



Convention on Biological Diversity

Distr.: General
26 January 2026
English only

Subsidiary Body on Implementation

Sixth meeting

Rome, 16-19 February 2026

Item 3 (a) of the provisional agenda*

**Resource mobilization and financial
mechanism: resource mobilization**

Study on the relationship between biodiversity and climate finance**

Note by the Secretariat

Introduction

1. In decision 16/34 the Executive Secretary was requested, subject to the availability of resources, to commission, or undertake, alongside relevant international institutions, studies on: (a) the relationship between debt sustainability and the implementation of the Convention; (b) how the guidance on safeguards in biodiversity finance mechanisms adopted in decisions XII/3 and 14/15 has been implemented, identifying good practices and lessons learned, as well as opportunities for improving implementation of the guidance; (c) the relationship between biodiversity and climate finance (para. 26 (b)).
2. Accordingly, a draft of the third of the listed studies on the relationship between biodiversity and climate finance has been prepared, and is provided in the present document.
3. The study has been prepared by an independent consultant who was commissioned by the Secretariat. Its development has been informed by the discussions held on the topic during the sixteenth meeting of the Conference of the Parties, the experience and expertise of the consultant, the selected expert interviews that the consultant conducted, and inputs from key staff at the Secretariat.
4. Notification No. 2026-014 was issued on 27 January 2026 to request the voluntary peer review of the present document. The deadline for the submission of comments for the peer review is 20 March 2026.
5. Following any inputs received on the present document at the sixth meeting of the Subsidiary Body on Implementation and the peer review, a final version of the study will be completed for presentation at the seventh meeting of the Subsidiary Body on Implementation.
6. The document is issued in the form and language in which it was received.

* [CBD/SBI/6/1](#).

** The present document is being issued without formal editing.

CONVENTION ON BIOLOGICAL DIVERSITY

Assessment of the Relationship between Biodiversity and Climate Finance: Synergies, Trade-offs and Policy Options for KMGBF TARGETS 18 AND 19

Prepared in response to CBD/COP/DEC/16/34 paragraph 26 (iii)

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January 2026

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List of Abbreviations

| Abbreviation | Full Term |
|-----------------------|--|
| ASEAN | Association of Southeast Asian Nations |
| B | Biodiversity (analytical framework axis) |
| BIOFIN | Biodiversity Finance Initiative |
| C | Climate (analytical framework axis) |
| CAP | Common Agricultural Policy (EU) |
| CBD | Convention on Biological Diversity |
| CDR | Carbon Dioxide Removal |
| CIFOR | Center for International Forestry Research |
| CO₂ | Carbon Dioxide |
| COP | Conference of the Parties |
| CORSIA | Carbon Offsetting and Reduction Scheme for International Aviation |
| CRCF | Carbon Removal Certification Framework (EU) |
| CSDDD | Corporate Sustainability Due Diligence Directive (EU) |
| CSRD | Corporate Sustainability Reporting Directive (EU) |
| DAC | Development Assistance Committee (OECD) |
| DAE | Direct Access Entity |
| DFC | U.S. International Development Finance Corporation |
| DFI | Development Finance Institution |
| DNSH | Do No Significant Harm |
| EbA | Ecosystem-based Adaptation |
| EFRAG | European Financial Reporting Advisory Group |
| EHS | Environmentally Harmful Subsidies |
| EIA | Environmental Impact Assessment |
| EIB | European Investment Bank |
| ESF | Environmental and Social Framework (World Bank) |
| ESMS | Environmental and Social Management System (GCF) |
| ESRS | European Sustainability Reporting Standards |
| ESRS E4 | ESRS Environment Standard 4 – Biodiversity & Ecosystems |
| EU | European Union |
| FAO | Food and Agriculture Organization of the United Nations |
| FCPF | Forest Carbon Partnership Facility |
| FPIC | Free, Prior and Informed Consent |
| GBFF | Global Biodiversity Framework Fund |
| GCF | Green Climate Fund |
| GDP | Gross Domestic Product |
| GEF | Global Environment Facility |
| GEO | Global Environment Outlook (UNEP) |
| IAPB | International Advisory Panel on Biodiversity Credits |
| ICI | Inclusive Conservation Initiative (GEF) |
| ICVCM | Integrity Council for the Voluntary Carbon Market |
| IDB | Inter-American Development Bank |
| IEO | Independent Evaluation Office (GEF) |
| IEU | Independent Evaluation Unit (GCF) |
| IFI | International Financial Institution |
| IKI | International Climate Initiative (Germany) |
| ILCN | International Land Coalition Network |
| IMF | International Monetary Fund |
| IPBES | Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services |
| IPCC | Intergovernmental Panel on Climate Change |
| IPLC | Indigenous Peoples and Local Communities |
| ISSB | International Sustainability Standards Board |

| | |
|---------------------|---|
| IUCN | International Union for Conservation of Nature |
| KBA | Key Biodiversity Area |
| KMGBF | Kunming-Montreal Global Biodiversity Framework |
| L&D | Loss and Damage |
| LEAF | Lowering Emissions by Accelerating Forest finance |
| LEAP | Locate, Evaluate, Assess, Prepare (TNFD approach) |
| MDB | Multilateral Development Bank |
| MRV | Measurement, Reporting and Verification |
| NAP | National Adaptation Plan |
| NBSAP | National Biodiversity Strategy and Action Plan |
| NbS | Nature-based Solutions |
| NCQG | New Collective Quantified Goal (on climate finance) |
| NDC | Nationally Determined Contribution |
| NELD | Non-Economic Loss and Damage |
| NGFS | Network for Greening the Financial System |
| NGO | Non-Governmental Organisation |
| ODA | Official Development Assistance |
| OECD | Organisation for Economic Co-operation and Development |
| QU.A.L.I.T.Y | Quantification, Additionality, Long-term storage and SustainABILITY |
| REDD+ | Reducing Emissions from Deforestation and Forest Degradation |
| SBI | Subsidiary Body on Implementation (CBD) |
| SBM | Supervisory Body (Article 6.4 mechanism) |
| SEA | Strategic Environmental Assessment |
| SIS | Safeguard Information System |
| SOE | State-Owned Enterprise |
| TCFD | Task Force on Climate-related Financial Disclosures |
| TFFF | Tropical Forest Forever Facility |
| TNC | The Nature Conservancy |
| TNFD | Taskforce on Nature-related Financial Disclosures |
| UN | United Nations |
| UNCTAD | United Nations Conference on Trade and Development |
| UNDP | United Nations Development Programme |
| UNEA | United Nations Environment Assembly |
| UNEP | United Nations Environment Programme |
| UNFCCC | United Nations Framework Convention on Climate Change |
| USD | United States Dollar |
| VCM | Voluntary Carbon Market |
| VCMI | Voluntary Carbon Markets Integrity Initiative |
| WBG | World Bank Group |
| WCMC | World Conservation Monitoring Centre (UNEP) |
| WEF | World Economic Forum |
| WRI | World Resources Institute |
| WWF | World Wide Fund for Nature |

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Executive Summary

This technical assessment, prepared in accordance with CBD COP16 Decision 16/34, examines how climate finance and biodiversity-related finance and actions interact, including the biodiversity outcomes of climate responses and the climate benefits of biodiversity measures, to inform deliberations on the Resource Mobilisation Strategy 2025–2030. It examines the relationship between climate finance and biodiversity outcomes to inform deliberations on the Resource Mobilisation Strategy 2025–2030. The analysis examines how the expansion of climate finance, driven by the New Collective Quantified Goal (NCQG), may affect the biodiversity finance gap, under scenarios where biodiversity objectives, safeguards and subsidy-related reforms are integrated into climate-finance architecture and implementation over 2026–2030. The analysis focuses on KMGBF (Targets 18 (environmentally harmful subsidies, EHS) and 19 (resource mobilisation)), using an analytical framework that distinguishes synergistic, trade-off and isolated finance flows.

Tracked biodiversity-relevant finance is estimated at USD 124–143 billion per year, while additional resource needs are around USD 700 billion annually. Recent dashboard data of The Nature Conservancy (TNC) show biodiversity-specific flows reached USD 16.8 billion in 2023, with broader biodiversity-related flows of USD 29.8 billion. Climate finance under the NCQG is expected to reach at least USD 300 billion per year in public and bilateral flows by 2035, with a broader aspiration to mobilise USD 1.3 trillion annually from all sources. Traceable finance for Nature-based Solutions (NbS) is estimated at around USD 220 billion in 2023, of which approximately USD 197 billion is public and USD 23 billion private, while public and private nature-negative finance flows reached about USD 7.3 trillion in the same year, a ratio of over 30:1 between harmful and NbS-positive flows (UNEP, 2026). In the context of declining Official Development Assistance (ODA), constrained fiscal space and evolving cooperation patterns, several assessments emphasise that the quality and alignment of finance may be as important as aggregate volume.

High-integrity NbS and Ecosystem-based Adaptation, when designed with robust safeguards and governance, may deliver measurable mitigation, adaptation and biodiversity benefits. As of September 2025, 19 countries have completed national-level harmful-subsidy assessments with BIOFIN support, 16 countries and 2 regions are conducting their own assessments, and a further 89 countries plan to start in 2025. In addition, 102 countries have at least one biodiversity-positive incentive and biodiversity-positive taxes in OECD economies already raise over USD 10.6 billion annually. The Green Climate Fund (GCF) and Global Environment Facility (GEF) already channel significant resources to nature-related outcomes. New instruments like the Tropical Forest Forever Facility (TFFF) combine long-term forest finance with provisions for Indigenous Peoples and Local Communities (IPLCs). Sustainable-finance taxonomies now incorporate biodiversity through Do-No-Significant-Harm (DNSH) criteria. Nature-related disclosure frameworks such as the Taskforce on Nature-related Financial Disclosures (TNFD) are reflected in European Sustainability Reporting Standards (ESRD). However, biodiversity metrics remain more context-specific and uptake of taxonomies and disclosure regimes is uneven.

Climate-motivated finance has generated significant biodiversity trade-offs in cases where biodiversity considerations were not integrated into project design and safeguards. Land-use mitigation approaches that prioritise rapid carbon sequestration through monoculture afforestation on non-forest ecosystems have in some cases displaced biodiverse habitats and reduced resilience.

Carbon offset projects with weak social and environmental safeguards have posed risks including insecure tenure, inadequate benefit-sharing and incomplete Free, Prior and Informed Consent, particularly for IPLCs. Renewable energy and coastal infrastructure investments can fragment habitats or undermine ecosystems when siting and design ignore biodiversity considerations. Existing safeguard frameworks – including the Cancun safeguards for Reducing Emissions from Deforestation and Forest Degradation (REDD), multilateral development bank environmental and social standards, and DNSH requirements – have been found to deliver stronger outcomes where they are supported by timely application, institutional capacity and monitoring systems.

Table ES.1 links macro-economic risks to finance architecture approaches identified in the literature over 2026-2030. Harmful flows that exceed nature-positive investment by orders of magnitude are assessed in the literature as contributing to systemic risk. Recent governance transitions are cited as reasons to consider more diversified and resilient mechanisms. Analyses underlying this assessment highlight structural transformations across seven areas, and underscore that transparency, EHS reform and safeguards are particularly time-sensitive in 2026–2027.

Table ES.1: Key Global Finance Findings (2025–2026)

| Finding Area | Key Evidence | Strategic Implication |
|-------------------------------|---|---|
| Systemic Economic Risk | Partial ecosystem collapse: USD 2.7 trillion annual GDP loss by 2030 (World Bank, 2021a) | Biodiversity loss is macro-critical; USD 700 billion finance gap closure is economic insurance |
| Finance Misalignment | Nature-negative flows (~ USD 7.3 trillion in 2023) exceed NbS investment (~USD 220 billion) by over 30:1 | Evidence suggests nature-negative flows outweigh green finance; EHS reform (Target 18) identified as a key factor to narrow the gap |
| Climate Finance Window | NCQG: USD 300 billion floor, USD 1.3 trillion goal by 2035; NbS investment needs to increase from USD 220 billion in 2023 to about USD 571 billion per year by 2030 and to roughly USD 771 billion by 2050 to meet Rio Convention targets (UNEP, 2026). | Biodiversity criteria in NCQG can channel major flows to high-integrity NbS |
| Governance Transition | Recent shifts in multilateral participation and evolving cooperation patterns | Diversified funding mechanisms and independent standards (TNFD, CSRD) critical for financial resilience and institutional stability |
| Disclosure Momentum | Mandatory reporting (EU CSRD) outperforms voluntary; 600+ organizations, USD 20+ trillion adopt TNFD | Double-materiality requirements accelerate capital reallocation |
| Proven Models | TFFF: stock-based payments, 20% IPLC allocation; Rhino Bond: outcome-based finance | Rights-based, jurisdictional approaches deliver dual climate-biodiversity outcomes |
| Implementation Gap | Targets 19 and 18 trajectories insufficient for 2030 goals | Systematic reforms in transparency, safeguards, access needed urgently |

In response to these findings, the assessment identifies a set of procedural approaches that have been used, in different combinations, to address the implementation gap. The assessment identifies seven areas that Conference of the Parties (COP) may wish to consider during in the short to medium term.

The scale-up of climate finance under the NCQG may contribute to closing the biodiversity finance gap under scenarios where biodiversity objectives, indicators and safeguards are integrated into climate-finance strategies, fund mandates and portfolio operations. Different integration choices – such as whether nature-related metrics become core performance indicators or remain optional co-benefits – may lead to markedly different outcomes for biodiversity. For Target 18, several analyses describe reform and repurposing of environmentally harmful subsidies (EHS) as a potentially significant fiscal lever. Estimated flows of USD 2.6–7 trillion per year far exceed current international biodiversity finance, creating scope to shift resources toward high-integrity NbS, IPLC-led conservation and just-transition measures.

The assessment identifies seven areas that may inform COP deliberations during the period leading to 2030 and beyond:

- Area 1 – Integration of biodiversity into climate and development finance.
- Area 2 – Target 18 implementation on environmentally harmful subsidies.
- Area 3 – Alignment of public finance with nature-positive pathways.
- Area 4 – Stronger quality standards and safeguards for climate-related instruments.
- Area 5 – Transparency and nature-related disclosure frameworks.
- Area 6 – Access mechanisms for IPLCs and jurisdictional approaches.
- Area 7 – Integrating biodiversity into loss and damage responses.

In the longer term, lessons from aligning climate, biodiversity and development finance under the Kunming-Montreal Global Biodiversity Framework (KMGBF) and NCQG could inform future global sustainable development goals beyond 2030, including discussions on how nature, climate, inequality and finance are addressed as interconnected challenges.

Outcomes of NCQG-driven climate-finance expansion for biodiversity may depend on the approaches Parties take to integrating biodiversity into climate-finance architecture, implementing subsidy-related elements of Target 18 and designing mechanisms involving NbS and IPLC engagement over 2026–2030.

New biodiversity finance dashboard data show that international biodiversity-specific flows are approaching the KMGBF Target 19a 2025 benchmark. However, projected cuts in overall ODA and recent shifts in some major donor countries' participation in multilateral environmental institutions underscore the importance that many stakeholders place on alignment of finance flows and on subsidy-related reforms in sustaining this progress.

Chapter 1: Introduction, Mandate, and Analytical Framework

In response to CBD COP-16 Decision 16/34, this technical assessment examines the relationship between climate and biodiversity finance to inform the Resource Mobilisation Strategy 2025–2030. It analyses how the emerging climate-finance architecture—specifically the New Collective Quantified Goal (NCQG)—may support KMGBF Targets 14, 18, and 19. This chapter establishes the study’s mandate, introduces a three-part analytical framework (Section 1.2), and outlines the methodology (Section 1.3) to evaluate how climate finance scale-up may affect biodiversity outcomes over 2026–2030.

1.1. Study Mandate and Context

The assessment examines how the emerging climate-finance architecture under the Paris Agreement – particularly the NCQG – may help close the biodiversity finance gap and advance KMGBF Targets 14, 18 and 19, and identifies concrete areas that the Conference of the Parties (COP) may wish to consider over 2026–2030 (CBD, 2022; UNFCCC, 2024, 2025).

Scope and Purpose of This Study. This study provides Parties with a current technical assessment of biodiversity-climate finance alignment during 2022–2026, focusing on recent evidence and institutional practice and on how the NCQG and the Resource Mobilisation Strategy may affect KMGBF Targets 14, 18 and 19 over 2026–2030. It synthesises existing high-quality assessments rather than developing new frameworks or primary datasets and offers a non-prescriptive roadmap for enhanced synergies that reflects differing national capacities and circumstances, serving as an objective input to Parties’ deliberations rather than a binding recommendation.

The study is anchored in several key KMGBF targets that define the current landscape of resource mobilisation (CBD, 2022).

- Target 19 serves as the cornerstone of financial ambition, aiming to mobilise at least USD 200 billion per year by 2030 from all sources, including a sub-target (19a) to increase international financial flows from developed to developing countries to at least USD 20 billion per year by 2025 and USD 30 billion by 2030 (CBD, 2022).
- Target 14 focuses on integrating biodiversity values across all levels of government and sectors of the economy, ensuring that planning and financial flows are progressively aligned with the goals of the Framework (CBD, 2022).
- Target 18 addresses the elimination, phase-out or reform of incentives and subsidies harmful to biodiversity, with a goal of reducing such incentives by at least USD 500 billion per year by 2030 while scaling up positive incentives (CBD, 2022).

These targets frame a single resource-mobilisation challenge: closing the biodiversity finance gap by shifting the scale, composition and alignment of finance, as summarised in Table 1.1 (CBD, 2022; Deutz et al., 2020).

Table 1.1 summarises KMGBF targets, the NCQG floor, the Baku-Belém climate-finance aspiration, current NbS flows and the scale of harmful nature-negative subsidies (CBD, 2022; UNFCCC, 2024; UNEP, 2023; IMF, 2023). Together, these benchmarks frame the central question of the study: how the scale-up in climate finance can be leveraged to help close the biodiversity finance gap while ensuring that climate-motivated actions do not inadvertently degrade ecological integrity.

Table 1.1: Key Global Finance Benchmarks Relevant to Biodiversity-climate Alignment

| Element | Description | Value / Target | Source |
|--|--|--|---|
| KMGBF Target 19 | Mobilize biodiversity resources from all sources by 2030 | USD 200 billion per year | CBD, 2022 |
| KMGBF Target 19(a) | International finance to developing countries ^[1] | USD 20 billion by 2025; USD 30 billion by 2030 | CBD, 2022 |
| KMGBF Target 18 | Reduce harmful incentives and subsidies by 2030 | USD 500 billion per year | CBD, 2022 |
| Biodiversity finance gap | Shortfall between current flows and estimated needs | ~USD 700 billion per year | CBD, 2022 (KMGBF, Goal D) ¹ |
| NCQG minimum floor | Public/bilateral climate finance commitment by 2035 | USD 300 billion per year | UNFCCC, 2024 |
| Climate finance mobilization goal | Total public and private climate finance target by 2035 | USD 1.3 trillion per year | UNFCCC, 2024 (COP29) |
| Current NbS finance | Tracked finance flows to NbS in 2023 | USD 220 billion per year (USD 197 billion public, USD 23 billion private). | UNEP, 2026 (Rio-aligned scenario) |
| NbS finance needs | Estimated needs by 2030 | USD 571 billion per year | UNEP, 2026 |
| | Estimated needs by 2050 | USD 771 billion per year | |
| Harmful subsidies | Support for nature-negative activities | USD 7.3 trillion in 2023 (USD 2.4 trillion in public environmentally harmful subsidies and USD 4.9 trillion in private finance), with wider estimated range USD 2.6–7 trillion per year depending on scope and methodology | UNEP, 2026; IMF, 2023; UNEP et al., 2023. |

Note [1]: OECD DAC data from the 2025 Biodiversity Finance Trends Dashboard report biodiversity-specific flows of USD 16.8 billion and biodiversity-related flows of USD 29.8 billion in 2023 (TNC, 2025), indicating progress toward but not yet meeting the 2025 interim target of USD 20 billion.

Parties are to submit their seventh national reports, and reports under the Protocols, by 28 February 2026, feeding into the first global review of collective progress on KMGBF implementation to be considered at COP-17 in 2026, with a subsequent review at biodiversity COP-19 in 2030 (CBD, 2025). In parallel, the climate COP-29 in Baku operationalised the NCQG and agreed a minimum floor of at least USD 300 billion per year in public and bilateral climate finance by 2035, alongside a Baku–Belém Roadmap aspiration to mobilise USD 1.3 trillion per year from all public and private sources (UNFCCC, 2024). COP-30 decisions strengthened guidance on forests, adaptation and climate-finance institutions (UNFCCC, 2024, 2025).

