BIODIVERSITY FINANCE REFERENCE GUIDE



DRAFT FOR COMMENTS













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INTRODUCTION



Nature, underpinned by biologically diverse ecosystems, plays a critical role in our economies, health, and climate change mitigation, resilience, and adaptation. It is estimated that \$44 trillion of global value added (more than half of the world's GDP) is generated in industries that highly or moderately depend on nature and its services.¹ Yet, human economic activity is causing biodiversity loss at an unprecedented level. There is a growing recognition that nature loss and its interactions with climate change present systemic risks to economies; and it is important to develop sustainable business models that protect biodiversity and ecosystem services through both avoiding and minimizing threats to biodiversity and through creating benefits for nature.

Halting and reversing biodiversity loss could yield substantial climate and economic benefits. It is estimated that transitioning to nature-friendly production practices could generate up to \$10.1 trillion in annual business opportunities and create 395 million jobs by 2030.² Biologically diverse ecosystems can provide up to 37% of carbon emissions reduction needed to meet the goals of the Paris Agreement³ and provide substantial and cost-effective resilience and adaptation benefits to physical impacts of climate change. For

example, preservation and restoration of mangrove forest is 2-5 times cheaper than engineered structures to protect from storm surges and create additional economic, climate mitigation, and biodiversity benefits. Finance and innovative financial solutions are key to supporting the transition to nature-friendly production practices and deploying nature-based climate solutions. Biodiversity Finance – defined as finance that contributes or intends to contribute to activities that conserve, restore, or avoid negative footprint on biodiversity and nature contributions to people⁴ – is a fast-emerging area in Green Finance with increased interest from investors and issuers globally. It offers tremendous business opportunities and helps address pressing challenges by improving the health of terrestrial and marine ecosystems and contributing to economic growth and improved livelihoods.

Amid this growing interest in scaling Biodiversity
Finance, IFC has built on the Green Bond Principles
and the Green Loan Principles and related resources,
including the ICMA Handbook for Impact Reporting, to
develop this reference guide. This reference guide seeks
to help identify investment projects that constitute
Biodiversity Finance in the context of green bonds and
green loans.

¹http://www3.weforum.org/docs/WEF_New_Nature_Economy_Report_2020.pdf

² https://www.weforum.org/reports/new-nature-economy-report-ii-the-future-of-nature-and-business

³ https://www.nature.org/en-us/what-we-do/our-insights/perspectives/natures-make-or-break-potential-for-climate-change/

⁴ This definition is adopted from OECD and is used in "Mobilizing Private Finance for Nature. A World Bank Group paper on private finance for biodiversity and ecosystem services," 2020, available at http://pubdocs.worldbank.org/en/916781601304630850/Finance-for-Nature-28-Sep-web-version.pdf

BIODIVERSITY FINANCE REFERENCE GUIDE



Both Green Bond Principles and Green Loan Principles list biodiversity as an accepted use of proceeds. However, they do not provide a granular description of the types of projects that would fit this category. The purpose of this reference guide is to address this gap and to provide an indicative list of investment activities and investment components that contribute to protecting, maintaining, or enhancing biodiversity and ecosystem services and sustainably managing living natural resources through the adoption of practices that integrate conservation needs and sustainable development.

This reference guide aims to provide a list of eligible use of proceeds to support private investments aligned with the Green Bond Principles and Green Loan Principles that contribute to Sustainable Development Goal 14 "Conserve and sustainably use the oceans, seas and marine resources for sustainable development" and Sustainable Development Goal 15 "Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss." This guide has been developed under the Green Bond Technical Assistance Program (GB-TAP) in response to growing interest in biodiversity

finance from investors, financial institutions and issuers globally. GB-TAP is a multi-donor program managed and administered by IFC to promote green bond issuance from emerging-market financial institutions. This is a living document subject to periodic updates.

This reference guide uses the Convention on Biological Diversity's definition of biodiversity as "the variability among living organisms from all sources including, inter alia, terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems."

Ecosystem services are defined as the benefits that people, including businesses, derive from ecosystems. Ecosystem services are organized into four types: (i) provisioning services, which are the products people obtain from ecosystems; (ii) regulating services, which are the benefits people obtain from the regulation of ecosystem processes; (iii) cultural services, which are the nonmaterial benefits people obtain from ecosystems; and (iv) supporting services, which are the natural processes that maintain the other services.⁵

⁵ Examples are as follows: (i) provisioning services may include food, freshwater, timber, fibers, medicinal plants; (ii) regulating services may include surface water purification, carbon storage and sequestration, climate regulation, protection from natural hazards; (iii) cultural services may include natural areas that are sacred sites and areas of importance for recreation and aesthetic enjoyment; and (iv) supporting services may include soil formation, nutrient cycling, primary production.

To be considered biodiversity/nature related, investment activities should seek to address at least one of the following key drivers of biodiversity loss, articulated by the Convention on Biological Diversity⁶ and the 2019 report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystems Services (IPBES)⁷:



Land use change. Land use change from agriculture, unsustainable forest management, urbanization, industrial developments, and transport networks is the biggest single source of pressure on biodiversity worldwide, leading to habitat loss, fragmentation, and degradation.



Over-exploitation and unsustainable use of nature. Overexploitation and destructive harvesting practices are a critical threat to the world's biodiversity and ecosystems. Overexploitation is a particularly significant threat to marine ecosystems. Unsustainable water use for agriculture, cities, energy, and industries puts further pressure on biodiversity and the health of ecosystems.



Pollution. Pollution from nutrients (nitrogen and phosphorous) and other pollutants from industrial, mining, and agricultural activities as well as air pollution, greenhouse gas emissions, untreated urban and rural waste, and plastic pollution are a continuing and growing threat to biodiversity in terrestrial, inland water, coastal, and marine ecosystems.



Climate change. Warming global temperatures are already having an adverse impact on biodiversity and are projected to become a bigger threat in the next decade. In addition, more frequent extreme weather events and changing patterns of rainfall and drought associated with the changing climate can be expected to have further significant impacts on biodiversity.8



Invasive species. The spread of invasive alien species continues to be a major threat to all types of species and ecosystems.

⁶ https://www.cbd.int/gbo3/?pub=6667§ion=6711

⁷ https://ipbes.net/global-assessment

^{*} For the purposes of this Reference Guide, only activities that address localized impacts of climate change on biodiversity and ecosystem services will be considered to have a biodiversity related component. Examples could include restoration of cloud forest to increase rain fall and water table at a project site or restoration of coral reef with native species resistant to higher water temperatures.

BIODIVERSITY FINANCE FRAMEWORK



To identify projects and project components eligible for the use of proceeds under Biodiversity Finance, this reference guide applied the following assessment criteria:

- Is the project type consistent with the Green Bond Principles' and Green Loan Principles' eligible project categories and does it contribute to Sustainable Development Goals 14 and 15?
- To qualify as a biodiversity finance project, it must be consistent with the project categories of Green Bond Principles and Green Loan Principles and contribute to either Sustainable Development Goal 14 or 15 with outputs and outcomes directly related to one or more of the target indicators of Sustainable Development Goals.
- Does the project type introduce risk that may affect progress on other environmental priorities such as Sustainable Development Goals 2,6, 7, 12, and 13?

The project can only be labelled biodiversity finance if it does not introduce material risks to other themes and priority environmental areas of the Sustainable Development Goals themes, including:

- SDG2: No hunger
- SDG6: Access to clean water
- SDG7: Affordable and clean energy
- SDG12: Climate action
- SDG13: Responsible consumption and production
- Are Environmental, Social and Governance (ESG) safeguards and standards, such as the IFC Performance Standards, applied in the implementation of the project if there are material environmental and social risks?

The project must clearly state which internationally accepted sustainability standards it is following in order to minimize and manage any adverse environmental and social impacts, including biodiversity loss. IFC's E&S Performance Standards (or similar good practice E&S standards) are expected to be followed in addition to national requirements. Industry specific sustainability standards, as well as certain specific product standards, may also be applied for a biodiversity finance investment above national requirements.

BUILDING ON THE GREEN BOND PRINCIPLES AND GREEN LOAN PRINCIPLES



Biodiversity finance projects are expected to be consistent with Green Bonds and Green Loans and issuers are encouraged to follow a framework. To stay consistent with the Green Bond Principles and Green Loan Principles, it is best practice that an issuer of green bonds or borrower of green loans with a biodiversity finance component prepares a framework that clearly distinguishes the green and biodiversity activities for the use of proceeds. The biodiversity finance activities can be derived from the Biodiversity Finance Reference Guide. This framework includes:

- In the section on the Use of Proceeds: Which project types contribute to SDG 14 or 15 and are consistent with the Green Bond Principles and Green Loan Principles?
- In the section on Project Assessment and Selection: How will the biodiversity finance projects be assessed and selected?
- In the section on Management of Proceeds:
 How will the proceeds from biodiversity finance be managed?
- How will the impact of biodiversity finance be reported?