Recent trends confirm this constrained and volatile macro-financial environment and create at least five structural constraints:

- **Falling concessional finance.** Total official development assistance (ODA) from DAC members fell in 2024 for the first time in six years, with further reductions projected, tightening fiscal space for environmental investments precisely as needs are rising, especially in low-income, nature-dependent countries (OECD, 2025a, 2025c; UNCTAD,

¹ High-level estimate; see NbS finance needs row for Rio-aligned scenario (UNEP, 2026)

2025). These trends are cited in the literature as reasons why some stakeholders place increased emphasis on reallocating harmful flows and on improving the quality of existing climate and development finance for biodiversity outcomes (UNEP, 2023; OECD, 2025d).

- **Rising debt burdens.** A deteriorating sovereign-debt situation means a substantial share of climate finance is, and is likely to remain, loan-based, with implications for debt sustainability and governments' ability to allocate domestic resources to biodiversity-relevant investment (IMF, 2024b; UNCTAD, 2025). Instruments that address debt sustainability while supporting nature-positive transitions – such as debt-for-nature swaps and debt reprofiling linked to KMGBF implementation – become increasingly important (TNC, 2021; OECD, 2024).
- **Shifts in domestic spending priorities.** Increased public expenditure on defence and other domestic priorities in several donor countries, in the absence of explicit ring-fencing, can constrain budgetary room for international environment and development finance (OECD, 2025a; CONCORD, 2025). These developments are often linked in the literature to calls for more systematic alignment of climate and biodiversity finance for synergies and co-benefits, rather than expanding in silos (UNEP, 2025; OECD, 2025d).
- **Contested multilateralism and governance transitions.** Recent geopolitical developments have created significant uncertainty regarding the future scale and predictability of multilateral climate and biodiversity finance. These developments affect burden-sharing between developed and developing countries, the stability of long-term support flows, and patterns of international cooperation on climate and biodiversity (IMF, 2024b; UNCTAD, 2025). Recent changes in patterns of multilateral participation increase transaction costs for future diplomacy, create institutional vacancies, and risk undermining scientific cooperation on assessments that inform both climate and biodiversity policy. They also risk deepening North-South divides in climate and nature negotiations and may affect the availability and quality of technical inputs from international scientific platforms.

In this context, several analyses emphasise the importance of ensuring that remaining and emerging climate and biodiversity-finance flows are systematically aligned with nature-positive objectives and characterised by robust safeguards, transparency frameworks and standards that can maintain confidence and continuity of investment under conditions of geopolitical uncertainty (OECD, 2025; UNEP, 2023; TNFD, 2023).

Notwithstanding these institutional goals, technical assessments indicate a significant biodiversity finance gap, estimated at approximately USD 700 billion per year (Deutz et al., 2020). The 2025 Biodiversity Finance Trends Dashboard (TNC, 2025) shows that biodiversity-specific international public flows reached USD 16.8 billion in 2023, with biodiversity-related flows of USD 29.8 billion, suggesting that the 2025 Target 19a milestone could be met if current trends persist but may be jeopardised by projected cuts in development finance. This funding shortfall can be evaluated against the identified fiscal risks of ecosystem degradation, as detailed in the following analysis of the cost of inaction.

Box 1.1: *The Macro-economic Cost of Biodiversity Inaction*

The annual biodiversity finance gap stands at USD 700 billion (Deutz et al., 2020), yet this investment requirement pales against the fiscal risks of inaction. World Bank modelling

demonstrates that even a partial collapse of three essential ecosystem services—wild pollination, marine fisheries, and timber from native forests—would trigger substantial macroeconomic damage (World Bank, 2021a).

By 2030, such a scenario would reduce global real GDP by USD 2.7 trillion annually, a 2.3% contraction compared to baseline projections. These losses distribute unequally: low-income and nature-dependent regions face disproportionate risk, with GDP declines potentially exceeding 10% in Sub-Saharan Africa. Agricultural sectors face particularly acute exposure, as wild pollinators contribute to crops representing roughly one-sixth of global food production value.

The broader systemic risk is more severe still. Complete degradation of ecosystem services could threaten 7-9% of global GDP, confirming that biodiversity loss constitutes a material macroeconomic and fiscal threat rather than merely an environmental concern. These estimates remain conservative, capturing only partial service collapse and excluding cascading effects across interconnected natural systems.

Note. Adapted from *The Economic Case for Nature: A Global Earth-Economy Model to Assess Development Policy Pathways*, World Bank, 2021a.

As detailed in Box 1.1, these ecosystem risks are characterised in recent analyses as material macro-economic and fiscal threats rather than solely environmental concerns. The potential for a 2.3% annual reduction in global GDP – and significantly higher losses in nature-dependent regions – confirms that biodiversity loss is a “macro-critical” risk that can undermine national debt sustainability and long-term development stability (World Bank, 2021a). These estimates suggest that closing the USD 700 billion finance gap can be framed not only as an environmental target under KMGBF Target 19 but also, in some analyses, as a fiscally prudent response to the risk of larger economic losses.

These macro-economic and fiscal risks interact with a constrained and evolving finance landscape, marked by tighter fiscal space, rising debt burdens and contested multilateralism. The above trends intersect with a deteriorating sovereign-debt situation in many countries. A substantial share of climate finance has been – and is likely to continue to be – provided in the form of loans, with implications for debt sustainability and fiscal space for biodiversity-relevant investment (IMF, 2024b; UNCTAD, 2025). The relationship between debt sustainability and biodiversity investment is explored in greater detail in the parallel study on debt sustainability and the implementation of the Convention, which examines how fiscal space constraints shape countries’ ability to mobilise domestic resources for KMGBF implementation (CBD Secretariat, 2026).

Fiscal tightening and contested multilateralism affect efforts to mobilise new resources for biodiversity and to improve the quality, alignment and resilience of existing flows (UNEP, 2023; UNEP, 2025; OECD, 2025d). The combination of falling ODA, shifting domestic spending priorities and uneven implementation of international commitments is frequently associated, in the literature and stakeholder submissions, with calls to scale up high-integrity Nature-based Solutions, reform environmentally harmful subsidies, strengthen safeguards and disclosure frameworks, and expand direct access for Indigenous Peoples and Local Communities (UNEP, 2023; UNEP, 2025; OECD, 2025d; Rainforest Foundation Norway, 2021; WWF et al., 2021).

1.2. Analytical Framework: The Three Relationship Areas

To evaluate the biodiversity–climate nexus, this study maps how climate-related finance for mitigation, adaptation and loss and damage affects biodiversity outcomes, distinguishing three relationship areas: isolated, synergistic and trade-off finance (OECD, 2019; UNEP, 2023; TNFD, 2023). Historically, the climate-biodiversity nexus has been analysed through the lenses of Mitigation (KMGBF Target 8) and Adaptation (KMGBF Target 11). However, the operationalisation of the Loss and Damage Fund at COP28 and subsequent 2026 developments highlight the need for a third pillar: Loss and Damage (L&D). L&D represents the “residual risk” where adaptation is no longer possible. For biodiversity, this encompasses Non-Economic Loss and Damage (NELD), such as the irreversible extinction of species or the permanent collapse of ecosystem services like coral reefs.

Figure 1.1 presents this outcome space as a quadrant diagram, with biodiversity outcomes on the vertical axis and climate outcomes on the horizontal axis; synergistic finance lies in the upper-right quadrant, trade-off finance in the lower-right, and isolated finance in the upper-left and neutral central band (OECD, 2019; UNEP, 2024).

- 1) **Isolated finance and action (B-only or C-only).** Isolated finance refers to financial flows or interventions that pursue either biodiversity or climate objectives with limited or no explicit consideration of the other (OECD, 2019). Examples include species-focused conservation programmes in already well-protected areas, which deliver important biodiversity outcomes but have little direct influence on emissions trajectories, and grid-modernisation or digital-infrastructure projects that support mitigation while assuming biodiversity impacts are neutral and not systematically assessed (CBD, 2022; OECD, 2019a). Large-scale adaptation and disaster-risk-reduction investments that prioritise grey infrastructure such as dykes, levees and seawalls, without exploring complementary Nature-based Solutions, similarly reduce climate risk but often leave potential biodiversity co-benefits unrealised (Depietri & McPhearson, 2017; EESI, 2023).
- 2) **Synergistic finance and action ($B \cap C$).** Synergistic finance comprises actions explicitly designed to deliver positive, measurable outcomes for both climate and biodiversity across mitigation, adaptation and loss and damage (CBD, 2022; UNEP, 2023).

A flagship example is the restoration of mangrove ecosystems. Mangroves simultaneously provide coastal protection against storms and sea-level rise (adaptation and loss-and-damage risk reduction), sequester and store carbon (mitigation), and restore habitat for marine and coastal species (biodiversity). This contributes to multiple KMGBF targets and nationally determined contributions (UNEP, 2021, 2023; IPBES, 2024).

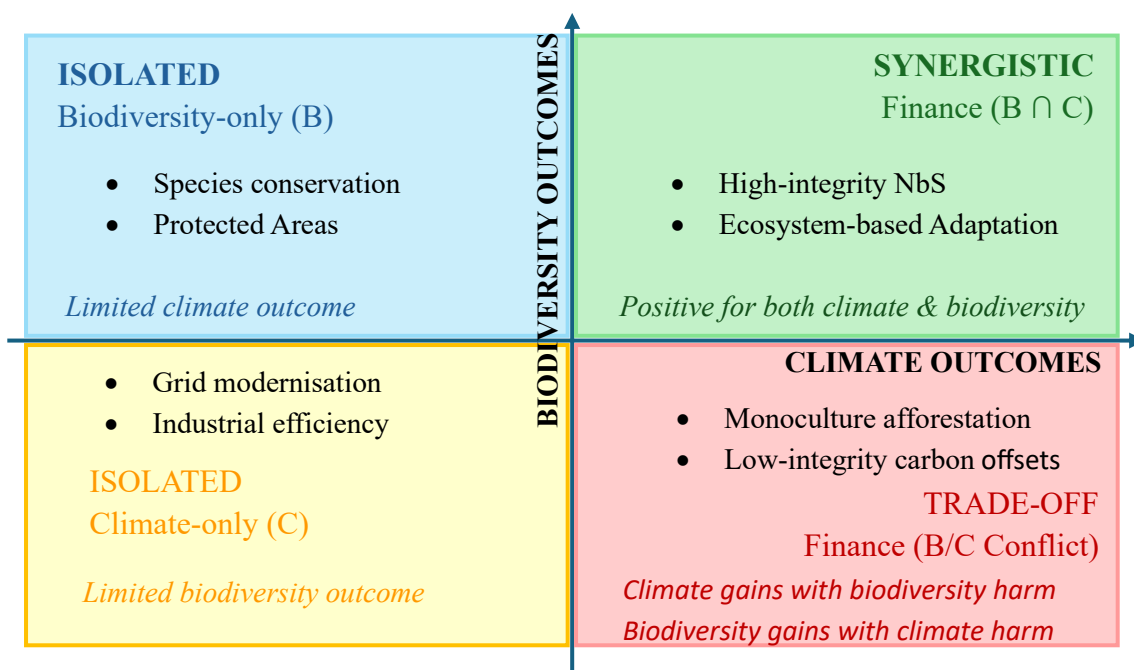
Other synergistic approaches include integrated landscape and seascape management, high-integrity forest and wetland NbS, urban Ecosystem-based Adaptation (EbA), and selected debt-for-nature or blue-bond structures that explicitly link measurable climate and biodiversity outcomes (UNEP, 2021, 2023; TNC, 2021). Synergistic loss and damage finance refers to resources explicitly designed to deliver positive outcomes for both climate and biodiversity by rebuilding natural capital stocks. Examples include post-disaster ecological restoration that prioritises the recovery of mangroves, seagrasses, and wetlands following extreme weather events, or supports biocultural heritage recovery for Indigenous

Peoples and Local Communities (UNEP, 2023; Government of Brazil, 2024; WWF et al., 2021).

- 3) **Trade-off finance and action (B ⊥ C).** Trade-off finance describes actions that deliver measurable gains in one domain – biodiversity or climate, whether through mitigation, adaptation or loss-and-damage responses – while creating documented harm or significant risk in the other (Dasgupta, 2021; UNEP, 2023). This includes C-positive / B-negative cases, such as monoculture afforestation for rapid carbon sequestration on biodiverse grasslands or savannas, which may reduce emissions but degrade ecosystem integrity and resilience. Poorly sited renewable-energy or transport infrastructure can also fragment high-biodiversity habitats (IPCC, 2019; Seddon et al., 2021; OECD, 2019a). It also includes B-positive / C-negative cases, such as conservation measures that displace vulnerable communities into more climate-exposed areas or new deforestation frontiers, increasing emissions and climate risk elsewhere. Strict coastal protection can also prevent climate-resilient livelihood diversification (IPBES, 2019; OECD, 2019a).

Trade-off loss and damage finance occurs when rapid climate responses inadvertently sacrifice biodiversity for short-term economic or safety stabilization (Dasgupta, 2021). One example is “grey” infrastructure lock-in: the use of post-disaster finance to construct hard coastal defence (e.g., seawalls, dykes) that protect assets in the near term but destroy remaining mangroves and coral reefs (EESI, 2023). This creates maladaptation, increasing long-term vulnerability by undermining ecosystem-based protection (Global Commission on Adaptation, 2019). Another is maladaptive resettlement: funding for the relocation of climate-displaced populations that may displace vulnerable communities into high-biodiversity “new frontiers”, inadvertently increasing emissions and degrading ecosystem integrity (IPCC, 2019; UNEP, 2024; EESI, 2023). Chapter 2 primarily examines flows in the upper-right quadrant of Figure 1.1, while Chapter 3 focuses on flows in the lower-right quadrant and on governance approaches that may reduce such trade-offs (UNEP, 2023; TNFD, 2023).

Figure 1.1: Biodiversity-climate Outcome Space for Finance Flows



Note: The vertical axis represents biodiversity outcomes; the horizontal axis represents climate outcomes. Synergistic finance lies in the upper right quadrant, trade-off finance in the lower right, and isolated finance spans the upper left and central neutral band.

Table 1.2 operationalises the conceptual framework from Figure 1.1 across the three climate finance pillars, showing synergistic pathways and trade-off risks with their biodiversity mechanisms.

Table 1.2: Climate Pillar Analysis – Synergistic and Trade-off Finance with Biodiversity Mechanisms

| Climate Finance Component | Synergistic Approach (Nature-Positive) | Trade-off Risk (Nature-Negative) |
|---------------------------|--|--|
| Mitigation | <p>Native reforestation and natural regeneration (Griscom et al., 2017)</p> <p><i>Biodiversity mechanisms:</i></p> <ul style="list-style-type: none"> • Habitat restoration and connectivity • Native species recovery • Ecosystem structure enhancement <p>[Aligned with KMGBF Target 19]</p> | <p>Monoculture plantations (IPCC, 2019)</p> <p><i>Biodiversity risks:</i></p> <ul style="list-style-type: none"> • Habitat homogenization • Loss of native species diversity • Disruption of ecological processes |
| Adaptation | <p>Ecosystem-based Adaptation (EbA) (UNEP, 2021)</p> <p><i>Biodiversity mechanisms:</i></p> <ul style="list-style-type: none"> • Mangrove/wetland restoration for coastal defense • Wildlife corridor creation for migration adaptation • Watershed protection for water security | <p>Maladaptive grey infrastructure (EESI, 2023)</p> <p><i>Biodiversity risks:</i></p> <ul style="list-style-type: none"> • Coastal ecosystem destruction • Barrier effects on species movement • Hydrological disruption |
| Loss & Damage | <p>Reef and mangrove ecosystem restoration (UNEP, 2024)</p> <p><i>Biodiversity mechanisms:</i></p> <ul style="list-style-type: none"> • Marine ecosystem restoration post-bleaching • Coastal habitat regeneration • Species population recovery | <p>Hard seawalls and habitat destruction (OECD, 2025b)</p> <p><i>Biodiversity risks:</i></p> <ul style="list-style-type: none"> • Intertidal zone elimination • Coastal squeeze effects • Loss of nursery habitats |

The study addresses several critical challenges in evaluating this nexus (UNEP, 2021; TNFD, 2023):

- Distinguishing genuine integration from “biodiversity-washing”. This may require assessing whether projects labelled as nature-positive or biodiversity-aligned are backed by solid evidence on outcomes, not just generic claims of co-benefits (UNEP, 2021; TNFD, 2023).
- Assessing additionality for biodiversity. A key question is whether climate-labelled finance represents genuinely new resources for nature or largely repackages pre-existing conservation funding under labels such as NbS (UNEP, 2021; OECD, 2019).
- Measuring biodiversity outcomes. Biodiversity lacks a single universal metric, requiring context-specific indicators, baselines and monitoring systems to track co-benefits and trade-offs (TNFD, 2023; IPBES, 2024).

1.3. Methodology and Study Limitations

The study uses a mixed-methods approach to synthesise authoritative evidence, triangulating policy decisions, institutional reporting and peer-reviewed literature rather than collecting new primary

data (OECD, 2024; UNEP, 2025; IPBES, 2024). The research approach comprises three main components:

1. Desk review. A structured review of policy decisions, institutional reports and peer-reviewed literature from 2015 to January 2026, including CBD and UNFCCC decisions, KMGBF and Paris Agreement implementation guidance, and flagship assessments such as the Global Environment Outlook and the IPBES Nexus Assessment (OECD, 2024; UNEP, 2025; IPBES, 2024).
2. Targeted expert consultations. Semi-structured discussions with a small number of experts from multilateral funds, finance ministries, IPLCs, civil society and research institutions will be conducted during the public review process, rather than during initial drafting as originally envisaged. This timing reflects contracting delays and means that consultation insights will primarily be used to nuance and validate the analysis, rather than to reshape the study's overall structure or key messages. A brief summary of consultation themes and how they informed any refinements to the report will be provided in an annex to the final version.
3. Illustrative case-study analysis. Short vignettes on four instruments examined in Section 4.6 – including a blue-carbon facility, a sovereign debt-for-nature operation, an IPLC-led jurisdictional programme and an NbS-linked disclosure or taxonomy reform – illustrate high-integrity synergies and critical trade-offs (TNC, 2021; World Bank, 2021; UNEP, 2023).

The assessment uses global databases and reporting frameworks, including OECD DAC climate-finance statistics and Rio markers, Green Climate Fund (GCF) and Global Environment Facility (GEF) project databases and independent evaluations, and multilateral development bank (MDB) reports and safeguard assessments (OECD, 2024; GCF, 2024; GEF, 2025; EIB, 2023; Germanwatch, 2024). The finance gap analysis reflects the latest data and Rio-aligned investment needs reported in State of Finance for Nature 2026, which uses 2023 as the base year and expresses estimates in real 2024 USD (UNEP, 2026). It also draws on emerging frameworks such as TNFD pilot results and recent CBD and UNFCCC reports, including National Biodiversity Strategies and Action Plans and Biennial Transparency Reports (TNFD, 2023; UNFCCC, 2024).

Several constraints shape the scope and depth of the analysis. First, private-finance data gaps mean that many private-sector flows lack the granularity needed to assess specific biodiversity impacts. The assessment therefore uses proxy indicators and illustrative case studies (OECD, 2024; UNEP, 2023). Second, the policy landscape is evolving rapidly, particularly regarding the NCQG and carbon-market rules under Article 6. The analysis therefore focuses on established trends and systemic patterns (UNFCCC, 2024). Third, time constraints mean the study synthesises existing high-quality work rather than generating new primary datasets. This may under-represent very recent or smaller-scale initiatives (UNEP, 2025; IPBES, 2024).

The following chapters apply this framework to synergistic, trade-off and alignment pathways for climate and biodiversity finance.

This assessment complements two parallel technical studies requested under CBD Decision 16/34. The first examines *'The relationship between debt sustainability and the implementation of the Convention,'* analysing how debt burdens shape countries' capacity to invest in biodiversity and implement the KMGBF. The second assesses *'How the guidance on safeguards in biodiversity finance mechanisms adopted in decisions XII/3 and 14/15 has been implemented, identifying good*

practices and lessons learned, as well as opportunities for improving implementation of the guidance. Together, findings from all three studies – on finance alignment, debt sustainability and safeguards implementation – inform the resource-mobilisation deliberations of the Conference of the Parties.

Chapter 2: Scaling Synergistic Finance – Pathways to Integration

Synergistic finance delivers measurable benefits for both climate and biodiversity through well-designed interventions, particularly Nature-based Solutions (NbS) and Ecosystem-based Adaptation (EbA). With climate finance expected to scale dramatically under the NCQG—from current levels to at least USD 300 billion per year in public flows by 2035—there is significant opportunity to embed biodiversity objectives from the outset rather than retrofitting them later. This chapter examines pathways for achieving such integration. It begins by defining the synergistic landscape and analysing current finance flows (Sections 2.1-2.2), then explores key channels including multilateral climate funds (2.3), forest and ecosystem finance mechanisms (2.4), Indigenous Peoples and Local Community access (2.5), and enabling infrastructure such as taxonomies and disclosure frameworks (2.6). Evidence shows that while synergistic finance remains modest relative to overall climate flows, proven pathways exist to scale it substantially if embedded in NCQG architecture.