The framework serves as a transparent way to avoid green washing and safeguards against reputational risk, and it should be endorsed by the issuer's or borrower's senior management.

Further, it builds on existing green eligible activities stated in the Green Bond Principles and Green Loan Principles and complements them.

Use of proceeds



The reference guide for biodiversity finance provides an indicative list of private sector biodiversity related investment activities to demonstrate eligible use of proceeds that contribute to Sustainable Development Goal 14 "Conserve and sustainably use the oceans, seas and marine resources for sustainable development" and Sustainable Development Goal 15 "Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss."

The indicative list is intended for the application to projects to identify biodiversity related investment activities and to offer biodiversity finance based on the use of proceeds.

This reference guide captures biodiversity and nature-related investment components that contribute to the protection and enhancement of biodiversity and ecosystem services through intentional avoidance of damaging activities and through value creation to benefit biodiversity and ecosystems. The investment activities reviewed in this reference guide fall into the following categories:

Investment activities that generate biodiversity co-benefits, while supporting established business operations. Such investment activities include: (i) financing sustainable production and operation practices that rely on natural ecosystems and generate biodiversity conservation co-benefits; and (ii) financing waste prevention and recycling activities, pollution prevention and control, and manufacturing of products that reduce pollution harmful to biodiversity.



Investments in biodiversity conservation as the primary objective, directly financing conservation or conservation-related services.

Investments in nature-based solutions where biodiversity is used to preserve, enhance, and restore ecosystem services to address a number of challenges – from water purification to climate resilience and adaptation – and generate economic value to public and private stakeholders (based on the IUCN definition of nature-based solutions as "actions to protect, sustainably manage and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.")

⁹ This approach is consistent with the practice within sustainable finance, including the financing of climate mitigation and adaptation projects, where some activities can be identified as risk management measures (e.g. reducing air pollution and as a co-benefit also reducing CO₂ emissions) while others can be considered as value creation (e.g. solar PV in an arid area).

Table 1:

Mapping biodiversity finance activities under the Green Bond Principles and Green Loan Principles' Environmental Objectives

	GREEN BOND/GREEN LOAN PRINCIPLES' ENVIRONMENTAL OBJECTIVES				
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Biodiversity Finance	Pollution Prevention	Natural Resource		Climate	Change
Area		Conservation	Biodiversity	Mitigation	Adaptation
Activities that generate biodiversity co-benefits, while supporting established business operations	222	22	22	9	9
Biodiversity conservation as the primary objective	9	222	222	0	0
Nature-based solutions where biodiversity is used to preserve, enhance, and restore ecosystem services	99	99	22	9	9

Legend

Primary or direct relationshipSecondary or indirect relationshipTertiary or derived relationship

Annex 1 includes a more detailed indicative mapping of biodiversity finance activities and how they relate to the Green Bond Principles and Green Loan Principles. This Biodiversity Finance Reference Guide may be updated periodically to be consistent with Green Bond Principles and Green Loan Principles and may be used for the initial identification of biodiversity finance assets.

Biodiversity finance use of proceeds can be allocated to finance or refinance the eligible activities described in the following sections.

Investment activities that generate biodiversity/nature co-benefits while supporting business operations





PRODUCTIVE LAND USE/ AGRICULTURE



Climate smart agriculture, focused on one or more of the following:

- a. Rehabilitation of degraded lands with a share of native species.¹⁰
- **b.** Reduction in synthetic fertilizer use by at least 20%¹¹ to avoid downstream eutrophication, promote use of bio-fertilizer and other organic solutions (E.g. composting).
- **c.** Reduction in pesticide use by at least 20%¹² and use of bio-solutions.
- **d.** Intercropping/ use of cover crops.
- **e.** Significant reduction of tillage or implementation of no till practices.
- **f.** Cultivation of species that can more readily adapt to variations in production cycles, water quality/quantity and temperatures.
- **g.** Infrastructure that prevents run-off of agrochemicals into rivers or coastal basins.¹³
- **h.** The use of sustainable agricultural practices/varieties/ technology or infrastructure that increases crop yields/quality on existing land without increasing environmental footprint and in so doing creates opportunities for reduced conversion pressure on forested/high biodiversity areas.
- **i.** Financing traceability mechanisms, data and technologies used to prevent deforestation and monitor biodiversity benefits at the corporate level or along the supply chain.
- **j.** Efficient irrigation promote efficient water allocation, water recycling, sustainable reuse of grey water, and rainwater harvesting and utilization of low water consumption native species.