Box 2.1 clarifies how this assessment uses the terms Nature-based Solutions, Ecosystem-based Adaptation (EbA) and ecosystem-based mitigation across the three climate-finance pillars.

Box 2.1: How NbS, EbA, Mitigation and Loss and Damage Fit Together

This assessment uses a simple hierarchy, grounded in existing international definitions, to organise climate–biodiversity linkages.

- Nature-based Solutions (NbS) are treated as the overarching category. UNEA Resolution 5/5 defines NbS as “actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits” (UNEA, 2022). In this report, NbS includes ecosystem-based measures across mitigation, adaptation and selected loss and damage responses.
- Ecosystem-based Adaptation (EbA) is a subset of NbS. The CBD and UNFCCC define EbA as “the use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people adapt to the adverse effects of climate change” (CBD, 2009; UNFCCC, 2015). All EbA interventions are NbS, but not all NbS are EbA.
- Ecosystem-based mitigation refers to NbS primarily designed to reduce greenhouse-gas emissions or enhance removals, such as native forest restoration, peatland re-wetting, mangrove and seagrass restoration (UNEP, 2026; Griscom et al., 2017). These measures sit in the mitigation column of Table 1.2 as mitigation-oriented NbS.
- NbS for loss and damage are NbS deployed where mitigation and adaptation are no longer sufficient, or in post-disaster contexts, for example post-cyclone restoration of mangroves, reefs and wetlands, or biocultural heritage recovery for Indigenous Peoples and Local Communities (IPLCs). These responses address residual climate risks and can reduce future loss and damage while supporting biodiversity.

In this report, climate actions and finance are organised around three pillars – mitigation, adaptation and loss and damage – and their interactions with biodiversity. NbS populate all three pillars:

- mitigation-oriented NbS (ecosystem-based mitigation) in the mitigation pillar,
- EbA within the adaptation pillar, and
- NbS for loss and damage within the loss-and-damage pillar.

The biodiversity outcomes of these climate actions, and the climate outcomes of biodiversity-focused measures, are mapped in the analytical framework as synergistic, isolated or trade-off finance flows (OECD, 2019; UNEP, 2023; TNFD, 2023).

2.1. Defining the Synergistic Landscape: Nature-based Solutions and the Nexus Approach

Literature on achieving the objectives of the Paris Agreement and the Kunming–Montreal Global Biodiversity Framework (KMGBF), identifies pathways for financial systems to shift from siloed climate or biodiversity investments toward synergistic pathways that deliver measurable benefits for both (UNFCCC, 2024). The seventh Global Environment Outlook (GEO-7) calls for transformations in energy, food, cities, consumption and nature to address the interlinked crises of climate change, biodiversity loss and pollution – the “triple planetary crisis” (UNEP, 2025). Nature-based Solutions (NbS) and Ecosystem-based Adaptation (EbA) are central to this transition, as recognised by the United Nations Environment Assembly and successive UNFCCC and CBD decisions (UNEP, 2021, 2022).

As outlined in Box 2.1, UNEA Resolution 5/5 (2022) defines NbS as ecosystem-based actions that address societal challenges while providing human well-being and biodiversity benefits, and CBD (2009) /UNFCCC (2015) guidance defines EbA as the use of biodiversity and ecosystem services to help people adapt to climate change (UNEA, 2022; CBD, 2009; UNFCCC 2015). Within the climate regime, EbA operationalises this concept by using biodiversity and ecosystem services to help people adapt to climate impacts such as flooding, drought and extreme heat, often delivering mitigation co-benefits through carbon storage and sequestration (UNEP, 2021, Griscom et al., 2017). Evidence from synthesis studies indicates that high-integrity NbS could deliver up to one-third of the cost-effective mitigation needed by 2030 to keep 1.5°C within reach. They also reduce climate risks and safeguard ecosystem services (Griscom et al., 2017). GEO-7 underlines that scaling such solutions is identified in several assessments as important, particularly for adaptation, ecosystem resilience and human health (UNEP, 2025).

The IPBES Nexus Assessment emphasises that biodiversity, water, food, health and climate form an interconnected system in which decisions taken in isolation frequently generate unplanned trade-offs (IPBES, 2024; Pörtner et al., 2023). Synergistic finance recognises that a single intervention – such as restoring mangroves – may provide coastal protection (adaptation), sequester carbon (mitigation) and restore habitat (biodiversity). Such interventions contribute to KMGBF Targets 1, 2, 8 and 11, as well as national climate and development priorities (CBD, 2022; UNEP, 2023). This chapter examines finance mechanisms that seek such joint outcomes and explores how they can be scaled.

2.2. Current Scale and Trajectory of Finance

As noted in Chapter 1 and Section 2.1, current NbS finance remains modest relative to the trillions in nature-negative flows, making the composition and integrity of portfolios as important as their overall scale (UNEP, 2023; IMF, 2023). The 2025 Biodiversity Finance Trends Dashboard confirms

the imbalance, estimating harmful nature-negative subsidies at roughly USD 840 billion per year excluding fossil fuels and revealing that biodiversity-positive incentives and taxes are still comparatively small (TNC, 2025). This implies that positive investment in nature is still outweighed by harmful public and private flows by roughly two orders of magnitude, underlining a scale mismatch that synergistic finance could address by both increasing NbS investment and redirecting nature-negative expenditure (UNEP, 2023; CBD, 2022).

2.2.1 Isolated Finance and Missed Opportunities for Synergy

This sub-section considers the substantial volume of biodiversity- and climate-related finance that does not explicitly integrate both objectives and therefore falls into the “isolated” category.

A significant share of current biodiversity- and climate-related finance targets either biodiversity or climate objectives with little explicit consideration of the other (OECD, 2019). In some cases, this isolation appears relatively benign; for example, certain grid-modernisation or digital-infrastructure investments may have limited direct interaction with ecosystems and therefore limited realistic potential for biodiversity co-benefits (OECD, 2019a). Similarly, narrowly focused species-recovery programmes in already well-protected areas may offer limited scope for meaningful climate-mitigation gains where emissions are largely driven by other sectors (CBD, 2022).

In other instances, apparently isolated finance may represent a missed opportunity to deliver synergistic outcomes. Large-scale adaptation and disaster-risk-reduction programmes have in many cases prioritised grey infrastructure such as dykes, levees and seawalls without exploring complementary Nature-based Solutions that could enhance resilience while restoring habitats (Depietri & McPhearson, 2017; EESI, 2023). Urban and transport investments can also proceed without systematic assessment of options for green infrastructure – such as urban forests, wetlands or riparian buffers – that could reduce heat-island effects, manage flood risk and create biodiversity corridors (Depietri & McPhearson, 2017; Rolhauser et al., 2024).

Isolated biodiversity-only finance can under-perform where climate considerations are not considered. Protected-area expansion or restoration initiatives that do not consider projected climate impacts may focus on areas that are unlikely to remain climate-suitable for key species or ecosystems, or may overlook opportunities to enhance connectivity and climate resilience (CBD, 2023; Buenafe et al., 2025). Incorporating basic climate-risk screening and adaptation planning into conservation finance can, in such cases, shift funding from isolated to more synergistic outcomes (CBD, 2023).

From an analytical perspective, recognising these patterns of isolated finance helps explain why overall volumes of climate- and biodiversity-related expenditure do not always translate into proportionate gains for nature (UNEP, 2023a). The examples above illustrate that, in a range of sectors, relatively modest adjustments in project design and appraisal could determine whether finance remains isolated or contributes to climate-biodiversity synergies (UNEP, 2023a; UNECE, 2025).

2.2.2 Synergistic Climate-biodiversity Finance

Despite growing political recognition, synergistic finance remains small relative to overall climate and nature-negative flows. Recent State of Finance for Nature analysis estimates global finance flows to NbS at around USD 220 billion in 2023, of which approximately USD 197 billion is public domestic and international expenditure and about USD 23 billion private finance, including certified commodity supply chains, offsets, sustainable bonds and philanthropy (UNEP, 2026).

Public NbS finance thus accounts for around 90 per cent of tracked flows, with private contributions remaining modest and concentrated in a limited set of instruments and sectors (UNEP, 2026). In the same year, public and private nature-negative finance flows totalled roughly USD 7.3 trillion, including about USD 2.4 trillion in environmentally harmful subsidies and USD 4.9 trillion in private capital to nature-negative activities, meaning harmful flows exceeded NbS finance by a ratio of more than 30:1 (UNEP, 2026). Under the Rio-aligned scenario, annual NbS investment needs are estimated at about USD 571 billion by 2030 and USD 771 billion by 2050, implying that current NbS flows would need to increase more than two and a half times by 2030 and more than triple by mid-century (UNEP, 2026). GEO-7 stresses that without a rapid redirection of such harmful flows, incremental increases in NbS finance may be insufficient to reverse biodiversity decline (UNEP, 2025).

In this study, synergistic finance includes two dimensions: increasing the absolute volume of finance for high-integrity NbS and EbA, and realigning existing climate-labelled and development flows so that they systematically deliver biodiversity co-benefits and avoid trade-offs (Deutz et al., 2020). The New Collective Quantified Goal (NCQG), with a floor of at least USD 300 billion per year in public and bilateral climate finance and an aspiration to mobilise USD 1.3 trillion per year by 2035, represents a critical opportunity to achieve both objectives if biodiversity is embedded from the outset (UNFCCC, 2024).

Dashboard analysis also shows that around 90 per cent of bilateral biodiversity-related finance contributes to climate objectives, yet only 22 per cent of equivalent climate-related finance simultaneously targets biodiversity, underscoring an opportunity to embed nature objectives more systematically in climate portfolios (TNC, 2025). UNEA-7’s Ministerial Declaration, adopted in December 2025, calls for advancing “sustainable solutions for a resilient planet”, reinforcing opportunities to align climate finance with biodiversity and pollution objectives (UNEA, 2025). Table 2.1 summarises major synergistic finance pathways, the instruments used, available evidence on co-benefits and key levers to scale them.

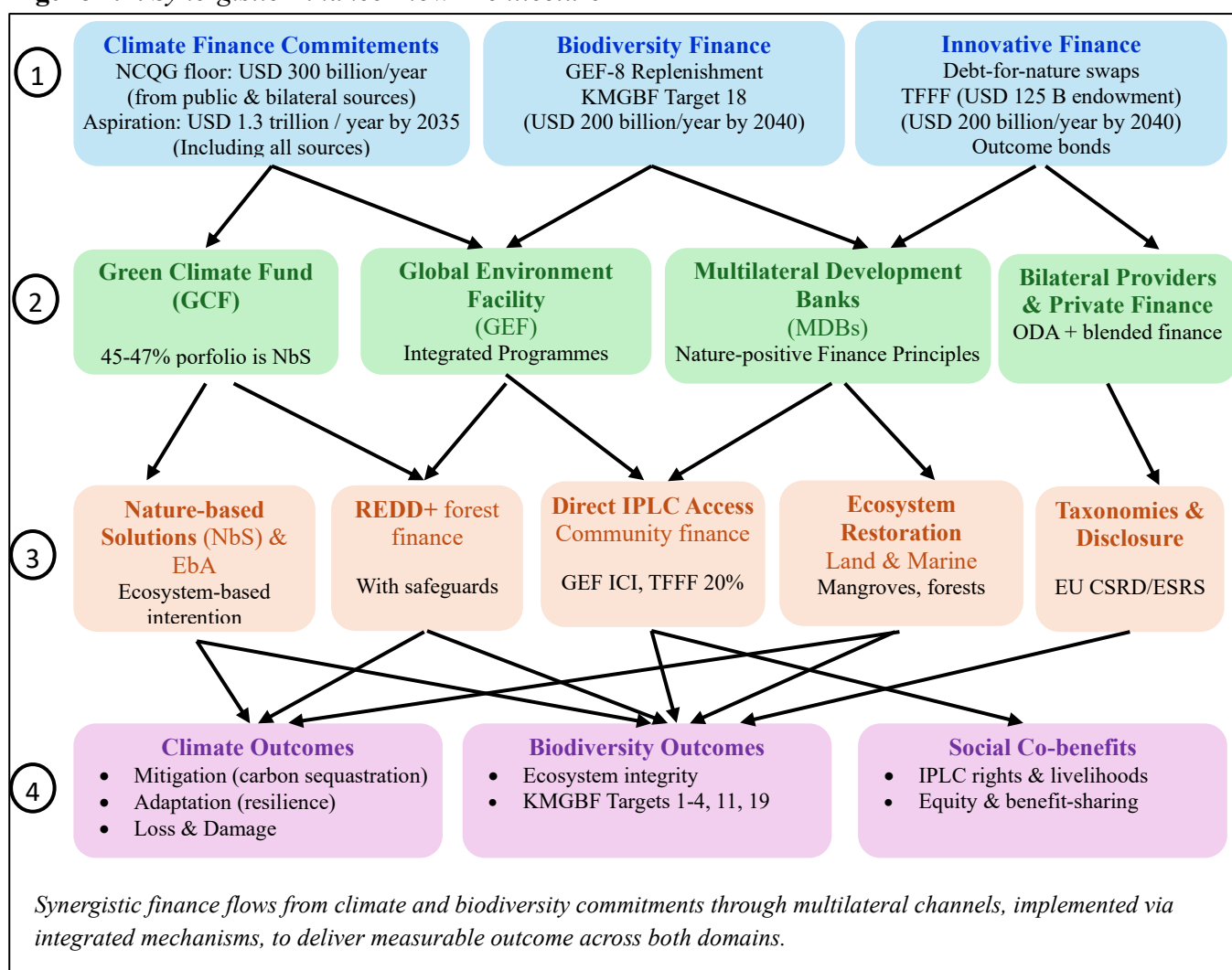
Table 2.1: Major Synergistic Finance Pathways and Levers

| Pathway | Main Instruments | Evidence of Co-Benefits | Key Scaling Levers |
|--|--|--|---|
| NbS and EbA | Native reforestation, coastal restoration, watershed management | Mitigation, adaptation, and biodiversity co-benefits documented across multiple NbS interventions (UNEP et al., 2023; IPBES, 2019) | <ul style="list-style-type: none"> • Tripling adaptation finance • EbA eligibility criteria • MRV technical support |
| Multilateral climate funds (GCF, GEF) | Integrated programmes, results-based payments, blended finance, guarantees | High NbS portfolio share in adaptation finance; integrated programming demonstrates multiple co-benefits | <ul style="list-style-type: none"> • Portfolio-level biodiversity targets • Co-benefit tracking systems • Direct access modalities |
| MDB nature-positive alignment | Policy-based loans, outcome bonds, green guarantees | Emerging tracking principles; pilots such as the Rhino Impact Bond demonstrate viability | <ul style="list-style-type: none"> • Nature-positive metrics integration • DNSH safeguards • Project pipeline support |

| | | | |
|--|--|--|--|
| Innovative forest finance | TFFF, jurisdictional REDD+, LEAF Coalition finance | Stock-based forest payments show resilience; IPLC-inclusive models demonstrate enhanced outcomes | <ul style="list-style-type: none"> • Capitalization mechanisms • IPLC benefit-sharing frameworks • Robust safeguards |
| Sovereign and private instruments | Blue bonds, debt-for-nature swaps, sustainability-linked bonds | Debt relief combined with measurable conservation outcomes (e.g., Seychelles, Belize swaps) | <ul style="list-style-type: none"> • Transaction cost reduction • Standardization of terms • Independent verification |

These pathways provide the main entry points for scaling synergistic finance within the emerging climate-finance architecture. To understand how synergistic finance can be scaled, this analysis maps the architecture through which climate and biodiversity commitments translate into on-the-ground outcomes. Figure 2.1 illustrates this flow across four interconnected levels: finance sources, multilateral channels, implementation mechanisms (including NbS instruments and IPLC-led modalities), and measurable outcomes.

Figure 2.1: Synergistic Finance Flow Architecture



At the source level, operationalisation of the NCQG with a floor of USD 300 billion per year and an aspiration to mobilise USD 1.3 trillion annually by 2035 represents a major expansion of climate finance, creating both opportunities and risks for biodiversity (UNFCCC, 2024). As discussed in Chapter 1, traceable finance for NbS is still modest relative to overall climate-related flows, indicating considerable scope to realign existing portfolios and scale up high-integrity NbS within the emerging climate-finance architecture (UNEP, 2023).

The multilateral-channel level reveals the intermediary role of institutions such as the GCF and GEF in shaping finance quality. GCF portfolio analysis showing a 45–47 per cent contribution to NbS demonstrates that climate funds can mainstream nature considerations when governance systems incentivise multi-benefit approaches (GCF, 2024). Similarly, GEF Integrated Programmes explicitly design for cross-focal-area outcomes, moving beyond traditional siloed projects (GEF IEO, 2025). Multilateral development banks, with their capacity to leverage public finance and influence national policy frameworks, are central to the KMGBF Resource Mobilisation Strategy, though their adoption of Common Principles for Tracking Nature-Positive Finance is still in early stages (OECD, 2024).

At the mechanism level, the diversity of pathways reflects different theories of change for achieving synergies. High-integrity NbS and EbA represent the most direct route, delivering climate and biodiversity outcomes through ecosystem-based interventions. REDD+ and jurisdictional forest

finance provide performance-based payments that reward verified conservation and restoration outcomes, though effectiveness depends critically on robust safeguard implementation (see Section 3.2). Direct-access mechanisms, such as the GEF Inclusive Conservation Initiative and the proposed 20 per cent IPLC allocation in the TFFF, acknowledge that effective stewardship often resides with communities managing high-biodiversity landscapes (GEF, 2021). Sustainable-finance taxonomies and mandatory disclosure frameworks, particularly the EU CSRD and ESRS E4, function as enabling infrastructure by creating transparency and steering private capital toward nature-positive activities (EFRAG, 2023).

The outcome level points to the importance of assessing synergistic finance not only by volume but by verified impact across three dimensions: climate mitigation and adaptation; biodiversity integrity and KMGBF target alignment; and social equity, including IPLC rights and benefit-sharing. This multi-dimensional accountability distinguishes genuinely synergistic finance from projects that claim co-benefits without rigorous evidence or that prioritise one objective while creating harm in another domain (see Chapter 3 on trade-offs).

Three insights emerge from this architecture. First, the alignment challenge is not only about increasing total finance but about whether climate finance, which is scaling rapidly, integrates biodiversity considerations systematically or treats them as optional co-benefits. Second, governance quality at the multilateral-channel level shapes whether finance flows translate into genuine synergies or missed opportunities. Third, the effectiveness of implementation mechanisms depends on complementary enabling conditions, including secure land tenure, Free, Prior and Informed Consent, equitable benefit-sharing arrangements and robust MRV systems that track biodiversity outcomes alongside carbon metrics.

2.3. Multilateral and public finance pathways

Multilateral climate and environment funds, together with multilateral development banks (MDBs) and bilateral providers, shape the quality and direction of climate finance (OECD, 2024). Their mandates, safeguard systems and co-benefit-tracking frameworks can promote or constrain synergistic approaches (OECD, 2024).

2.3.1. *Green Climate Fund and Global Environment Facility*

The Green Climate Fund (GCF) is one of the largest public financiers of NbS. Internal analyses show roughly 45–47 per cent of its portfolio contributes to Nature-based Solutions across mitigation and adaptation windows (GCF, 2023; GEF IEO, 2025). The Fund uses its higher risk appetite to crowd in private capital through first-loss equity, guarantees and technical assistance. The Amazon Bioeconomy Fund illustrates this approach, blending GCF resources with private investment in sustainable agroforestry and native timber value chains (GCF, 2023; WRI, 2024).

In GEF-8, most IPs incorporate NbS elements to deliver multiple Global Environmental Benefits. For example, conserving primary tropical forests supports biodiversity, carbon storage and local livelihoods (GEF, 2021; WBG, 2024b). The Inclusive Conservation Initiative (ICI) demonstrates how direct allocation to Indigenous Peoples and local communities (IPLCs) can strengthen environmental outcomes and equity. The ICI supports IPLC-led stewardship across millions of hectares of high-biodiversity land (GEF, 2021; WWF et al., 2021).

Experience from GCF and GEF portfolios reveals several governance features associated with high-integrity synergistic programming (GCF IEU, 2020; GEF IEO, 2025). Successful programmes define explicit multi-benefit objectives and indicators at the design stage, making biodiversity,

climate and social outcomes visible rather than treating nature as an implicit co-benefit (GEF IEO, 2025). They rely on robust safeguard systems that recognise IPLC rights and knowledge, including clear provisions on tenure, Free, Prior and Informed Consent, and equitable benefit-sharing (GCF IEU, 2020; FAO, 2006; Rainforest Foundation Norway, 2021). They also use flexible instruments – such as programme-based approaches and jurisdictional or landscape-scale operations – that support long time horizons and adaptive management across ecosystems and sectors (GEF, 2021; GEF IEO, 2025).

However, both GCF and GEF face challenges in tagging, measuring and reporting biodiversity outcomes consistently across their climate portfolios. This limits Parties' ability to assess how much climate-labelled finance is genuinely nature-positive (GEF IEO, 2025; OECD, 2024).