¹⁰ This can also be part of NBS.

[&]quot;This threshold is consistent with benchmarks used in climate finance.

¹² This threshold is consistent with benchmarks used in climate finance.

¹³ If infrastructure solutions include use of nature, this can also be part of NBS

- **Regenerative agribusiness:** Farming and grazing practices that, among other benefits, rebuild soil organic matter and restore degraded soil biodiversity, and enhance and maintain ecosystem function; sustainable fiber production and other activities that focus on recuperation of the ecosystem through improved land management and operate throughout the supply chain.
- Investment in certified sustainable crop production with demonstrated biodiversity benefit agricultural production that does not impose any harm to environment, biodiversity, and quality of agricultural crops. (Note: Closely linked to climate smart and organic agriculture).
- 4 Investing in alternative production or production practices, e.g. hydroponics, alternatives to beef to reduce pressure on land and prevent land conversion. This would include agricultural practices that contribute to the protection of wildlife, especially endangered and threatened species (wildlife friendly options) and in businesses that promote wildlife friendly practices to improve land management and reduce demand for bushmeat (which may have positive impact on reducing zoonotic diseases). (Note: closely linked to climate smart and regenerative agriculture).



- B. FRESH WATER / MARINE SUSTAINABLE PRODUCTION
- Biodiversity Friendly Fishing:
 - **a.** Repopulation of native species in rivers and other water bodies.
 - **b.** Land-based production of high value niche marine products (e.g., crustaceans, sea urchins, ornamental corals, and fish).
 - **c.** Production practices consistent with an approved Fishery Improvement Project ¹⁵ (FIP).
 - **d.** Adoption of production practices to meet, keep, or exceed best practice certification standards (e.g., Marine Stewardship Council (MSC)) certification standard for the fishing industry.
 - e. Production, trade, or retail of seafood products with the blue MSC label.¹⁶

¹⁴ Can refer to guidelines (https://www.rainforest-alliance.org/business/certification/) Fair Trade Sustainability Alliance (https://www.fairtsa.org/) Note: these guidelines are highly targeted at certain commodities and certain modes of production and aren't useful or applicable in all cases.

¹⁵ For more information: https://www.msc.org/for-business/fisheries/developing-world-and-small-scale-fisheries/fips

¹⁶ See quidelines and information on certification schemes: https://www.seafoodwatch.org/about-us/our-standards

- **Sustainable aquaculture production:** Aquaculture that is certified as following best practice (e.g., Aquaculture Stewardship Council).¹⁷
- Improved sustainable fisheries and fishery practices: Operations compliant with gear restrictions/modifications, offtake and sourcing procedures, vessel modifications (e.g. reducing by-catch).

4 Biodiversity-friendly shipping:

- **a.** Ballast water treatment on shipping vessels to prevent contamination with invasive species.
- **b.** Installation of membrane bioreactor type water treatment for all blackwater and greywater on shipping or cruising vessels.
- **c.** Installation of bilge water treatment in shipping vessels.
- **d.** Retrofitting shipping vessels to reduce noise pollution harmful to ocean mammal species.
- **e.** Solid waste reception and processing facilities at ports and terminals.

5 Waste/plastics management to protect fresh water and marine habitats:

- **a.** Manufacturing or retail of compostable and biodegradable products, including plant-based plastics and packaging solutions (in locations where compostable facilities are readily available) that displace traditional products that impact marine and freshwater biodiversity.
- **b.** Manufacturing, trade finance and retail of low carbon and biodegradable materials (e.g. Lyocell) as alternative to cotton and fossil-based fibers.
- **c.** Urban drainage systems that prevent plastic and pollutants runoff to fresh water and marine habitats.
- **d.** Flood mitigation that prevents plastic, solid waste or pollutants runoff to fresh water and marine habitats.
- **e.** Use of recycled plastics for manufacturing in a circular economy approach in areas close to fresh water and marine habitats.
- **f.** Plastic recycling facilities in areas close to fresh water and marine habitats.
- **g.** Reuse or repurposing of plastics in areas close to fresh water and marine habitats.

[&]quot; World Bank includes some key elements including meeting best practice in the following areas:

[•] Environment practices: Mangrove and wetland conservation; effective effluent management and water quality control; sediment control and sludge management; soil and water conservation; efficient fishmeal and fish oil use; responsible sourcing of broodstock and juvenile fish; control of escapes and minimizing biodiversity and wildlife impact.

[•] Community practices: Establish well-defined rights, aquaculture zones and responsibilities for aquaculturists; regulatory compliance and effective enforcement; community involvement; worker safety, fair labor practices and equitable compensation.

[•] Sustainable business and farm management practices: Effective biosecurity and disease control systems; minimal antibiotic and pharmaceutical use; microbial sanitation; maintain global standards for hygiene; efficient and humane harvest and transport; accountable record-keeping and traceability; profitability. (https://www.worldbank.org/en/topic/environment/brief/sustainable-aquaculture) Also see guidelines and information on certification schemes: https://www.seafoodwatch.org/about-us/our-standards

- 6 Manufacturing or retail of ocean and water friendly household products (e.g., biodegradable and phosphate free detergent, shampoos, soaps, deodorants, cleaners; microbead free toothpaste; non-plastic packaging).
- Reduction of downstream eutrophication through the replacement of phosphate or nitrogen based synthetic fertilizers (linked also to improved agricultural practices).
- 8 Prevention of sewer and wastewater runoff into waterways.
- **9 Upgrading wastewater treatment plants** (agricultural, industrial, commercial, residential, or city level) in areas close to fresh-water and marine habitats.



C. FORESTRY AND PLANTATIONS

- **Reforestation/Afforestation:** Reforestation with native species resulting in biodiversity benefits (e.g. water quality, water supply in areas of critical ecological flow) and other ecosystem services, including carbon sequestration. (*Note: this is also part of watershed management under NBS*).
- Reforestation on previously forested land with native or naturalized non-monoculture species adapted to changes in climate (note: use species that more readily adapt to variations in production cycles, water quality/quantity and temperatures).
- Afforestation (plantations) or natural forest regeneration on degraded lands to benefit nearby protected and conservation areas through creation of production buffer zones or biodiversity corridors, especially when adjacent to or connecting virgin forest or protected areas.
- **Native non-timber forest products** linked to forest conservation, soil retention and recovery, alternative livelihoods.
- 5 Improved sustainable forest management projects (e.g. Forest Stewardship Council www.fsc.org).
- **Sustainable tree-crops production** (including organic) such as cacao (https://www.iso.org/standard/64767.html), coffee (sustaincoffee.org), including greening supply chains.
- Agroforestry Systems (linked to sustainable agricultural practices)

 mixed tree and crop production, using native or naturalized species, appropriate for local climate conditions.



D. TOURISM/ECOTOURISM SERVICES

- Sustainable or Ecotourism Tourism ventures that meet established standards for best practices and conserve or restore habitats or avoid increasing the footprint (e.g., www.ecotourism.org, https://greenglobe.com/standard/).
- **Tourism concessions and operations inside marine and terrestrial conservation areas**, that create opportunities or incentives for enhanced biodiversity protection or reduced biodiversity threat e.g., economic (alternative livelihoods), social (supporting changing norms or behaviors through education/best practice), fiscal (profit sharing user fees with conservation areas). Tourism operations must meet recognized ecotourism standards.
- **Ecotourism ventures and operations outside conservation areas** (e.g., in buffer zones or which provide finance for protected area budgets) consistent with ecotourism principles (See also above additional points).



E. OTHER INVESTMENTS

- Projects designed to avoid impact on ecologically sensitive areas in circumstances with weak regulation or enforcement.
- Infrastructure projects opting for 'green' over 'grey' solutions or that include components of green infrastructure.¹⁸
- Investment in technology that supports the identification, monitoring and verification of biodiversity and business impacts (e.g., GIS for biodiversity protection).

¹⁸ This can also be part of NBS.



Investments in biodiversity/ nature conservation as the primary objective





- Public private partnership for the conservation of legally protected and internationally recognized areas¹⁹ and for the conservation of biosphere (e.g., no modification of natural soil chemistry, protection of habitats that provide ecosystem services, etc.).
- 2 Investment in land for conservation or restoration to create biodiversity credits (e.g., Mitigation Banking). (Note: These could be linked to conservation easements set up to provide offsets via protection/ management/ restoration).
- Conservation easements /servitudes /right of ways. Conservation easements earmark land for biodiversity conservation on private land while allowing owners to retain certain private property rights (some of these may be directly related to biodiversity credits/mitigation banking).
- Payments for ecosystem services or investments in mechanism and conservation trust funds that support payment for ecosystem services directly linked to nature and biodiversity conservation.
- A public-private partnership mechanism that rewards/reduces tax paid by private landowners to implement new privately managed protected areas adjacent to existing protected areas; investments in oversight and verification mechanisms to ensure correct use.