2.3.2. Multilateral Development Banks: From “Do-No-Harm” to Nature-positive Alignment

MDBs are central to the KMGBF Resource Mobilisation Strategy because of their ability to leverage large volumes of public and private capital and influence national policy frameworks (CBD, 2022; WRI, 2024). Historically, MDB approaches to biodiversity relied on environmental and social safeguards to avoid or mitigate harm, with little systematic effort to generate positive nature outcomes (EIB, 2023; World Bank, 2017). Recent developments indicate shifts in this area.

In 2023, ten MDBs adopted Common Principles for Tracking Nature-Positive Finance, committing to more consistent methodologies for identifying and reporting investments that contribute to nature goals (IDB, 2023; OECD, 2024). Early analysis shows around one-third of MDB commitments are in sectors with material nature dependencies – such as infrastructure, energy and water. However, nature-positive outcomes are not yet routinely part of project diagnostics, economic analysis or results frameworks (Neunuebel et al., 2025; WRI, 2024).

Emerging instruments illustrate how MDBs can link financial performance to verified nature results. For example, the Wildlife Conservation Bond ties investor returns to rhino population trends (WBG, 2024a; WRI, 2024). Analysis suggests that for MDBs to become major drivers of synergistic finance, three shifts would be beneficial: integrating nature into macro-economic and country diagnostics; applying nature-positive screening and “Do-No-Significant-Harm” (DNSH) criteria to climate operations; and using concessional and blended-finance windows to de-risk NbS and EbA investment in client countries (Neunuebel et al., 2025). GEO-7 identifies MDBs as key actors in mobilising and re-orienting capital for systemic environmental outcomes (UNEP, 2025).

2.4. Forest and Ecosystem Finance: Results-based and Long-term Mechanisms

Forests and other ecosystems are central to the biodiversity-climate nexus, and forest finance shows both synergies and trade-offs more clearly than most other areas (Angelsen et al., 2012; Dasgupta, 2021). This section examines the newly launched Tropical Forest Forever Facility (TFFF) and lessons from REDD+ and jurisdictional approaches.

2.4.1. Tropical Forest Forever Facility

The Tropical Forest Forever Facility (TFFF), launched at COP30 in Belém by Brazil and partners, addresses a longstanding market failure: tropical forests provide global climate and biodiversity benefits, but forest countries bear most conservation costs (Government of Brazil, 2024; UNFCCC, 2025a). The mechanism works as an endowment-like blended-finance vehicle targeting around USD 125 billion. It invests in a diversified portfolio and uses returns to provide predictable annual payments to participating jurisdictions (Government of Brazil, 2024).

Three features distinguish the TFFF as a synergistic finance model. First, payments are based on verified forest area measured through satellite imagery, rewarding forest “stocks” rather than only emission-reduction “flows” (Government of Brazil, 2024). Second, a minimum share of payments – around 20 per cent – flows directly to IPLCs, building on evidence that Indigenous territories often have lower deforestation and better biodiversity outcomes (Government of Brazil, 2024; WWF et al., 2021). Third, the mechanism complements existing REDD+ and carbon market initiatives rather than replacing them, providing a more stable base for long-term conservation finance (Angelsen et al., 2012; Government of Brazil, 2024).

With its launch at COP30, the TFFF demonstrates how long-duration, jurisdictional instruments can channel NCQG-related climate finance into biodiversity outcomes – provided its governance, safeguards and transparency mechanisms work as designed (Government of Brazil, 2024; UNFCCC, 2025).

2.4.2. REDD+ and High-integrity Carbon Markets

Over the past decade, REDD+ has been the main international framework linking forest conservation to climate finance (Angelsen et al., 2012; UNFCCC, 2011). Multilateral facilities such as the Forest Carbon Partnership Facility (FCPF) and results-based payment programmes have mobilised significant public finance, offering lessons for integrated approaches (Hacking et al., 2021; World Bank, 2021). Programmes with effective benefit-sharing, early stakeholder engagement and robust MRV systems tend to deliver more durable emission reductions alongside biodiversity and social benefits (Angelsen et al., 2012; World Bank, 2021).

Recent efforts to scale jurisdictional REDD+ through the LEAF Coalition and similar initiatives show growing private interest in high-integrity forest credits, though concerns remain about additionality, permanence, leakage and IPLC rights (VCMI, 2024; World Bank, 2023). The key question is whether forest carbon finance protects and restores ecosystem integrity or instead incentivises monoculture plantations and displaces deforestation to other areas (IPCC, 2019).

2.5. Empowering Indigenous Peoples and Local Communities

Indigenous Peoples and local communities manage territories containing a large share of the world’s remaining intact ecosystems and serve as effective biodiversity stewards (TNFD, 2023; WWF et al., 2021). Biodiversity declines more slowly on IPLC lands than in comparable non-Indigenous areas, yet IPLCs receive less than one per cent of international climate-related development assistance directly (Rainforest Foundation Norway, 2021; WWF et al., 2021). Bilateral biodiversity-related development finance for IPLCs reached roughly USD 1.1 billion in 2023 – an increase, but still a small fraction of total biodiversity flows (TNC, 2025).

Scaling synergistic finance needs more resources and different access and governance models. Direct-access modalities, such as those piloted in the GEF’s Inclusive Conservation Initiative, strengthen ecological outcomes when finance flows through IPLC-led organisations that uphold rights and local priorities (GEF, 2021; GEF IEO, 2025). Technical evidence suggests that treating FPIC, secure land tenure, and equitable benefit-sharing as core conditions – rather than optional co-benefits – is assessed as a key approach for achieving durable outcomes (FAO, 2006).

National and sub-national public finance can enhance IPLC access through community-level grant windows, support for IPLC-led enterprises and co-management arrangements for protected areas (OECD, 2024). These approaches enhance effectiveness and legitimacy while preventing climate

finance from exacerbating social inequities or undermining customary governance systems (Rainforest Foundation Norway, 2021; WWF et al., 2021).

2.6. Taxonomies, Disclosure and Standards as Enabling Infrastructure

Scaling synergistic finance faces a barrier: the lack of widely used criteria for nature-positive or biodiversity-aligned investment (TNFD, 2023). Several jurisdictions – the European Union, ASEAN, Colombia and South Africa – are developing sustainable-finance taxonomies that define environmentally sustainable activities and include requirements such as DNSH to biodiversity (ASEAN, 2025; EU, 2020; South Africa National Treasury, 2022).

Voluntary disclosure frameworks such as the Taskforce on Nature-related Financial Disclosures (TNFD) provide guidance for companies and financial institutions on assessing and reporting nature-related dependencies, impacts, risks and opportunities (TNFD, 2023). As TNFD elements enter mandatory disclosure regimes like the European Sustainability Reporting Standards, they can redirect private capital toward activities that support KMGBF goals and away from those degrading ecosystems (EFRAG, 2023; WEF, 2024). UNEA-7 and GEO-7 emphasise strengthening these enabling conditions – policy coherence, disclosure frameworks and sustainable-finance standards – as part of integrated environmental governance (UNEA, 2025; UNEP, 2025).

These classification and disclosure tools serve three functions for synergistic finance. First, they give public and private actors a common language to identify climate- and biodiversity-aligned investments (ASEAN, 2025; South Africa National Treasury, 2022). Second, they enable more consistent tracking of biodiversity co-benefits within climate-finance reporting, including NCQG and MDB portfolios (IDB, 2023; OECD, 2024). Third, they incentivise project developers and issuers – for example in green-bond and sustainability-linked-bond markets – to incorporate biodiversity outcomes and safeguards directly into transaction design rather than treating them as secondary (TNFD, 2023; WEF, 2024).

Chapter 3: Managing Trade-off Finance – Risks and Safeguards

Trade-off finance refers to climate-motivated investments that inadvertently degrade biodiversity through poorly designed mitigation or adaptation projects. With nature-negative finance flows of USD 7.3 trillion per year far exceeding the USD 220 billion in NbS investment, the structural risk is substantial. Moreover, the rapid scaling of climate finance under the NCQG creates urgency: without systematic safeguards, expanded flows could accelerate ecosystem degradation even while addressing climate objectives. This chapter examines three major domains where trade-offs have materialized: land-use mitigation approaches that prioritize carbon over biodiversity (Section 3.2), renewable energy and adaptation infrastructure that fragments habitats or undermines coastal ecosystems (3.3), and the critical gap between safeguard policies and implementation (3.4). The chapter synthesizes approaches identified in the literature and practice that have been associated with reduced biodiversity harm while maintaining climate integrity (3.5).

3.1. Identifying the Trade-off Nexus and the Impact Inequality

The Kunming-Montreal Global Biodiversity Framework (KMGBF) and the Paris Agreement are complementary, but the rapid scale-up of climate finance has created a distinct category of trade-off finance. Trade-off finance refers to financial flows that pursue climate objectives while harming or risking ecological integrity through species, habitat and ecosystem degradation.

Flows initially treated as “isolated” can become trade-off finance over time when biodiversity impacts go unassessed or unmanaged. Examples include transport or energy infrastructure presumed neutral that later fragments habitat or causes species decline (OECD, 2019a). These cases highlight the need for early biodiversity screening of presumed isolated projects and sectors (Section 2.2.1).

Expanding climate-finance commitments coexist with persistent, large-scale nature-negative flows, creating structural tension in the global finance system. This tension reflects what Dasgupta (2021) calls the impact inequality: humanity’s total demand on the biosphere – driven by population, consumption and technology – exceeds its regenerative capacity. Literature estimates USD 2.6–7 trillion annually in nature-negative capital flows (UNEP et al., 2023; IMF, 2023), with State of Finance for Nature (SFN) 2026 quantifying USD 7.3 trillion in 2023 outpacing NbS flows of USD 220 billion by over 30:1 (UNEP, 2026). These nature-negative flows overwhelm incremental green and NbS finance, underscoring the systemic scale of misalignment (UNEP, 2026).

A substantial share of these nature-negative flows comes from environmentally harmful subsidies (EHS) and tax expenditures in fossil fuels, industrial agriculture and fisheries (UNEP, 2023; Koplow & Steenblik, 2024). Recent assessments in the 2025 Biodiversity Finance Trends Dashboard show that environmentally harmful subsidies to nature, excluding fossil fuels, have grown since the KMGBF entered force and now total around USD 840 billion per year (TNC, 2025; IMF, 2023; Koplow & Steenblik, 2024). Broader nature-negative subsidies and capital flows remain in the USD 2.6–7 trillion range (TNC, 2025; IMF, 2023; Koplow & Steenblik, 2024). EHS act as a structural source of trade-off finance by incentivising activities that increase emissions and degrade ecosystems, contradicting KMGBF Target 18’s commitment to reduce harmful incentives by at least USD 500 billion per year by 2030 (CBD, 2022).

Climate-motivated finance often exacerbates this gap by funding transitions that reduce emissions but harm local ecosystems through poorly sited renewable energy or monoculture plantations

(TNFD, 2023; IPCC, 2019). GEO-7 emphasises that addressing this misalignment may require additional climate and biodiversity funding plus rapid reallocation away from harmful activities toward integrated solutions (UNEP, 2025). Literature on managing trade-off finance suggests approaches that extend beyond a do-no-harm baseline toward integrated wellness – recognising non-linearities and tipping points in ecosystem processes while treating ecological integrity as foundational to climate stability (Dasgupta, 2021).

3.2. Land-Use Mitigation Risks: Carbon vs. Biodiversity

Land-use mitigation shows clear climate-biodiversity trade-offs, especially where rapid carbon gains override ecosystem integrity (IPCC, 2019; Seddon et al., 2021). Four areas show how a narrowly climate-centric approach of land policy drives ecological harm: monoculture afforestation, low-integrity offsets, the Article 6.4 removals framework and the EU Carbon Removal Certification Framework.

3.2.1. *Monoculture and the Carbon-centrism of Nature Policy*

Mitigation strategies pursuing rapid carbon sequestration through monoculture afforestation or large tree plantations overlook ecological requirements for structural complexity, native species diversity and landscape connectivity. Plantations of fast-growing, non-native species reduce ecosystem resilience, alter hydrology and cause net biodiversity losses, even while meeting short-term carbon targets (IPCC, 2019).

This reflects broader over-prioritisation of carbon in nature policy: an exclusive focus on carbon flows (emissions and removals) ignores nature stocks – existing ecosystem extent, condition and functionality (Government of Brazil, 2024; TNFD, 2023). Converting biodiverse grasslands, savannas or wetlands into tree plantations damages ecosystems that store substantial soil carbon and support unique biota that forest cover cannot replace (IPCC, 2019). GEO-7 warns that scaling such land-use changes without safeguards undermines biodiversity goals and long-term climate resilience (UNEP, 2025).

Technical evidence suggests the utility of native-ecosystem restoration, landscape-scale planning, and long-term ecological monitoring over narrow carbon metrics for maintaining ecosystem integrity (Seddon et al., 2021). Climate finance eligibility criteria should exclude projects that drive conversion of high-biodiversity non-forest ecosystems for carbon sequestration (TNFD, 2023; Government of Brazil, 2024).

3.2.2. *Low-integrity Carbon Offset Schemes and Direct Developer-Community Engagement*

Low-integrity carbon-offset schemes promise inexpensive emission reductions but deliver weak or negative biodiversity outcomes. Documented failures stem from missing site-specific biodiversity baselines, inadequate leakage monitoring and weak social safeguards, particularly around land tenure (OECD, 2025).

Project developers engaging directly with local communities for carbon rights – bypassing national authorities – create risks for ecosystems and IPLC rights (Angelsen et al., 2012; Sunderlin et al., 2011). These arrangements create “win-lose” outcomes: developers secure long-term control over land and carbon revenue while local people face restrictions on resource use, dispossession or conflicts, and biodiversity becomes primarily a carbon asset (Angelsen et al., 2012).

The analysis identifies the potential utility of integrity standards that extend beyond greenhouse-gas accounting, including robust biodiversity baselines, equitable benefit-sharing, and mandatory FPIC (TNFD, 2023; FAO, 2006). Emerging voluntary-market standards like the Core Carbon Principles address some issues, but uptake and enforcement remain uneven (ICVCM, 2024; VCMI, 2024).

3.2.3. Article 6.4 Mechanism and the Reversal Risk Buffer Pool

Under the Paris Agreement, the Article 6.4 mechanism develops rules for internationally transferred mitigation outcomes, including those from removals activities (UNFCCC, 2024). The Article 6.4 Supervisory Body has proposed a draft removals standard with a Reversal Risk Buffer Pool. This may require at least 20 per cent of issued credits from land-based activities to be set aside as insurance against reversals like fires or pest outbreaks (SBM, 2024).

This buffer approach addresses non-permanence and some climate risks but does not guarantee biodiversity integrity. Without explicit biodiversity criteria, Article 6.4 removals could incentivise monoculture plantations or other land-use changes that undermine ecosystem diversity and resilience (UNEP, 2025; UNFCCC, 2024). GEO-7 emphasises that climate solutions could avoid locking in land-use patterns that compromise biodiversity and ecosystem services (UNEP, 2025).

Strengthening Article 6.4 to avoid trade-off finance may require three additions: (i) mandatory biodiversity safeguards and indicators for land-based methodologies; (ii) exclusion or strict limitation of projects that convert high-biodiversity ecosystems; and (iii) explicit provisions for IPLC rights, FPIC and equitable benefit-sharing in host countries (UNFCCC, 2024).

3.2.4. EU Carbon Removal Certification Framework (CRCF) and Q.U.A.L.I.T.Y criteria

The EU Carbon Removal Certification Framework (CRCF) is among the first regulatory schemes defining criteria for high-quality carbon removals and creating a certification system for both public policy and voluntary markets (EU, 2024). The framework applies the Q.U.A.L.I.T.Y principles – Quantification, Additionality, Long-term storage and SustainabILLITY – to evaluate removal activities.

While the “sustainability” pillar explicitly references environmental safeguards, it may not be stringent enough to prevent carbon-farming incentives from converting biodiverse grasslands and other non-forest ecosystems into biomass plantations. This risk may require site-specific biodiversity assessments, ecosystem-appropriate baselines and a strong “no conversion of high-biodiversity ecosystems” rule within CRCF implementation (TNFD, 2023; OECD, 2025).

The CRCF shows the potential and limits of carbon-centred certification: without robust biodiversity metrics and clear exclusion criteria, even advanced removal schemes become vehicles for trade-off finance rather than genuine co-benefits (UNEP, 2025).

The assessment indicates that high-integrity outcomes are associated with land-use-mitigation eligibility criteria that exclude the conversion of high-biodiversity non-forest ecosystems (TNFD, 2023; FAO, 2006; OECD, 2025).

3.3. Infrastructure and Mal-adaptation Trade-offs

Infrastructure investments – renewable energy, transport and coastal protection – generate significant trade-offs when siting and design ignore biodiversity considerations (OECD, 2019a; IUCN & The Biodiversity Consultancy, 2021).

3.3.1. Renewable Energy Siting and Key Biodiversity Areas (KBAs)

Rapid deployment of renewable energy is identified in several assessments as important for decarbonization but generates substantial biodiversity trade-offs when poorly sited. Large-scale hydropower, wind and solar projects fragment habitats, alter hydrological regimes and cause direct wildlife mortality (Dasgupta, 2021; Marques et al., 2019). These risks intensify when projects are in or near Key Biodiversity Areas (KBAs), protected areas or critical ecological corridors.

Hydropower dams can obstruct migratory pathways for fish and freshwater species, disrupt sediment flows and cause loss of floodplain and wetland habitats (Dasgupta, 2021; IPCC, 2019). Large wind farms can cause significant functional habitat loss for soaring birds and bats, especially along migration routes, unless operators apply curtailment measures like increasing turbine cut-in speeds during migration periods (Marques et al., 2019; OECD, 2024).

Avoiding these trade-offs may require integrating biodiversity data and spatial-planning tools early in energy planning. This includes explicitly excluding KBAs and critical habitats from renewable-energy project pipelines and applying the mitigation hierarchy at the landscape level (OECD, 2024). GEO-7 identifies nature-positive infrastructure as a key pillar of systemic transformation, emphasising such planning approaches (UNEP, 2025).

Beyond improved spatial planning, emerging standards point toward nature-positive infrastructure that integrates biodiversity outcomes into renewable-energy design and operation (OECD, 2024a; IUCN, 2021). For onshore and offshore wind, good practice includes turbine-free buffer zones around key flyways and breeding colonies, curtailment protocols – higher cut-in wind speeds or temporary night-time shutdowns during peak bat and bird activity – and adaptive management based on post-construction monitoring (OECD, 2024; IUCN, 2021). For solar PV, nature-inclusive and agrivoltaic designs combine elevated panels, vegetated understories with native species, habitat corridors, nest boxes and low-intensity grazing. Early evidence indicates higher plant and insect diversity and enhanced ecosystem services compared with conventional ground-mounted solar parks (Ludzuweit et al., 2025; OECD, 2024). Initiatives such as IUCN’s “Renewables for Nature” and associated guidance for wind and solar provide practical design criteria. MDBs can promote these through project preparation, policy dialogue and performance standards (IUCN, 2021; IUCN, 2025).

3.3.2. Coastal Mal-adaptation and the “Triple Dividend”

Adaptation finance frequently prioritises grey-infrastructure solutions like seawalls, breakwaters and levees, damaging or displacing coastal ecosystems including mangroves, seagrass beds and coral reefs. These ecosystems provide more effective and flexible natural protection against storm surges and erosion, plus critical habitat, carbon storage and livelihood benefits (UNEP, 2023; Global Commission on Adaptation, 2019).

When grey infrastructure undermines these natural buffers, it creates mal-adaptation, increases long-term vulnerability and reduces the adaptive capacity of ecosystems and communities (Global Commission on Adaptation, 2019; TNFD, 2023). In contrast, coastal Nature-based Solutions – mangrove restoration, dune rehabilitation and reef protection – deliver a triple dividend: avoided losses from climate impacts, economic co-benefits and wider social and environmental gains (Global Commission on Adaptation, 2019). Studies show that making infrastructure more climate-

resilient and integrating NbS adds only around 3 per cent to upfront costs but yields benefit–cost ratios of roughly 4:1 (Global Commission on Adaptation, 2019).

Adaptation windows in climate funds and national budgets could apply an NbS-first principle: grey solutions only where NbS are technically infeasible or insufficient, and hybrid designs that minimise ecological damage (UNEP, 2025). The central governance challenge is integrating strategic environmental assessment, spatial planning and the mitigation hierarchy early in project design to steer adaptation and mitigation infrastructure toward synergistic rather than trade-off finance (OECD, 2025; UNEP, 2025).

3.4. Safeguards Implementation: The Gap Between Policy and Practice

The implementation of safeguard frameworks is examined in greater detail in the parallel technical study on biodiversity-finance safeguards requested under CBD Decision 16/34, which assesses how the guidance adopted in Decisions XII/3 and 14/15 has been operationalised, identifies good practices and barriers to implementation, and outlines opportunities for strengthening safeguard frameworks in the context of scaled-up climate and biodiversity finance.

Many trade-offs emerge not because safeguards are absent on paper, but because they are weakly implemented. Four areas illustrate this gap: REDD+ safeguards, institutional capacity constraints in funds and MDBs, the application of “Do-No-Significant-Harm” (DNSH) and corporate due diligence.

3.4.1. Cancun Safeguards and National Information Systems (SIS)

The Cancun Safeguards (Decision 1/CP.16) are the primary international standard for ensuring that REDD+ actions do not harm biodiversity or local rights (UNFCCC, 2011). Countries such as Brazil and Indonesia have established Safeguard Information Systems (SIS) and submitted summaries describing how they address and respect these safeguards (Brazil Ministry of Environment, 2018; Indonesia MoEF, 2023).

Despite this progress, a persistent policy-practice gap remains. Evaluations show that SIS often under-report or inadequately document non-carbon benefits, biodiversity co-benefits and social outcomes, and focus instead on procedural compliance (World Bank, 2021). Achieving meaningful FPIC remains challenging. Some project proponents call it an "impossible dream" because of the time and resources required for genuine consensus-building in complex local contexts (Angelsen et al., 2012).

Safeguards could be considered beyond checklists to encompass participatory processes, rights-based approaches and independent verification of biodiversity and social outcomes (FAO, 2006). GEO-7 highlights rights-based governance and IPLC knowledge as critical enablers of successful environmental transformations (UNEP, 2025).

Table 3.1 shows key biodiversity risks and corresponding safeguard and governance needs across selected activities and instruments.

Table 3.1: *High-risk Climate Finance Activities and Required Safeguards*

| Activity / Instrument | Biodiversity Risk | Key Safeguard / Governance Need |
|---|---|---|
| Monoculture plantations and bioenergy crops | Habitat simplification; water stress; invasive species spread | Native species prioritization; landscape-scale planning; water impact assessments |

| | | |
|---|--|--|
| Low-quality carbon credits | Leakage; non-permanence; land tenure conflicts; additionality failures | Biodiversity baselines; FPIC; CCBS or equivalent integrity standards; independent verification |
| Article 6.4 Carbon Dioxide Removal (CDR) methodologies | Engineered carbon removal displacing natural ecosystems; land competition | Biodiversity criteria embedded in methodologies; buffer reserves; nature co-benefit requirements |
| Grey coastal infrastructure | Mangrove and coral reef destruction; coastal ecosystem degradation; maladaptation | NbS-first approach; DNSH application in adaptation finance windows; comparative analysis requirement |
| Renewable energy in KBAs | Habitat fragmentation; collision mortality (wind/solar); hydrological disruption (hydro) | Strategic spatial planning; KBA exclusion zones; strict mitigation hierarchy enforcement; environmental impact assessments |

3.4.2. Institutional Safeguards: Multilateral Development Banks and GCF Accreditation

Multilateral Development Banks and climate funds have adopted sophisticated safeguard policies, such as the World Bank’s Environmental and Social Framework (ESF) and the GCF’s Environmental and Social Management System (ESMS) (World Bank, 2017; GCF IEU, 2020). However, implementation capacity often lags behind ambition. An evaluation of the GCF’s accreditation process found that 55.6 per cent of Direct Access Entities (DAEs) had incomplete scores on environmental and social safeguards, revealing significant gaps in systems and expertise (GCF IEU, 2020).

These capacity constraints lead to delays, cost escalation and sometimes diluted safeguard requirements during project design and implementation (GCF, 2024; GEF, 2021). MDB experience suggests that while safeguards prevent the most egregious harms, they are less effective at steering portfolios toward nature-positive outcomes, especially when biodiversity expertise is thinly spread across large institutions (WRI, 2024; Neunuebel et al., 2025).

Closing this gap may require increased investment in institutional capacity-building for DAEs and project proponents, simplified but robust safeguard templates for smaller entities and greater use of programmatic approaches that embed safeguards and biodiversity co-benefits at the portfolio level (GCF IEU, 2020).

3.4.3. Do-No-Significant-Harm (DNSH) and the Mitigation Hierarchy

The DNSH principle is a cornerstone of emerging sustainable-finance taxonomies, including those developed by the EU and ASEAN. It may require that activities contributing to one environmental objective like climate mitigation do not significantly harm others, such as biodiversity or water (EU, 2020; ASEAN, 2025). DNSH operates through the mitigation hierarchy – Avoid, Minimise, Restore, Offset – which prioritises impact avoidance over compensation (OECD, 2025).

In practice, environmental impact assessments (EIAs) come too late in project cycles, after major siting and design decisions (GEF, 2021). Late-stage EIAs limit the practical application of the “avoid” step, leaving restoration and offsetting as the primary options despite their greater technical uncertainties in preserving biodiversity. Options for reducing trade-off risks include integrating DNSH and the mitigation hierarchy into early-stage spatial planning, sector strategies and financial-product design rather than treating them as downstream compliance (ASEAN, 2025; WEF, 2024). GEO-7 and UNEA-7 emphasise upstream integration of environmental safeguards in infrastructure and energy planning (UNEA, 2025; UNEP, 2025).

3.4.4. Corporate due Diligence: EU CSDDD and Supply-chain Integrity

Corporate supply chains are a major channel through which climate-motivated investments drive land-use change, deforestation and habitat degradation. The EU Corporate Sustainability Due Diligence Directive (CSDDD) introduces mandatory due diligence on environmental and human-rights impacts across global value chains (EU, 2024; CBD Secretariat, 2025). Among other requirements, CSDDD obliges large companies to identify, prevent and mitigate deforestation, ecosystem conversion and related human-rights violations in their supply chains (EU, 2024).

This framework provides an important legal lever for aligning private capital with KMGBF Targets 5, 14 and 18, but its effectiveness depends on robust traceability systems and clear performance expectations (FAO, 2024; OECD, 2024). Examples include product-level traceability in timber and commodities, such as using piece-specific specifications and digital tracking to reduce waste and prevent illegally sourced wood from entering supply chains (FAO, 2024).

If effectively implemented, CSDDD and similar regimes could transform potential trade-off finance into synergistic flows by linking corporate climate targets with deforestation-free and nature-positive sourcing requirements. This would simultaneously create pressure to reform environmentally harmful subsidies and other perverse incentives (Koplow & Steenblik, 2024).

3.5 Synthesis: Approaches Identified for Managing Trade-off Finance

Evidence across land-use mitigation, safeguard implementation and infrastructure shows several approaches associated with reduced biodiversity trade-offs that maintain climate objectives. Five thematic areas emerge from these findings (see Table 3.2).

Table 3.2: Approaches for Managing Trade-off Finance

| Thematic Approach | Key Elements | Example Mechanisms |
|--|--|--|
| Prioritize high-integrity NbS over monoculture | <ul style="list-style-type: none"> • Biodiverse reforestation • Multi-species agroforestry • Ecosystem restoration | <ul style="list-style-type: none"> • GCF NbS criteria • Article 6.4 safeguards • EU CRCF QU.A.L.ITY |
| Strengthen carbon offset safeguards | <ul style="list-style-type: none"> • Social and environmental standards • FPIC implementation • Benefit-sharing mechanisms | <ul style="list-style-type: none"> • Cancun safeguards • CORSIA eligible credits • Jurisdictional REDD+ |
| Apply mitigation hierarchy to infrastructure | <ul style="list-style-type: none"> • Avoid KBAs in siting • Minimize through design • Restore/offset residual impacts | <ul style="list-style-type: none"> • IFC PS6 • EU DNSH criteria • Strategic Environmental Assessment |
| Prioritize coastal NbS over grey infrastructure | <ul style="list-style-type: none"> • Mangrove restoration • Coral reef protection • Natural flood management | <ul style="list-style-type: none"> • GCF Adaptation Fund • Blue Natural Capital • Hybrid infrastructure |
| Ensure safeguard implementation capacity | <ul style="list-style-type: none"> • Timely application • Institutional capacity • Monitoring systems • Independent verification | <ul style="list-style-type: none"> • GCF accreditation standards • MDB E&S frameworks • REDD+ Safeguard Information Systems |

These approaches share common features: quality over quantity, with high-integrity interventions delivering stronger outcomes than larger volumes of poorly designed projects; integration at the

design phase rather than downstream mitigation; and independent monitoring systems that strengthen accountability and reduce implementation gaps.

Effectiveness depends on institutional capacity (trained staff, adequate budgets, functioning grievance mechanisms), transparency frameworks that enable public scrutiny, and meaningful participation of Indigenous Peoples and Local Communities in project design and monitoring. These approaches inform Chapter 4 options, particularly metrics and reporting (Section 4.1), public finance alignment (4.2), and IPLC access mechanisms (4.4). The 2026-2027 period offers a strategic window for embedding them into NCQG implementation.

Recognition of existing ecosystem stocks alongside carbon flows

Climate-finance mechanisms focused exclusively on carbon flows (emissions and removals) undervalue maintaining existing ecosystem stocks – intact forests, grasslands, wetlands and reefs (Dasgupta, 2021; Government of Brazil, 2024).

Options:

- Finance mechanisms rewarding maintenance of ecosystem extent and condition, not only emission reductions.
- Valuation approaches that account for ecosystem services beyond carbon storage.
- Stock-based metrics alongside flow-based carbon accounting.

The Tropical Forest Forever Facility (TFFF) exemplifies this approach by providing payments based on verified forest area rather than only emission-reduction flows.

Integration of biodiversity criteria at early policy and design stages

Trade-off cases show that upstream integration avoids biodiversity impacts more effectively than downstream mitigation. Environmental assessments late in project cycles, after major siting and design decisions, shift emphasis toward restoration and offsetting rather than impact avoidance (OECD, 2025; GEF, 2021).

Options:

- Biodiversity screening and DNSH assessment at policy and strategic-planning levels.
- Biodiversity safeguards and indicators integrated into climate-finance eligibility criteria and methodologies (for example Article 6.4, CRCF).
- Spatial planning that excludes high-biodiversity areas from renewable-energy and infrastructure pipelines.
- Early-stage application of the mitigation hierarchy (Avoid, Minimise, Restore, Offset).

Trade-offs: Earlier integration extends planning timelines and may require additional capacity while improving environmental outcomes and reducing long-term restoration costs.

Rights-based approaches including FPIC, tenure security and benefit-sharing

Documented cases of low-integrity offset schemes and infrastructure conflicts show the importance of rights-based approaches. Projects developed without robust FPIC processes and secure tenure arrangements lead to social conflicts, livelihood restrictions and sub-optimal biodiversity outcomes (Angelsen et al., 2012; FAO, 2006).

Options:

- Free, Prior and Informed Consent as a core requirement rather than optional safeguard.
- Legal recognition and strengthening of IPLC land tenure.
- Transparent and equitable benefit-sharing arrangements (for example minimum revenue shares, governance representation).
- Support for IPLC-led conservation and co-management approaches.

IPLC territories show lower deforestation rates and higher biodiversity outcomes, suggesting that rights-based approaches align social equity and environmental effectiveness (WWF et al., 2021).

Evolution of safeguards from compliance tools to strategic portfolio guidance

The policy-practice gap in safeguard implementation across REDD+, MDBs and climate funds shows that current approaches emphasise procedural compliance over strategic portfolio steering (World Bank, 2021; GCF IEU, 2020).

Options:

- Integrating safeguards into portfolio-level targets and strategies rather than project-by-project assessments only.
- Using DNSH principles and exclusion lists to proactively avoid high-risk activities.
- Strengthening monitoring of biodiversity and social outcomes, not only procedural compliance.
- Building capacity for implementing entities, particularly DAEs.
- Independent verification and adaptive management based on outcome monitoring.

Different approaches present trade-offs between safeguard stringency, transaction costs and accessibility for smaller entities.

Reallocation of flows supporting activities with negative environmental impacts

Flows supporting activities with documented negative impacts on biodiversity – estimated at USD 2.6–7 trillion annually – substantially outpace positive investment in nature-based solutions (UNEP, 2023; IMF, 2023). This includes environmentally harmful subsidies in fossil fuels, agriculture and fisheries.

Options:

- National inventories and fiscal impact assessments of subsidies with negative environmental impacts.
- Time-bound reform roadmaps with clear phase-out or repurposing objectives.
- Stakeholder engagement processes to manage distributional impacts.
- Explicit linkage between subsidy reform and investment in nature-positive alternatives, just-transition measures and social protection.

Jurisdictions undertaking subsidy reform show that structured approaches combining inventories, political mandates, stakeholder processes and compensatory measures facilitate reform while maintaining social support (European Commission, 2022).

Synthesis

These five approaches are interconnected and mutually reinforcing. For instance, recognition of ecosystem stocks informs eligibility criteria for climate finance (approach 1 → 2), rights-based

approaches strengthen safeguard effectiveness (approach 3 → 4), and subsidy reform creates fiscal space for scaled implementation of other approaches (approach 5 → 1–4).

Trade-off finance can be managed through governance systems that integrate these approaches rather than treating biodiversity impacts as unavoidable side-effects of climate action. However, implementation contexts, capacity requirements and political-economy considerations vary significantly across jurisdictions and instruments.

Different combinations of these approaches fit different contexts:

- Type of climate finance instrument (mitigation, adaptation, loss and damage).
- National and sub-national institutional capacity.
- Stakeholder configuration and governance systems.
- Resource availability for monitoring and enforcement.
- Alignment with national development priorities and KMGBF implementation strategies.

The selection and sequencing of approaches would be determined by Parties based on these contextual factors.

Chapter 4: Options for Aligning Finance Flows: Areas for Potential Consideration

Translating the assessment's findings on synergies and trade-offs into actionable pathways requires attention to enabling conditions across the finance architecture. This chapter identifies options that Parties and the Conference of the Parties may wish to consider during the critical 2026–2030 implementation window for both the NCQG and KMGBF. The options are organized around four interconnected themes: strengthening metrics and reporting systems to track biodiversity outcomes in climate finance (Section 4.1); aligning public and multilateral finance flows with nature-positive pathways including environmentally harmful subsidy reform (4.2); mobilizing private sector engagement through innovative instruments and de-risking mechanisms (4.3); and enhancing governance arrangements including direct access for Indigenous Peoples and Local Communities (4.4). The chapter also examines critical timing considerations (4.5) and presents four illustrative cases demonstrating how these approaches work in practice (4.6). These options inform the seven Areas for potential COP consideration presented in Chapter 5.

4.1. Strengthening Metrics and Reporting Systems

Why this matters now

Strengthening metrics and reporting systems helps understand how much climate-labelled finance is genuinely nature-positive and track progress toward KMGBF Targets 18 and 19 (CBD, 2022; OECD, 2024). Differences in definitions, tagging practices and biodiversity indicators hinder Parties from comparing portfolios, identifying trade-offs and reporting on alignment with the KMGBF and the NCQG (OECD, 2024; TNFD, 2023).

At the national level, Parties may wish to:

- Harmonise climate and biodiversity tags in public-finance and development-cooperation systems, using a small set of shared climate-biodiversity indicators (OECD, 2024).
- Align NBSAP and NDC reporting on finance to count biodiversity-relevant climate finance consistently and avoid double-counting (CBD, 2022; UNFCCC, 2024).
- Encourage national development banks and key line ministries to use the same basic indicators and tags when reporting on climate- and biodiversity-related spending (OECD, 2024).

The Conference of the Parties may wish to consider:

- Inviting relevant international organizations – such as OECD, regional development banks, and multilateral development banks – to improve tagging and tracking approaches and systems for biodiversity-climate finance indicators that can be used across conventions (CBD, 2025; OECD, 2024; UNFCCC, 2024).
- Considering, in the context of the global review of KMGBF implementation, how these indicators support more comparable reporting on Targets 18 and 19 (CBD, 2025).

Delivering KMGBF Target 19 depends on how much finance is mobilised and how results are measured for both climate and biodiversity (CBD, 2022; OECD, 2024). Current systems treat climate and nature separately: climate is measured in tonnes of CO₂-equivalent, while biodiversity

lacks an agreed core set of indicators, creating “metric fragmentation” and weak comparability across portfolios (TNFD, 2023; IPBES, 2024).

At COP-16, Parties adopted a KMGBF monitoring framework with headline and binary indicators for all goals and targets, including Targets 18 and 19, for use in the seventh and eighth national reports (CBD, 2025). This framework provides a common indicator set that Parties will report against. Instruments such as the Global Biodiversity Framework Fund results framework are aligning their project-level indicators with it, creating opportunities for greater coherence between national reporting and international-finance tracking (GEF, 2025).

The concept of isolated finance introduced in Chapter 1 shows that alignment involves managing nature-negative flows and identifying missed opportunities for joint outcomes in existing climate-, biodiversity- and development-finance portfolios (OECD, 2019; UNEP, 2023). For measurement, this means using metrics and reporting systems that distinguish between genuinely low-interaction activities and projects with significant potential for biodiversity co-benefits (TNFD, 2023; UNEP, 2023a). Emerging tools for biodiversity and NbS screening in infrastructure, urban development and other sectors illustrate how such distinctions work in practice, while revealing data and capacity constraints (UNEP, 2023a; UNECE, 2025).

GEO-7 and UNEA-7 call for improved environmental data and integrated monitoring frameworks as core enablers of systemic transformation, including better alignment of climate, biodiversity and pollution indicators (UNEP, 2025; UNEA, 2025). Strengthened metrics and reporting ensure that NCQG-related finance and Article 6 mechanisms support real biodiversity gains rather than paper-based "co-benefits" (UNFCCC, 2024; SBM, 2024).

4.1.1. Integrated Biodiversity–climate Metrics

Options for Parties, funds and financial institutions to consider include adopting integrated metrics that extend beyond tonnes of CO₂-equivalent to include ecosystem extent, condition and resilience, building on the TNFD LEAP approach and IPBES nexus indicators (TNFD, 2023; IPBES, 2024). These metrics can be disaggregated by finance pillar – mitigation, adaptation and loss and damage – to assess each unit of climate finance against its contribution to ecosystem integrity, not just carbon outcomes (UNFCCC, 2021; UNEP, 2023).

At the operational level, the Conference of the Parties may wish to consider inviting multilateral funds and MDBs to converge on a minimum core set of biodiversity indicators for NbS and ecosystem-based adaptation projects. Examples include changes in natural-habitat extent, species-richness proxies and IPLC stewardship area, linked to KMGBF Targets 1, 2, 8, 11 and 18 (CBD, 2022; GEF IEO, 2025). Harmonised metrics enable the Subsidiary Body on Implementation (SBI) to compare biodiversity contributions across climate funds and identify where trade-off finance remains prevalent.

Parties may use a small, shared set of climate-biodiversity tags to identify where public and development-cooperation portfolios already support KMGBF Targets 18 and 19, and where gaps remain (OECD, 2024; CBD, 2022).

4.1.2. Alignment of Financial Disclosures and Double Materiality

Voluntary frameworks such as TCFD and TNFD have advanced corporate and financial reporting on climate and nature risks, but GEO-7 emphasises that mandatory regimes are needed to shift

capital at scale (TCFD, 2017; TNFD, 2023; UNEP, 2025). New disclosure frameworks recognise that finance needs information on both how nature loss affects firms and how firms affect nature – a “double-materiality” perspective (TNFD, 2023; EFRAG, 2023).

In practical terms, three directions are relevant for the Conference of the Parties:

- the potential utility of a small core of indicators for both public-finance and disclosure reporting;
- the benefits of phased implementation to ensure feasibility for developing countries;
- the role of disclosure in redirecting finance away from nature-negative activities as a core factor for KMGBF alignment (TNFD, 2023; WEF, 2024).

The COP may also consider suggesting that global standard-setting bodies like the International Sustainability Standard Board (ISSB) explicitly embed biodiversity into climate-related disclosure standards, creating a coherent signal for private finance and avoiding parallel reporting silos (TCFD, 2017; TNFD, 2023).

Seven priority areas emerge where enhanced coordination between biodiversity and climate finance can accelerate progress toward both the Kunming-Montreal Global Biodiversity Framework and the Paris Agreement. These areas reflect finance flows, institutional mandates, and policy windows leading to 2030, when institutional decisions will influence whether expanded climate finance supports or undermines biodiversity outcomes.

These areas reflect finance flows, institutional mandates and policy windows during the period leading to 2030, when institutional decisions will influence whether expanded climate finance supports or undermines biodiversity outcomes.

The seven priority areas address distinct but interconnected challenges: transparency frameworks, finance integration, subsidy reform, public finance alignment, safeguards, Indigenous Peoples and local communities (IPLCs) access, and loss and damage responses. They reflect both immediate foundational actions (2026-2027) and sustained implementation through 2030.

Table 4.1 presents these seven priority areas with indicative sequencing across three implementation phases. The Conference of Parties may wish to consider these areas as a possible framework for finance-related deliberations during the COP17 cycle and in subsequent meetings.

Table 4.1: Priority Areas for Biodiversity-Climate Finance Alignment to 2030

| Priority Area | Short-term: Foundations | Medium-term: Implementation | Long-term: Scaling |
|--|--|---|--|
| Area 1: Transparency & Nature-Related Disclosure | Establish core biodiversity-climate indicators; pilot double materiality reporting frameworks | TNFD adoption accelerates globally; mandatory reporting frameworks emerge in key jurisdictions | Full biodiversity MRV integration in climate finance; mandatory disclosure requirements operational |
| Area 2: Integrate Biodiversity into Climate Finance | NCQG implementation guidance embeds biodiversity criteria; MDB strategies formally align with KMGBF targets | Climate funds mainstream biodiversity co-benefit monitoring; NbS reaches 40% of adaptation finance with rigorous indicators | High-integrity NbS scales to 50% of adaptation finance; full DNSH compliance across climate portfolios |
| Area 3: Accelerate EHS Reform (Target 18) | Complete national EHS inventories; develop time-bound reform plans with stakeholder consultation | Implement phased EHS phase-out; pilot fiscal repurposing mechanisms toward nature-positive outcomes | Repurpose minimum 10% of EHS savings to biodiversity conservation; accelerate reform in key sectors |
| Area 4: Align Public Finance with Nature-Positive Goals | Adopt green budgeting tools; develop DNSH criteria for public expenditure review | Apply harmonized green taxonomies; mainstream DNSH in infrastructure procurement | Achieve 50% SOE nature-positive alignment; full DFI (development finance institution) biodiversity integration with verification |
| Area 5: Strengthen Safeguards in Climate Instruments | Enhance Article 6.4 biodiversity safeguards; establish IPLC rights frameworks in carbon markets | Make ecosystem integrity criteria operational; require mandatory biodiversity impact assessments | Enforce no-net-loss standards for high-value ecosystems; verify corporate net-zero plans against biodiversity impacts |
| Area 6: Scale IPLC Direct Access | Establish dedicated direct access windows; strengthen land tenure security and FPIC frameworks | IPLC direct access reaches 10% of climate fund portfolios; scale jurisdictional REDD+ with benefit-sharing | Achieve transformational IPLC direct access (20% of portfolios); channel USD 1+ billion annually through IPLC-led mechanisms |
| Area 7: Embed Biodiversity in Loss & Damage | Operationalize L&D Fund with explicit biodiversity mandate; recognize ecosystem collapse as compensable loss | Integrate biodiversity safeguards in all L&D responses; prioritize nature-based recovery over grey infrastructure | Mainstream ecosystem restoration in L&D implementation; scale IPLC-led recovery approaches |

Note: The indicative timeframes reflect institutional policy windows and expected capacity-building trajectories but should be understood as flexible, recognising different national circumstances, varying institutional capacities and the need to adapt implementation sequences to domestic policy cycles. Parties are encouraged to adjust these sequencing suggestions to reflect their own context and readiness.

These seven priority areas operate in parallel with staggered emphasis reflecting institutional readiness and policy windows. Areas 1 (transparency), 5 (safeguards), and 7 (loss and damage) require early institutional action in 2026-2027 to establish measurement, governance, and funding frameworks for effective finance alignment. Areas 2 (climate finance integration), 3 (EHS reform), and 4 (public finance alignment) represent sustained finance transformation throughout 2026-2030. Area 6 (IPLC direct access) scales progressively from pilot modalities to transformational funding levels.

Implementation of these priority areas may require coordinated action across multiple institutional actors: CBD Parties, multilateral climate funds (GCF, GEF), multilateral development banks, UNFCCC bodies, the Loss and Damage Fund, private financial institutions, standard-setting organizations (such as ISSB and TNFD), and Indigenous Peoples and local communities. The respective roles and contributions of these actors may be determined through existing governance mechanisms and their mandates.

The Conference of the Parties may invite relevant actors to:

- a. Identify, within their mandates and capacities, their respective contributions to these seven priority areas;
- b. Report on progress through existing reporting mechanisms, including information on alignment with KMGBF Targets 18 and 19;
- c. Strengthen coordination mechanisms between CBD and UNFCCC bodies on finance-related matters, particularly regarding indicator frameworks, safeguards, and post-2030 goal development.

The 2026-2030 period is identified in several assessments as a significant window in which institutional decisions on NCQG implementation and KMGBF recourse mobilisation will shape whether expanded climate finance supports or undermines biodiversity outcomes. Early action on these seven priority areas can help ensure that climate-finance scale-up drives nature-positive outcomes rather than adding pressure on biodiversity (Dasgupta, 2021; UNEP, 2025).

4.2. Aligning Public and Multilateral Finance

Public and multilateral finance will shape whether the NCQG and Baku-Belém Roadmap deliver synergistic or trade-off outcomes for biodiversity (UNFCCC, 2024; UNEP, 2023). MDBs, IFIs and global funds can de-risk nature-positive investments and support countries in reforming incentives, including environmentally harmful subsidies (EHS), consistent with KMGBF Target 18 (CBD, 2022; IMF, 2023).

4.2.1. Mainstreaming Nature in Multilateral Development Banks and International Financial Institutions

MDBs are moving from "Do-No-Harm" to nature-positive alignment through the Common Principles for Tracking Nature-Positive Finance and emerging nature-finance tracking methods (IDB, 2023; WBG, 2024c). To consolidate this shift, the Parties may wish to consider the following options:

- Requesting MDBs to integrate nature-related risks and opportunities into macro-fiscal diagnostics, country partnership frameworks and climate-related public-expenditure reviews, with biodiversity as macro-critical (Neunuebel et al., 2025; WRI, 2024).
- Encouraging MDBs to adopt portfolio-level targets for nature-positive investments and to report annually on contributions to KMGBF Targets 14, 18 and 19 (CBD, 2022; OECD, 2024).

Consistent with GEO-7, MDBs may apply DNSH and the mitigation hierarchy in climate operations, using the safeguards guidance in Section 3.4.3 to prevent mitigation and adaptation investments from undermining ecosystems and IPLC rights.

4.2.2. Reforming and Repurposing Harmful Subsidies

Achieving KMGBF Target 18 – a reduction of at least USD 500 billion per year in harmful incentives by 2030 – is identified in several assessments as important for scaling synergistic finance (CBD, 2022). Environmentally harmful subsidies in fossil fuels, intensive agriculture and fisheries exceed an estimated USD 2.6 trillion annually, a major structural source of trade-off finance that reinforces the impact inequality (IMF, 2023; Koplow & Steenblik, 2024).

Options Parties may wish to consider include:

- Conducting national EHS inventories and developing time-bound reform plans, prioritising subsidies that drive habitat loss, over-exploitation and high emissions (OECD, 2025; UNEP, 2023).
- Repurposing a share of EHS savings towards NbS, IPLC-led conservation, just-transition measures and social protection for affected households, according to national circumstances (UNEP, 2023; IMF, 2024b).
- Aligning EHS reform with climate, biodiversity and social objectives through technical assistance and political-economy analysis, including by drawing on guidance and lessons learned from international organisations and other Parties (Koplow & Steenblik, 2024; OECD, 2025).

4.3. Innovative Financing and Private Sector Engagement

Innovative instruments and nature-related markets may help close the biodiversity finance gap if designed with high integrity and strong safeguards, as GEO-7 and recent analyses of biodiversity credit pilots show (UNEP, 2025; NatureFinance, 2024).

4.3.1. *Scaling High-Integrity Nature Markets*

Emerging biodiversity credit markets and other nature-outcome instruments complement public finance and regulatory measures but do not replace them (NatureFinance, 2024; IAPB, 2024).

Parties and standard-setters may consider:

- Supporting development of robust technical criteria for units of biodiversity outcome (for example habitat-quality and connectivity indices), aligned with the International Advisory Panel on Biodiversity Credits (IAPB, 2024; Wauchope et al., 2024).
- Ensuring nature markets are co-designed with IPLCs and local communities, with clear land-tenure recognition, FPIC and dedicated benefit flows like minimum revenue shares or governance seats (WWF et al., 2021; Government of Brazil, 2024).

The COP may wish to encourage Parties to treat biodiversity-credit schemes as complementary to – not substitutes for – EHS reform, public NbS funding and rights-based conservation policies (UNEP, 2023; OECD, 2025).

4.3.2. *Blended Finance and De-risking Mechanisms*

Blended finance can crowd in institutional and private capital for NbS, particularly in frontier markets with high perceived risks (GCF, 2023; NGFS, 2023). Public funds such as the GCF and GEF can act as green-market accelerators by:

- Providing first-loss equity, guarantees and concessional credit to de-risk NbS and ecosystem-restoration projects, including jurisdictional programmes like the TFFF and REDD+ (GCF, 2023; Government of Brazil, 2024).

- Supporting issuance of high-integrity blue bonds, sustainability-linked bonds and debt-for-nature swaps with robust conservation conditionality and transparent governance arrangements (TNC, 2021; IDB, 2024).

MDBs and development finance institutions (DFIs) may reduce risk further through political risk insurance, local-currency facilities and technical assistance for pipeline development in nature-dependent sectors like agriculture, forestry, fisheries and tourism (WBG, 2024b; WRI, 2024).

4.4. Governance, Institutional Arrangements, and IPLC Access

Governance reforms ensure that climate and biodiversity finance align at national and sub-national levels, and that Indigenous Peoples and Local Communities (IPLCs) can access and shape financial flows (WWF et al., 2021; Rainforest Foundation Norway, 2021).

4.4.1. *Enhancing Direct Access for IPLCs*

IPLC territories contain a large share of the world's remaining intact ecosystems and hold around 80 per cent of global biodiversity, yet IPLC organisations directly receive less than one per cent of international climate-related ODA (WWF et al., 2021; Rainforest Foundation Norway, 2021).

Parties and funds may explore:

- Expanding direct-access modalities and small-grant windows for IPLC-led organisations, using models such as the GEF Inclusive Conservation Initiative (ICI) (GEF, 2021; GEF IEO, 2025).
- Treating secure land tenure, FPIC and equitable benefit-sharing as core eligibility criteria for nature-related climate finance, rather than optional social co-benefits (FAO, 2006; TNFD, 2023).

These measures align with GEO-7's emphasis on rights-based governance and IPLC leadership as critical enablers of environmental transformation (UNEP, 2025).

4.4.2. *Cross-Convention Integration and Jurisdictional Approaches*

Aligning NDCs, NAPs and NBSAPs at the jurisdictional level reduces fragmentation and supports integrated landscape and seascape planning (CBD, 2022; IPBES, 2024). The Conference of the Parties may wish to:

- Encourage Parties to establish bioregional-financing facilities or jurisdictional platforms that jointly implement climate, biodiversity and development objectives through programmes such as the TFFF, jurisdictional REDD+ and coastal NbS (Government of Brazil, 2024; Angelsen et al., 2012).
- Explore options for a joint CBD–UNFCCC technical group on finance to improve coherence between NCQG implementation, KMGBF Target 19 monitoring and post-2030 development-goal design (UNFCCC, 2024; United Nations, 2023).

Such arrangements ensure that decisions on infrastructure, land-use and adaptation investments systematically consider biodiversity and IPLC rights, reducing the risk that climate finance becomes trade-off finance (UNEP, 2025; OECD, 2025).

4.5. Sequencing and Significant Windows (2026–2030)

The period 2026–2030 is a significant period when institutional lock-in for both the KMGBF and the NCQG will occur (CBD, 2022; UNFCCC, 2024). Sequencing considerations identified in this analysis include:

- Embed biodiversity co-benefit targets and EHS-reform commitments into NCQG implementation plans, NDC 3.0 updates and national climate-finance strategies by 2027 (UNFCCC, 2024; OECD, 2025).
- Strengthen Article 6.4 biodiversity safeguards, CRCF sustainability criteria and DNSH rules before large-scale carbon-removal and infrastructure pipelines lock in land-use patterns (SBM, 2024; EU, 2024).
- Scale up IPLC direct-access and rights-based NbS programmes, ensuring that a meaningful share of tripled adaptation finance flows through locally led, ecosystem-based approaches (UNFCCC, 2021; GEF, 2021).

Together, these recommendations aim to re-programme the financial operating system so that the USD 1.3 trillion climate-finance scale-up reinforces rather than erodes the ecological foundations for stable climate and sustainable development (Dasgupta, 2021; UNEP, 2025).

4.6. Illustrative Cases and Enabling Reforms for Aligning Climate and Biodiversity Finance

Four illustrative cases demonstrate how different parts of the enabling environment align climate and biodiversity finance in practice. The cases cover: (i) coastal nature-based solutions financed through blended public and private resources (mangrove restoration and blue carbon), (ii) sovereign debt conversions creating fiscal space for conservation and climate resilience, (iii) mandatory corporate disclosure under the EU CSRD embedding biodiversity into climate-related financial reporting and investment decisions, and (iv) cross-cutting lessons from EU environmentally harmful subsidy (EHS) reforms informing implementation of KMGBF Target 18. These cases are based on publicly available information and existing analyses and are presented for illustrative purposes only; they do not imply endorsement or formal validation by the entities mentioned.

4.6.1 Illustrative Case 1 – Mangrove Restoration and Blue Carbon

Illustrative Case 1 shows how well-designed coastal NbS – mangrove restoration and blue-carbon projects—simultaneously deliver mitigation, adaptation and biodiversity outcomes while attracting mixed public, climate and private finance.

Box 4.1: Mangrove Restoration and Blue Carbon

Indonesia's Coral Triangle Initiative demonstrates how blended climate finance can restore coastal ecosystems while securing community livelihoods. Launched in 2019 with support from the Green Climate Fund, the project set out to restore 33,000 hectares of degraded mangrove forests across Java and Sulawesi – areas where coastal communities had lost critical fishing grounds and storm protection due to decades of aquaculture expansion and coastal development. The finance architecture layered three distinct sources to manage different risks and timeframes. GCF provided USD 38 million in upfront adaptation grants covering the immediate costs of nursery establishment, community training, and initial planting. Germany's International Climate

Initiative added USD 8 million for the sophisticated monitoring and verification systems needed to attract carbon markets. The third layer – blue carbon credits registered under Verra's VM0033 methodology – is projected to generate USD 15-20 million over twenty years, creating a long-term revenue stream that sustains management beyond the initial project period.

Key Results (Year 3):

- 33,000 hectares restored mangroves
- 200% increase in fish nursery productivity (45 → 135 kg/hectare)
- 23 migratory bird species returned to restored areas
- 850,000 tons CO₂e to be sequestered over project lifetime
- USD 25 million annual value in ecosystem services (storm protection, coastal stabilization)

What made this work was the governance structure. Rather than imposing top-down management, the Ministry of Marine Affairs and Fisheries worked with UNDP to establish co-management arrangements with 47 village fishing cooperatives. Communities received secure tenure over restoration areas through participatory mapping exercises conducted before any planting began. Critically, the benefit-sharing arrangement directs 60% of carbon credit revenues directly to village cooperatives through transparent cash transfer mechanisms – giving communities a tangible stake in long-term stewardship.

The challenges were substantial. Navigating competing blue carbon certification standards (Verra versus Plan Vivo) consumed months of technical discussions. Carbon credit prices fluctuated between USD 10-15 per tonne, creating revenue uncertainty. Exchange rate volatility added another layer of risk for dollar-denominated credits in a rupiah economy. Yet the blended finance structure proved resilient: even if carbon revenues underperform, GCF and IKI (International Climate Initiative, Germany) grants ensure core restoration continues.

This model is now being adapted across mangrove-rich deltas in Vietnam, the Philippines, and Bangladesh, with an estimated 2 million hectares globally suitable for similar approaches where communities hold or can secure tenure rights.

Sources: GCF, 2019; Verra, 2015; Conservation International, 2023; UNDP Indonesia, 2022.

This case shows how scaling high-integrity coastal NbS supports KMGBF Targets 14 and 19 by integrating biodiversity into climate and development finance and expanding nature-positive public and multilateral flows, consistent with Areas 1 and 3 of this assessment.

4.6.2 Illustrative Case 2 – Sovereign Debt Conversion for Nature

Illustrative Case 2 shows how innovative debt instruments create fiscal space for conservation in highly indebted countries when conservation conditionality and governance are robust.

Box 4.2: Sovereign Debt Conversion for Nature

In November 2021, Belize faced a fiscal crisis. The country's USD 553 million "superbond"—representing 30% of all public external debt – carried punishing 8.5% interest rates that consumed resources desperately needed for healthcare, education, and hurricane recovery. Simultaneously, Belize's crown jewel – the Mesoamerican Reef, the world's second-largest

barrier reef system – faced mounting degradation from overfishing, coastal development, and climate change. The marine protected area network covered only 15.9% of ocean territory, far below what scientists recommended for ecosystem resilience.

The Nature Conservancy brokered an innovative solution. TNC purchased Belize's distressed debt at a discount on secondary markets, then partnered with Credit Suisse to issue a new USD 364 million "blue bond" at just 5% interest with extended maturity to 2041. The Government of Belize used the bond proceeds to buy back the old debt at face value, immediately reducing the debt burden by USD 189 million.

Transaction Structure:

- Original debt: USD 553M at 8.5% interest
- New blue bond: USD 364M at 5.0% interest
- Debt reduction: USD 189M (34% haircut)
- Annual savings: USD 29M in reduced debt service
- Conservation commitment: USD 23.5M over 20 years

The savings flow into two vehicles: a Marine Conservation Fund providing annual grants for patrol boats, ranger training, and fishing community programs; and an endowment trust that will sustain conservation beyond the twenty-year commitment period. The conservation conditionality was non-negotiable—Belize pledged to expand marine protected areas to 30% of ocean territory, adding 185,000 hectares of new protection including critical no-take zones around Nassau grouper spawning sites, mangrove nursery areas, and coral reef systems supporting over 500 fish species.

Governance runs through an independent oversight committee bringing together government ministers, environmental NGOs, and representatives from fishing cooperatives. This body reviews conservation progress annually, approves fund disbursements, and can trigger penalties if Belize fails to meet protection targets. Early results are promising: by 2023, monitoring showed 15% increases in commercially important fish stocks within newly established zones, and coral cover stabilized at 25% after years of decline.

The model has proven replicable. Gabon restructured USD 500 million for rainforest protection in 2023. Ecuador secured USD 656 million for Galápagos conservation the same year. Together, these transactions demonstrate that conservation-linked debt restructuring has moved from experimental to mainstream development finance – though success requires the specific combination of high debt burden, global biodiversity significance, and sufficient creditworthiness for refinancing.

Sources: The Nature Conservancy, 2021; Credit Suisse, 2021; Government of Belize, 2021; Belize Blue Bonds Oversight Committee, 2023.

This case demonstrates how sovereign debt conversions advance KMGBF Targets 18 and 19 by linking debt sustainability to nature-positive investment and repurposing fiscal space toward NbS and IPLC-relevant conservation, consistent with Areas 2 and 3.

4.6.3 Illustrative Case 3 – EU CSRD and Biodiversity Disclosure

Illustrative Case 3 demonstrates how mandatory, standardised disclosure and double-materiality reporting embed biodiversity considerations into corporate strategy and shift private capital away from nature-negative activities.

Box 4.3: EU CSRD and Biodiversity Disclosure

When the European Union adopted its Corporate Sustainability Reporting Directive in November 2022, it established the world's first mandatory biodiversity disclosure regime. However, recognizing implementation challenges, the EU undertook significant revisions in 2025. In December 2025, the European Parliament approved a provisional agreement that substantially revised scope and timing, while maintaining the directive's core ambition to make nature-related risks visible and auditable.

The revised framework narrows the scope significantly. Starting with financial years beginning January 1, 2027 (reporting in 2028), mandatory biodiversity disclosure under European Sustainability Reporting Standard E4 will apply only to companies exceeding both €450 million in net annual turnover and 1,000 employees on average – a much higher threshold than originally envisioned. This revised scope covers large EU entities, non-EU companies listed on EU-regulated markets meeting these thresholds, and enterprise-level reporting for major non-EU groups with substantial EU operations.

Revised Implementation Timeline:

- 2027 (reporting in 2028): Large EU entities and non-EU issuers with >€450M turnover and >1,000 employees
- 2028 (reporting in 2029): Enterprise-level reporting for non-EU parent groups with >€450M EU turnover
- Standards: Simplified ESRS to be finalized by mid-2026, based on December 2025 EFRAG technical advice

The European Financial Reporting Advisory Group submitted simplified draft standards in December 2025, reducing disclosure requirements by 61 percent through emphasis on materiality, fair presentation principles, and streamlined double materiality assessments. The revised ESRS E4 still requires companies to disclose biodiversity impacts across value chains – including land-use change by ecosystem type, threats to IUCN Red List species, pollution loads affecting ecosystems, and impacts on Key Biodiversity Areas – while also requiring disclosure of dependencies on ecosystem services like pollination, water regulation, and soil fertility that create business continuity risks.

The mandatory nature distinguishes ESRS E4 from voluntary frameworks. All disclosures face external audit, creating legal accountability. Early analysis suggests companies with robust biodiversity disclosure attract 25-30% more sustainable finance flows and secure green bonds at 15% lower interest rates than peers. Major European asset managers have announced integration of ESRS E4 data into investment screening, affecting over EUR 30 trillion in assets under management.

Implementation challenges remain substantial. Unlike climate's standardized CO₂ equivalent, biodiversity lacks universal metrics. Supply chain data remains weak, particularly for tier-2 and

tier-3 suppliers in agriculture and materials sourcing. The European Commission allocated EUR 40 million for technical assistance and is piloting biodiversity data platforms to address gaps. Yet the directive's power lies in its mandatory character – ESRS E4 makes comprehensive biodiversity reporting a legal requirement for accessing European markets, creating market pressure that voluntary initiatives never achieved.

Sources: EU, 2022, 2025; EFRAG, 2023, 2025; European Commission, 2025; Deloitte, 2026.

This case shows how mandatory disclosure and double-materiality reporting help implement KMGBF Targets 14, 18 and 19 by improving transparency on nature-related risks and steering private capital away from EHS-supported, nature-negative activities toward nature-positive portfolios, consistent with Areas 3 and 5.

4.6.4 Cross-cutting Lessons from EU EHS Reform for KMGBF Target 18

Experiences from recent efforts to reform environmentally harmful subsidies in the European Union offer practical lessons for operationalising KMGBF Target 18 in different national contexts. These lessons emphasise structured processes, clear mandates and sustained political engagement over one-off technical studies (European Commission, 2022; OECD, 2005).

Box 4.4: *Cross-cutting Lessons from EU EHS Reform for KMGBF Target 18*

The European Union's Common Agricultural Policy (CAP) has distributed over EUR 50 billion annually to farmers since the 1960s, originally designed to ensure food security through production subsidies. By the 2010s, however, the environmental costs became undeniable: intensive farming supported by coupled payments degraded soil, polluted groundwater with nitrates, and drove farmland bird populations down 57% since 1980. The 2023-2027 CAP reform represented a fundamental pivot—redirecting EUR 100 billion toward "eco-schemes" that pay farmers for environmental outcomes rather than production volumes.

The reform's architecture is revealing. Rather than eliminating agricultural subsidies – political suicide in rural constituencies – policymakers repurposed them. Member states designed eco-schemes tailored to local ecological priorities: France pays EUR 150 per hectare for biodiversity corridors and field margins; Netherlands offers EUR 600-800 per hectare for rewetting drained peatlands; Germany provides EUR 100 per hectare for achieving 30% pesticide reductions; Ireland rewards species-rich grasslands with payments rising to EUR 450 per hectare for meadows supporting 15+ plant species. By mid-2024, 28 million hectares – 17% of EU farmland – were enrolled.

Scale of Reallocation:

- EUR 100 billion to eco-schemes (2023-2027)
- EUR 6 billion/year harmful subsidies phased out
- 28 million hectares in eco-schemes by 2024
- Biodiversity outcomes: +12% farmland birds (France), 65% CO2 reduction (Netherlands peatlands), 40% less groundwater pesticides (Germany)

The political economy offers lessons for global Target 18 implementation. Success required public transparency—the EU Budget Database makes every subsidy recipient and amount public, enabling environmental NGOs to identify harmful subsidies and mobilize public pressure. The

process was gradual: seven years of negotiation, followed by five-year implementation, giving farmers time to adjust practices without economic shock. Critically, eco-scheme payments covered estimated compliance costs plus a 20-30% incentive margin – reducing farmer opposition by ensuring economic viability.

Green budgeting institutionalized the reform. EU regulations now require environmental impact assessments of all CAP spending, embedding recurring review into normal budget cycles rather than relying on one-time political decisions. Monitoring uses Copernicus satellite data for land-use verification at scale, combined with targeted field inspections of 5-10% of claims using risk-based selection.

Challenges persist. Enforcement varies dramatically: pioneering countries like Denmark and Netherlands apply stringent criteria, while some member states designed minimal eco-schemes that technically qualify but deliver little biodiversity benefit. Agricultural lobbies continue pushing for looser standards in each revision cycle. Monitoring capacity is stretched for complex indicators like pollinator diversity that satellites cannot detect.

Yet France's experience demonstrates the fiscal potential. By reallocating EUR 2.4 billion from harmful coupled livestock payments to agri-environment and organic support between 2021-2027, France directly linked Target 18 (harmful subsidy reduction) to Target 19 (resource mobilization for nature-positive activities) – showing these are complementary fiscal levers, not separate technical workstreams.

For developing countries, the EU model requires adaptation: simpler verification using satellite data plus sample field checks rather than comprehensive audits; practice-based payments rather than complex outcome metrics; and repurposing toward smallholder support, not only environmental services. Indonesia has adapted the eco-scheme concept for rice farming, offering Integrated Pest Management payments that reduce pesticide subsidies with lower administrative requirements than the EU approach – demonstrating the model's flexibility across different governance contexts.

Sources: European Commission, 2021, 2023; OECD, 2024b; France, 2024; Netherlands, 2023; Germany, 2023.

This case provides practical options for operationalising KMGBF Target 18 through structured, recurring EHS reform and green-budgeting processes that reallocate harmful subsidies toward NbS, just-transition measures and biodiversity-positive incentives, reinforcing Areas 2 and 3 of this assessment.

Chapter 5: Conclusion and Path Forward

This assessment has examined how the NCQG-driven expansion of climate finance may affect biodiversity outcomes under different integration scenarios. The findings confirm that the scale-up presents both significant opportunities and material risks. Outcomes will depend critically on the approaches Parties take to embedding biodiversity considerations into climate-finance architecture, implementing subsidy-related reforms under KMGBF Target 18, and designing mechanisms involving Nature-based Solutions and Indigenous Peoples and Local Communities. This concluding chapter synthesizes cross-cutting lessons (Section 5.1), examines implications for KMGBF Targets 18 and 19 (5.2), presents seven Areas that may inform Conference of the Parties deliberations over 2026–2030 (5.3), and identifies opportunities for cross-convention collaboration (5.4) and longer-term integration into post-2030 sustainable development frameworks (5.5).

5.1. From Fragmented Flows to Integrated Outcomes

Biodiversity and climate finance operate through fragmented channels that do not constitute a coherent response to biodiversity loss and climate change (CBD, 2022; UNEP, 2023). Tracked biodiversity-relevant flows of approximately USD 124–143 billion per year fall far below the estimated USD 700 billion annual need, while climate finance is projected to reach at least USD 300 billion per year in public and bilateral flows by 2035 (UNEP, 2023; IMF, 2023).

Biodiversity inaction and substantial GDP losses under ecosystem-collapse scenarios show that biodiversity loss is a macro-critical fiscal risk undermining national debt sustainability and global economic stability (see Box 1.1). The USD 2.6–7 trillion in annual subsidies and capital flows supporting nature-negative activities represents more than an environmental problem – it is a profound economic misallocation reinforcing the “impact inequality” described by the Dasgupta Review (UNEP, 2023; IMF, 2023; Dasgupta, 2021).

With falling ODA, rising debt burdens and shifting geopolitical priorities, rapidly increasing net public funding is difficult. This makes using existing and future finance flows with maximum efficiency strategically essential (OECD, 2025a; OECD, 2025c; UNCTAD, 2025). The current macro-financial reality means that the quality, coherence and risk management of finance are as important as aggregate volumes, not secondary considerations.

Several analyses emphasize that achieving integrated outcomes may involve a shift: from viewing biodiversity finance as an environmental “cost” to seeing it as a strategic hedge against systemic economic collapse. The transition from fragmented flows to integrated outcomes is associated in several analyses with redirecting nature-negative expenditure toward synergistic pathways – high-integrity NbS and IPLC-led conservation – that safeguard both climate and ecological foundations of the global economy.

The same financial instruments generate either synergies or trade-offs depending on their design, safeguards and governance. High-integrity NbS simultaneously supports mitigation, adaptation and biodiversity, while poorly sited renewables, monoculture plantations and grey coastal infrastructure undermine ecological integrity (UNEP, 2023; IPCC, 2019). Recent macro-economic assessments of ecosystem tipping points reinforce work by central banks, finance ministries and international financial institutions framing nature loss as a macro-critical risk for the global economy and financial system (IMF, 2024a; NGFS, 2024; Jourde & Moreau, 2025; Systemiq & International High-Level Expert Group on Natural Capital, 2025).

A large volume of flows are currently designed and classified as “isolated” – pursuing climate, biodiversity or development objectives with limited explicit attention to their interactions. Some of these flows are genuinely low-interaction, while others reflect missed opportunities to incorporate Nature-based Solutions, climate-risk information or biodiversity safeguards into project design (Section 2.2.1). How institutions and Parties approach this presumed isolated space – as largely neutral or as a source of context-specific synergies – will influence whether overall finance trajectories support or undermine KMGBF biodiversity outcomes.

GEO-7 and UNEA-7 call for systemic transformations addressing climate change, biodiversity loss and pollution, underscoring the importance of re-aligning all finance flows with a nature-positive trajectory (UNEP, 2025; UNEA, 2025).

5.2. Implications for the KMGBF Targets 18 and 19

This analysis has direct implications for implementing KMGBF Target 19 (resource mobilisation) and Target 18 (reforming harmful incentives).

On Target 19, the NCQG and related climate-finance commitments provide a historic opportunity to close a substantial share of the biodiversity finance gap if biodiversity safeguards and co-benefit metrics are embedded in national climate-finance strategies, fund mandates and MDB portfolios from the outset (CBD, 2022; UNFCCC, 2024). Without such integration, climate-finance scale-up risks under-delivering for biodiversity and, in some cases, exacerbating ecosystem degradation through trade-off finance (UNEP, 2023; IPCC, 2019). Evidence from the 2025 Biodiversity Finance Trends Dashboard shows that biodiversity-specific international flows are on a trajectory that could reach the USD 20 billion Target 19a benchmark by 2025 (TNC, 2025). However, this progress remains fragile given declining ODA and stalled private finance mobilised by public development finance. Target 19 focuses primarily on mobilising and aligning additional finance for biodiversity, including through climate-finance scale-up, so that positive flows approach the levels implied by KMGBF ambitions (CBD, 2022).

On Target 18, reforming and repurposing environmentally harmful subsidies is a major structural lever for both climate and biodiversity alignment, with potential fiscal space far exceeding current international biodiversity-finance flows (IMF, 2023; Koplow & Steenblik, 2024). Dashboard data also show only incremental increases in the number of biodiversity-positive incentives and limited progress in scaling national harmful-subsidy assessments, highlighting the need for COP attention to implementation tools and timelines (TNC, 2025). Linking EHS reform to NbS investment, just-transition measures and IPLC-led conservation simultaneously reduces nature-negative incentives and expands funding for nature-positive activities (OECD, 2025; UNEP, 2023).

Recent work for the European Commission and CBD Parties indicates that successful EHS reform is associated with four identified elements: (i) a national inventory or “catalogue” of EHS with basic impact and fiscal data; (ii) clear political mandates or roadmaps with time-bound phase-out objectives; (iii) structured stakeholder processes to manage distributional impacts; and (iv) explicit linkages between subsidy reform, green fiscal reform and positive incentives for NbS and biodiversity-friendly practices (European Commission, 2022; European Commission/VVA et al., 2022; OECD, 2005; Business for Nature, 2023). Case studies from Italy, France, Lithuania and Slovakia show that annual green-budgeting exercises and EHS catalogues identify “low-hanging-fruit” subsidies, design compensatory measures and sequence reforms to maintain social support

while gradually increasing environmental ambition (European Commission/VVA et al., 2022). Target 18 focuses on reducing and reforming environmentally harmful subsidies and other nature-negative incentives, addressing the scale of finance driving ecosystem degradation (CBD, 2022; Dasgupta, 2021).

Together, efforts to advance Targets 18 and 19 influence both sides of the biodiversity-finance equation. Resource-mobilisation measures that do not address harmful subsidies risk being overshadowed by nature-negative flows, while EHS reform without scaled-up positive finance will not deliver the levels of restoration and protection envisioned in the KMGBF (CBD, 2022; Dasgupta, 2021). These interactions may be particularly relevant for the first global review of collective progress in KMGBF implementation at COP17 in 2026, which will draw on seventh national reports (CBD, 2025). They also matter for the second global review at COP19 in 2030, aligned with the 2030 deadline for most KMGBF targets. Both reviews provide key milestones for assessing how far Parties have mobilised additional biodiversity finance under Target 19 and reduced harmful incentives under Target 18.

5.3. Areas Identified for Potential Consideration by the Conference of the Parties to 2030

The period 2026–2030 is a significant period when institutional architecture for both the KMGBF and the NCQG may be consolidated (CBD, 2022; UNFCCC, 2024). Seven areas merit consideration for further work during this period, with detailed discussion in Chapter 4.

Area 1 – Integration of biodiversity into climate and development finance. Embedding biodiversity objectives, indicators and safeguards into NCQG implementation, MDB strategies and multilateral climate-fund operations influences how expanding climate finance contributes to KMGBF Targets 18 and 19 (CBD, 2022; UNFCCC, 2024). Further options and implications for monitoring and capacity are in Sections 4.1 and 4.2.

Area 2 – Support for Target 18 implementation on environmentally harmful subsidies. Evidence on the scale and composition of nature-negative subsidies shows that EHS inventories, green-budgeting tools and structured reform processes inform national efforts to reduce harmful incentives and repurpose fiscal space toward nature-positive activities (UNEP, 2023; OECD, 2025d). Related approaches and experiences are in Section 4.2.

Area 3 – Alignment of public finance flows with nature-positive pathways. Work on green budgeting, DNSH principles and nature-positive screening shows potential entry points for aligning public budgets, state-owned enterprises and development-finance institutions with KMGBF targets (OECD, 2024; EU, 2020). Options and institutional considerations are in Sections 4.2 and 4.3.

Area 4 – Quality standards and safeguards for climate-related instruments. Findings on trade-off finance show the role of safeguards, exclusion criteria and IPLC-rights provisions in shaping biodiversity outcomes in carbon markets, Article 6 mechanisms, renewable-energy and adaptation investments (IPCC, 2019; UNEP, 2023). Avenues for strengthening quality standards and their implementation are in Section 4.4.

Area 5 – Transparency and nature-related disclosure frameworks. Convergence around core climate-biodiversity indicators and disclosure frameworks is emerging but remains partial. Recent work by TNFD and standard-setting bodies has defined a common architecture for nature-related

risk and impact reporting, yet biodiversity indicator sets remain more context-specific and less standardised than climate indicators. Evidence from the 2025 Biodiversity Finance Trends Dashboard shows that around 620 organisations, representing roughly USD 20 trillion in assets under management, have committed to report in line with TNFD recommendations (TNC, 2025). This underscores momentum behind nature-related disclosure and the need for a limited set of comparable climate-biodiversity metrics. Issues and options related to disclosure frameworks are in Sections 4.1 and 4.3.

Area 6 – Access mechanisms for IPLCs and jurisdictional approaches. Experience with IPLC-led and jurisdictional finance mechanisms shows the importance of tenure security, Free, Prior and Informed Consent (FPIC) and equitable benefit-sharing for achieving durable biodiversity and climate outcomes (GEF, 2021; GEF IEO, 2025). Related design features and trade-offs between direct access, fiduciary requirements and scale are in Sections 4.4 and 4.6. In the longer term, lessons from these mechanisms could inform how future global sustainable development goals beyond 2030 reflect biodiversity, IPLC rights and climate-finance alignment.

Area 7 – Integrate biodiversity into loss and damage governance and finance. Recent discussions on the Loss and Damage Fund and related arrangements highlight the relevance of ecosystem collapse and species extinction as profound, irreversible non-economic losses (UNFCCC, 2024; IPCC, 2019). Possible options identified in this assessment include: (1) explicitly recognising certain ecosystem losses as non-economic loss and damage in relevant guidance and methodologies; (2) integrating biodiversity safeguards and nature-based recovery into governing instruments, funding windows and project-level guidance, including prioritising restoration and protection of natural buffers and avoiding grey infrastructure that drives habitat degradation; and (3) encouraging Parties and relevant institutions to align loss and damage standards on safeguards, IPLC rights, secure tenure, FPIC, equitable benefit-sharing and biodiversity-related indicators with approaches in Areas 3, 4, 5 and 6 to promote coherence across the climate-finance architecture.

5.4. Opportunities for Cross-convention Collaboration

Delivering these priorities – scaling and aligning finance for Target 19, implementing Target 18 EHS reform, aligning public finance, strengthening safeguards, enhancing transparency and expanding IPLC-led and jurisdictional access – is identified as potentially benefiting from closer CBD–UNFCCC coordination and engagement with MDBs and other international financial institutions. The 2024 and 2025 ODA cuts and mixed outcomes at recent COPs and UNEA-7 show that global environmental governance is under strain precisely when systemic transformations are most important (UNEA, 2025; UNEP, 2025; OECD, 2025a). This reinforces the need for strong CBD–UNFCCC coordination and clearer expectations for aligning all finance flows with nature-positive pathways. Given the shared objectives of the KMGBF and the Paris Agreement, the Conference of the Parties could explore options for enhanced CBD–UNFCCC collaboration on finance. Potential avenues include:

- Establish a joint technical working group on biodiversity-climate finance to improve coherence between NCQG implementation, KMGBF Target 19 monitoring and future global development-goal frameworks (UNFCCC, 2024; United Nations, 2023).
- Encourage coordinated guidance from CBD, UNFCCC and other relevant bodies on NbS quality criteria, safeguards and IPLC rights, building on existing work under IPBES, TNFD and GEO-7 (IPBES, 2024; TNFD, 2023; UNEP, 2025).

Such collaboration may reduce duplication, clarify expectations for Parties and financial institutions, and send a stronger, unified demand signal for nature-positive climate finance (CBD, 2022; WEF, 2024).

5.5. Opportunities from Developing New Global Sustainable Development Goals

The eventual development of global sustainable development goals beyond 2030 provides an opportunity to reflect lessons from KMGBF implementation and efforts to align climate and development finance with biodiversity outcomes (OECD, 2025c). Experience with IPLC access mechanisms, jurisdictional approaches and integrating biodiversity into climate finance can shape how nature, climate and inequality are addressed after 2030 (CBD, 2022; Draft key findings, 2026).

Three lessons from this assessment are especially relevant for future global goal-setting:

- **Hard-wiring nature into macroeconomic goals.** Future goals can recognise biodiversity, ecosystem integrity and environmental limits as foundational to poverty reduction, food security and economic stability, building on the "impact inequality" framing in the Dasgupta Review and the systemic-transformation narrative in GEO-7 (Dasgupta, 2021; UNEP, 2025). This means explicit targets on aligning public and private finance with nature-positive pathways, including reform of environmentally harmful subsidies and scaling up NbS (OECD, 2025)
- **Integrating finance architecture into goal design.** The next framework could be more finance-aware, with specific targets and indicators on climate and biodiversity finance volumes, quality and alignment, drawing on KMGBF Targets 18 and 19, the NCQG and emerging taxonomies, disclosure standards and safeguards (CBD, 2022; UNFCCC, 2024; OECD, 2025d). This helps ensure that future global goals are accompanied by clear expectations for fiscal policy, public investment, MDB operations and private capital flows.
- **Centring rights-based and IPLC-led approaches.** Recognising IPLCs as rights-holders and key stewards of biodiversity can be a core organising principle of any post-2030 framework, reflecting evidence that IPLC lands host a large share of remaining intact ecosystems but receive limited direct finance (Rainforest Foundation Norway, 2021; WWF et al., 2021). Future goals could include explicit indicators on land-tenure security, FPIC implementation and the share of climate and biodiversity finance reaching IPLC-led organisations.

The emerging discussion on new global sustainable development goals provides an opportunity to ensure that lessons from KMGBF implementation and biodiversity-climate finance alignment feed into future global goal-setting processes (CBD, 2022; United Nations, 2023). Future frameworks could treat climate, biodiversity, pollution and finance not as separate pillars but as interconnected dimensions of a single safe and just operating space, institutionalising the integrated approach emphasised in this assessment (UNEP, 2025; WEF, 2024).

5.6. Concluding Reflections

Several analyses describe the NCQG-driven expansion of climate finance as a juncture at which it could either support a climate-resilient, nature-positive development trajectory or entrench patterns of nature-negative investment under a green label (Dasgupta, 2021; UNEP, 2025). The outcome depends on how quickly Parties and institutions reform harmful incentives, embed biodiversity

metrics and safeguards into climate-finance architecture, and scale high-integrity NbS and IPLC-led conservation at the heart of national development strategies (CBD, 2022; UNEP, 2023).

With falling ODA, high and in some cases rising debt burdens, and contested environmental policies in several developed countries, rapidly increasing net public finance at scale is difficult (OECD, 2025a; UNCTAD, 2025). Under these constraints, many assessments emphasise that approaches which tap synergies and avoid harm are central features of scenarios that achieve KMGBF Targets 18 and 19 (OECD, 2025a; UNCTAD, 2025). The quality, coherence and resilience of climate and biodiversity finance flows – including the balance between grants and loans, the integrity of safeguards and the reallocation of environmentally harmful subsidies – are at least as important as aggregate volume (UNFCCC, 2024; OECD, 2025; OECD, 2025d).

The 2026–2030 period represents a critical implementation window for the Kunming-Montreal Global Biodiversity Framework, during which institutional choices on finance will have lasting effects (CBD, 2022; UNFCCC, 2024). Analyses of ecosystem-service collapse scenarios suggest that closing the approximately USD 700 billion annual biodiversity-finance gap can be framed as a fiscally prudent response to much larger potential macro-economic losses (World Bank, 2021a; Dasgupta, 2021).

The path forward may involve a gradual shift from voluntary commitments toward mandatory, high-integrity frameworks – such as strengthened disclosure regimes and long-term nature-finance facilities – that prioritise the direct inclusion of Indigenous Peoples and Local Communities and robust safeguards (EU, 2024; Government of Brazil, 2024; GEF, 2021). The analysis suggests that progress on KMGBF implementation is associated with narrowing the impact inequality by reducing nature-negative flows and increasing the share of climate finance that delivers measurable biodiversity outcomes (Dasgupta, 2021; UNEP, 2025).

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References

1. Angelsen, A., Brockhaus, M., Sunderlin, W. D., & Verchot, L. V. (Eds.). (2012). *Analysing REDD+: Challenges and choices*. CIFOR.
2. ASEAN. (2025). *ASEAN Taxonomy for Sustainable Finance Version 4*. ASEAN Taxonomy Board.
3. Belize Blue Bonds Oversight Committee. (2023). *Annual Conservation Progress Report 2023: Marine Protected Area Expansion and Fisheries Management*. Government of Belize, Belmopan.
4. Buenafe, L. (2025). “To survive climate change, scientists say protected areas need climate-smart planning”. *Mongabay*, 12 June 2025.
5. Business for Nature. (2023). *Guidance on Target 18: How to implement Target 18 of the Global Biodiversity Framework*.
6. Carbon Brief. (2024). *COP29: Key outcomes agreed at the UN climate talks in Baku*. Carbon Brief.
7. Carbon Brief. (2025, December 3). *Analysis: Why COP30’s “tripling adaptation finance” target is less ambitious than it seems*. Carbon Brief.
8. Carbon Brief (2026). *Q&A: What Trump's US exit from UNFCCC and IPCC could mean for climate action*. 8 January 2026.
9. CBD (2009). *Connecting Biodiversity and Climate Change Mitigation and Adaptation: Report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change*. CBD Technical Series No. 41. Montreal: Secretariat of the Convention on Biological Diversity.
10. CBD. (2022). *Kunming–Montreal Global Biodiversity Framework*. Secretariat of the Convention on Biological Diversity (CBD), Montreal.
11. CBD. (2023). *Climate change adaptation and resilience through protected area systems: Guidance for protected area planning*. Secretariat of the Convention on Biological Diversity, Montreal.
12. CBD. (2025). *Procedures for the global review of collective progress in the implementation of the Kunming–Montreal Global Biodiversity Framework, including its targets, and related monitoring frameworks (CBD/SBI/4/4/Add.2/Rev.1)*. CBD Secretariat.
13. Conservation International (2023). *Indonesia Mangrove Restoration: Three-Year Impact Assessment*. Blue Carbon Initiative, Jakarta.
14. COP30 Presidency. (2025). *COP30 approves Belém Package*. Government of Brazil.
15. Credit Suisse (2021). *Blue Bond Framework for the Government of Belize Marine Conservation*. Credit Suisse AG, Zurich.
16. Dasgupta, P. (2021). *The economics of biodiversity: The Dasgupta review*. HM Treasury.
17. Deloitte (2026). *European Sustainability Reporting — Omnibus Legislative Developments and Updates to European Sustainability Reporting Standards*. Heads Up Volume 33, Issue 1, January 14, 2026.
18. Depietri, Y. & McPhearson, T. (2017). *Integrating the grey, green and blue in cities: Nature-based solutions for climate change adaptation and risk reduction*. In: Kabisch, N. Et al. (eds.), *Nature-Based Solutions to Climate Change Adaptation in Urban Areas*. Springer, Cham.
19. Deutz, A., Heal, G. M., Niu, R., Swanson, E., Townshend, T., Zhu, L., Delmar, A., Meghji, A., Sethi, S. A., & Tobin-de la Puente, J. (2020). *Financing Nature: Closing the global biodiversity financing gap*. The Paulson Institute, The Nature Conservancy, and the Cornell Atkinson Center for Sustainability.
20. EFRAG. (2023). *European Sustainability Reporting Standard E4: Biodiversity and Ecosystems*. EFRAG, Brussels. <https://www.efrag.org/lab6> .
21. EFRAG. (2024). *Draft implementation guidance for European Sustainability Reporting Standards (ESRS)*. European Financial Reporting Advisory Group.

22. EFRAG. (2025). *Basis for Conclusions accompanying EFRAG Technical Advice on draft amended ESRS*. European Financial Reporting Advisory Group, Brussels, December 2025. Available at: <https://www.efrag.org>
23. EIB. (2023). *Joint Report on Multilateral Development Banks' Climate Finance 2023*. European Investment Bank.
24. Environmental and Energy Study Institute (EESI). (2023). *Nature as Resilient Infrastructure – An Overview of Nature-Based Solutions*. Fact Sheet, EESI, Washington, DC.
25. EU. (2020). *Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment*. Official Journal of the European Union.
26. EU. (2022). *Directive (EU) 2022/2464 of the European Parliament and of the Council on Corporate Sustainability Reporting (CSRD)*. Official Journal of the European Union L 322/15, December 14, 2022.
27. EU. (2024). *Directive (EU) 2024/XXXX on corporate sustainability due diligence (CSDDD)*. Official Journal of the European Union.
28. EU. (2025). *Directive (EU) 2025/794 of the European Parliament and of the Council amending Corporate Sustainability Reporting and Due Diligence Requirements ("Stop-the-Clock" Directive)*. Official Journal of the European Union, April 16, 2025.
29. European Commission. (2021). *Common Agricultural Policy 2023–2027: Key Policy Objectives and Tools*. Directorate-General for Agriculture and Rural Development, Brussels.
30. European Commission. (2022). *A toolbox for reforming environmentally harmful subsidies in Europe*.
31. European Commission. (2023). *CAP Strategic Plans 2023-2027: Overview of Implementation Across Member States*. Directorate-General for Agriculture and Rural Development, Brussels.
32. European Commission. (2024). *Status report on the implementation of the Corporate Sustainability Reporting Directive (CSRD)*. European Union.
33. European Commission / VVA et al. (2022). *Country case studies and candidates for EHS reform factsheets*.
34. FAO. (2006). *Free, prior and informed consent: An indigenous peoples' right and a good practice for local communities*. Food and Agriculture Organization of the United Nations.
35. FAO. (2024). *The state of the world's forests 2024*. Food and Agriculture Organization of the United Nations.
36. France, Ministry of Agriculture. (2024). *Plan Stratégique National PAC 2023-2027: Rapport de Mise en Œuvre 2023 [CAP Strategic Plan 2023-2027: Implementation Report 2023]*. Paris.
37. GCF. (2019). FP086: Indonesia Coastal and Marine Resources Management Project. GCF Project Document B.23/02/Add.04. Green Climate Fund, Incheon.
38. GCF. (2023). *The Amazon Bioeconomy Fund*. Green Climate Fund.
39. GCF. (2024). *Annual portfolio performance report 2024*. Green Climate Fund.
40. GCF IEU. (2020). *Independent evaluation of the GCF's environmental and social safeguards*. Green Climate Fund Independent Evaluation Unit.
41. GEF. (2021). *GEF-8 programming directions*. Global Environment Facility.
42. GEF. (2025). *Results framework of the Global Biodiversity Framework Fund (GBFF) (GEF/GBFF/C.05/05)*. Global Environment Facility.
43. GEF IEO. (2025). *Evaluation of GEF support for nature-based solutions*. Global Environment Facility Independent Evaluation Office.
44. Germany, Federal Ministry of Food and Agriculture. (2023). *GAP-Strategieplan für Deutschland: Öko-Regelungen Monitoring 2023 [CAP Strategic Plan for Germany: Eco-schemes Monitoring 2023]*. Berlin.
45. Germanwatch. (2024). *Multilateral Development Banks' Paris Alignment Methodologies*. Germanwatch & NewClimate Institute.
46. Global Commission on Adaptation. (2019). *Adapt now: A global call for leadership on climate resilience*. Global Center on Adaptation.

47. Government of Belize. (2021). Marine Conservation Commitments Under the Blue Bond Agreement. Ministry of Blue Economy and Civil Aviation, Belmopan.
48. Government of Brazil. (2024). *Tropical Forest Forever Facility (TFFF): Concept note 3.0*. Government of Brazil.
49. Griscom, B. W., Adams, J., Ellis, P. W., Houghton, R. A., Lomax, G., Miteva, D. A., Fargione, J. (2017). *Natural climate solutions*. Proceedings of the National Academy of Sciences, 114(44), 11645–11650.
50. GSI–IISD. (2023). *The Nature of Subsidies: A snapshot of environmentally harmful subsidies and pathways for reform*.
51. Hacking, J., Williams, B., Tind Nielsen, S., & Braña Varela, J. (2021). *Beyond carbon credits: A blueprint for high-quality interventions that work for people, nature and climate*. WWF.
52. IAPB. (2024). *High-level principles for biodiversity credits*. International Advisory Panel on Biodiversity Credits.
53. ICVCM. (2024). *Core Carbon Principles and assessment framework*. Integrity Council for the Voluntary Carbon Market.
54. IDB. (2023). *MDB common principles for tracking nature-positive finance*. Inter-American Development Bank.
55. IDB. (2024). *Ecuador completes world’s largest debt-for-nature conversion with IDB and DFC support*. Inter-American Development Bank.
56. Institute for Climate Economics (I4CE). (2025, December 10). *Climate finance at COP30: Progress, pitfalls, persistent challenges*. I4CE.
57. International Monetary Fund (IMF). (2023). *Fossil fuel subsidies data: 2023 update* (Black, S., Liu, A., Parry, I., & Vernon, N.). International Monetary Fund.
58. IMF. (2024a). *Embedded in Nature: Nature-Related Economic and Financial Risks and Their Implications for Policy*. IMF Staff Climate Note.
59. IMF. (2024b). *Fiscal policy for the climate and nature transition*. International Monetary Fund.
60. IPBES. (2019). *Global assessment report on biodiversity and ecosystem services*. IPBES Secretariat.
61. IPBES. (2024). *Summary for policymakers of the thematic assessment report on the interlinkages among biodiversity, water, food and health*. IPBES Secretariat.
62. IPCC. (2019). *Climate change and land: An IPCC special report*. Intergovernmental Panel on Climate Change.
63. IUCN. (2025). *Renewables for Nature: Guidance from the REN Coalition and the Global Initiative for Nature, Grids and Renewables (GINGR)*.
64. IUCN & The Biodiversity Consultancy. (2021). *Guidance to Mitigate Biodiversity Impacts of Solar and Wind Energy Development*.
65. Jourde, T., & Moreau, Q. (2025). *Systemic climate risk* (Policy Brief). E-axes Forum.
66. Koplow, D., & Steenblik, R. (2024). *Environmentally harmful subsidies: Magnitude, trends and reform options*. OECD Publishing.
67. Le Monde. (2026). *What the US withdrawal from international bodies means for climate change and biodiversity*. 9 January 2026.
68. Ludzuweit, A., et al. (2025). *Enhancing ecosystem services and biodiversity in agrivoltaics through habitat-enhancing strategies*. Renewable and Sustainable Energy Reviews.
69. Marques, A. T., Santos, C. D., Hanssen, F., Muñoz, A. R., Onrubia, A., Wikelski, M., Moreira, F., Palmeirin, J. M., & Silva, J. P. (2019). Wind turbines cause functional habitat loss for migratory soaring birds. *Journal of Animal Ecology*, 89(1), 93–103.
70. NatureFinance. (2024). *Integrity in biodiversity credit markets: Design principles and lessons from pilots*. NatureFinance.
71. Netherlands, Ministry of Agriculture, Nature and Food Quality. (2023). *Implementation of Peatland Restoration Under CAP Eco-schemes: Progress Report 2023*. The Hague.
72. Network for Greening the Financial System (NGFS). (2023). *Central banking and supervision in the biosphere era*. Network for Greening the Financial System.

73. NGFS. (2024). *The Green Scorpion: The Macro-Criticality of Nature for Finance*. NGFS Occasional Paper.
74. Neunuebel, C., Bulbena, L., Laxton, V., & Krisht, S. (2025). *Multilateral development banks: Nature and biodiversity mainstreaming*. World Resources Institute.
75. OECD. (2005). *Environmentally Harmful Subsidies: Challenges for Reform*.
76. OECD. (2019). *Biodiversity: Finance and the Economic and Business Case for Action*. OECD Publishing.
77. OECD. (2019a). *Accelerating Climate Action: Refocusing Policies through a Well-being Lens*. OECD Publishing, Paris.
78. OECD. (2024). *Biodiversity and Development Finance 2015-2022*. OECD Publishing.
79. OECD. (2024a). *Mainstreaming Biodiversity into Renewable Power Infrastructure*. OECD Publishing.
80. OECD. (2024b). *Agricultural Policy Monitoring and Evaluation 2024*. OECD Publishing, Paris. <https://doi.org/10.1787/19900877>
81. OECD. (2025). *Biodiversity safeguards and the mitigation hierarchy in infrastructure finance*. OECD Publishing.
82. OECD. (2025a). *International aid falls in 2024 for first time in six years*. OECD Press release.
83. OECD. (2025b). *Embedding Water-related Risks in Financial Stability Frameworks*. OECD Publishing.
84. OECD. (2025c). *Cuts in official development assistance: OECD projections*. OECD Policy brief.
85. OECD. (2025d). *Scaling up biodiversity positive incentives: Delivering on Target 18 of the Global Biodiversity Framework*. OECD Publishing.
86. Pörtner, H. O., Scholes, R. J., Agard, J., Archer, E., Arneth, A., Bai, X., Ngo, H. T. (2023). Overcoming the coupled climate and biodiversity crises and their societal impacts. *Science*, 380(6642), eadc9156.
87. Rainforest Foundation Norway. (2021). *Falling short: Donor funding for Indigenous Peoples and local communities*. Rainforest Foundation Norway.
88. Rolhauser, A., et al. (2024). Urban green infrastructure: Bridging biodiversity conservation and climate adaptation in cities. *Frontiers in Ecology and Evolution*, 12, 1440477.
89. SBM. (2024). *Draft standard for activities involving removals under the Article 6.4 mechanism*. Article 6.4 Supervisory Body.
90. Seddon, N., Chausson, A., Berry, P., Girardin, C. A. J., Smith, A., & Turner, B. (2021). Getting the message right on nature-based solutions to climate change. *Global Change Biology*, 27(8), 1518–1546.
91. South Africa National Treasury. (2022). *South African green finance taxonomy – 1st edition*. National Treasury of South Africa.
92. Sunderlin, W. D., Larson, A. M., Duchelle, A. E., Resosudarmo, I. A. P., Dokken, T., & Awono, A. (2011). How are REDD+ proponents addressing tenure problems? Evidence from Brazil, Cameroon, Tanzania, Indonesia, and Vietnam. *World Development*, 55, 37–52.
93. Systemiq & International High-Level Expert Group on Natural Capital. (2025). *Making Natural Capital Count: Integrating Nature into Economic Decision-Making*. Systemiq.
94. TCFD. (2017). *Recommendations of the Task Force on Climate-related Financial Disclosures*. Task Force on Climate-related Financial Disclosures.
95. The Nature Conservancy (TNC). (2021). *Belize Blue Bonds for Ocean Conservation: Transaction Summary and Conservation Outcomes*. TNC Caribbean Division, Belize City.
96. The Nature Conservancy (TNC). (2025). *Biodiversity Finance Trends 2025: Tracking trends towards financing the Kunming–Montreal Global Biodiversity Framework*. November 2025.
97. TNFD. (2023). *Recommendations of the Taskforce on Nature-related Financial Disclosures*. Taskforce on Nature-related Financial Disclosures.
98. U.S. Department of the Treasury. (2026). *Treasury Announces the United States’ Immediate Withdrawal from the Green Climate Fund*. Press Release SB0352, 7 January 2026.

99. UNCTAD. (2025). *Aid at the crossroads: Trends in official development assistance and debt distress*. UNCTAD.
100. UNDP Indonesia. (2022). *Blue Carbon Finance for Coastal Communities: Lessons from the Coral Triangle*. United Nations Development Programme, Jakarta.
101. UNEA. 2022. *Resolution 5/5: Nature-based solutions for supporting sustainable development*. Nairobi: United Nations Environment Assembly of the United Nations Environment Programme
102. UNEA. (2025). *Ministerial declaration of the seventh session of the United Nations Environment Assembly: Advancing sustainable solutions for a resilient planet (UNEP/EA.7/HLS/L.1)*. United Nations Environment Assembly.
103. UNECE. (2025). *Promoting Nature-based Solutions and Sustainable Infrastructure in the Pan-European Region*. United Nations Economic Commission for Europe, Geneva.
104. UNEP. (2021). *State of finance for nature 2021*. United Nations Environment Programme.
105. UNEP. (2022). *Nature based solutions: Opportunities and challenges for scaling up*. United Nations Environment Programme.
106. UNEP. (2023). *State of Finance for Nature 2023: The Big Nature Turnaround*. United Nations Environment Programme.
107. UNEP. (2023a). *Nature-based Solutions in Urban Areas: Primer 6*. United Nations Environment Programme Finance Initiative, Geneva.
108. UNEP. (2024). *Growing the Green: Why and how restoration finance could quadruple by 2030*. United Nations Environment Programme.
109. UNEP. (2025). *Global Environment Outlook 7: A future we choose – Why investing in Earth now can lead to a trillion dollar benefit for people and planet*. United Nations Environment Programme.
110. UNEP. (2026). *State of finance for nature 2026: Nature in the red – Powering the trillion-dollar nature transition economy*. Nairobi: UNEP. <https://wedocs.unep.org/handle/20.500.11822/49119>
111. UNFCCC. (2011). *Decision 1/CP.16: The Cancun agreements*. UNFCCC Secretariat.
112. UNFCCC. (2015). *Guidelines for Integrating Ecosystem-based Adaptation into National Adaptation Plans*. Bonn: UNFCCC Secretariat.
113. UNFCCC. (2021). *Decision 1/CMA.3: Glasgow Climate Pact*. UNFCCC Secretariat.
114. UNFCCC. (2024). *Decision 1/CMA.6: New collective quantified goal on climate finance*. UNFCCC Secretariat.
115. UNFCCC. (2025). *New collective quantified goal on climate finance under the Paris Agreement (Decision 24/CMA.5, FCCC/PA/CMA/2025/L.24)*. UNFCCC Secretariat.
116. UNFCCC. (2025a). *Report on the Baku to Belém Roadmap to USD 1.3 trillion in climate finance (FCCC/PA/CMA/2025/INF.XX)*. UNFCCC Secretariat.
117. United Nations (UN). (2023). *Our common agenda: Policy brief on the future of the global economy*. United Nations.
118. VCMi. (2024). *VCMi claims code of practice*. Voluntary Carbon Markets Integrity Initiative.
119. Verra. (2015). VM0033 Methodology for Tidal Wetland and Seagrass Restoration, v2.0. Verified Carbon Standard. <https://verra.org/methodologies/vm0033-methodology-for-tidal-wetland-and-seagrass-restoration-v2-0/>
120. Wauchope, H. S., et al. (2024). Principles and pitfalls for biodiversity credits. *Conservation Letters*, 17(2), e12902.
121. WBG. (2024a). *Investors support Amazon reforestation through USD 225 million World Bank outcome bond*. World Bank Group.
122. WBG. (2024b). *Global Challenge Program: Forests for development, climate and biodiversity*. World Bank Group.
123. WBG. (2024c). *World Bank Group nature finance tracking methodology*. World Bank Group.
124. WEF. (2024). *Nature finance and biodiversity credits: A private sector roadmap*. World Economic Forum.

125. World Bank. (2017). *Environmental and social framework*. World Bank.
126. World Bank. (2021). *Lessons learned from the implementation of MRV systems for REDD+*. World Bank.
127. World Bank. (2021a). *The economic case for nature: A global Earth-economy model to assess development policy pathways*. World Bank.
128. World Bank. (2023). *Sustainability in Delta Blue Carbon-1*. World Bank.
129. WRI. (2024). *Multilateral development banks: Nature and biodiversity mainstreaming*. World Resources Institute.
130. WWF, UNDP, UNEP-WCMC, & ILCN. (2021). *The state of Indigenous Peoples' and local communities' lands and territories*. WWF International.