¹⁹ Areas as defined by IFC Performance Standard 6, particularly natural and critical habitats as well as habitats listed in IUCN Protected Area Categories, World Database of Key Biodiversity Areas and IUCN Red List of Ecosystems'.

- **Rewilding** (strong linkage to restoration) and habitat creation for wildlife/recreation, etc.
- **Fire management/ fire risk reduction** programs that finance management and interventions that directly reduce fire threats and that have demonstrated a benefit to biodiversity.
- 8 Investment in REDD+ ventures to generate carbon credits (post Paris Agreement framework).²⁰



B. FRESH WATER AND MARINE HABITAT CONSERVATION

- Investment in wetland conservation/restoration to create biodiversity credits to establish wetland mitigation banks for delivery of credits.²¹
- 2 Investment in conservation / restoration of marine areas (sea grass beds, coral mangroves, etc.) that protect important species and improve habitats. In some cases, these interventions can be designed to deliver credits (marine habitat bank).²²
- **Provision of services for restoration of natural habitats** (e.g., use of drones to plant mangroves; monitoring services to enforce fishing quotas; repopulation of native species in a landscape).
- Measures that achieve at least 20% reduction²³ of water use per unit of product in areas next to rivers with critical ecological flow.
- 5 Conservation of critical marine habitats that provide services or important ecological functions.²⁴
- 6 **Nutrient credit schemes** to reduce the amount of discharge of pollutants into water bodies (nutrient trading in regulated markets).

²⁰ This can also be part of NBS.

²¹ This can also be part of NBS.

²² This can also be part of NBS.

²³ This threshold is consistent with benchmarks used in climate finance.

²⁴ Areas as defined by IFC Performance Standard 6, particularly natural and critical habitats, as well as habitats listed in IUCN Protected Area Categories, World Database of Key Biodiversity Areas and IUCN Red List of Ecosystems.



Investment in nature-based solutions (NBS) where biodiversity/nature is used to enhance ecosystem services



A. NATURE-BASED SOLUTIONS²⁵

- Natural Infrastructure investments that prevent runoff of agrochemicals into rivers or coastal water basins (e.g., swales, biofiltration).
- **Constructed wetlands** for water treatment (primary through tertiary).
- **Watershed management practices** to decrease run-off, siltation, increase recharge.
- Natural infrastructure to reduce water temperatures of used water discharged into water ways.
- Natural infrastructure or combination of natural and grey infrastructure for storm water management solutions (e.g., parks, green walls and roofs).
- 6 Conservation or rehabilitation of wetlands to reduce flooding and soil/water salination.
- **Conservation or rehabilitation of mangroves** to reduce flooding and soil erosion and to sequester carbon.

²⁵ It is recommended to refer to the IUCN Global Standard for Nature-based Solutions in designing and evaluating investment activities in this area. https://portals.iucn.org/library/sites/library/files/documents/2020-020-En.pdf

- **8** Conservation or rehabilitation of coral reefs to reduce storm surges and flooding.
- **9** Use of forest buffers and agricultural strips to avoid nutrient and sediment run-off.
- 10 Parametric insurance schemes for green/blue infrastructure such as coral reefs, fisheries, aquaculture, coastal protection.
- **REDD+ and forestry projects/grassland projects** to sequester carbon (linked to activities in agriculture and forestry).

On Project Selection



The issuer or borrower should understand and apply the indicative list above for the identification of eligible assets in its portfolio and pipeline. Only activities in which enough information can be gathered to objectively describe use of proceeds and impact reporting can be selected.

On Management of Proceeds



The issuer or borrower should have the capabilities to ring fence the proceeds from biodiversity finance and allocate them only to eligible activities. Using a follow-the-money approach, if a project or investment has several components, only the eligible component should receive funds from biodiversity finance.

On Impact Reporting



The issuer or borrower should make all reasonable efforts to gather data for impact reporting. Upon the identification of the activities that are eligible for receiving proceeds from biodiversity finance, the issuer or borrower can work with investors and experts to define suitable impact indicators to include in annual impact reports. To the extent possible, it is recommended to use impact indicators included in the monitoring protocols of applicable certification system or those included in the ICMA Handbook for Impact Reporting.²⁶

²⁶ https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Handbook-Harmonized-Framework-for-Impact-Reporting-220520.pdf https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Standalone-Biodiversity-Impact-Metrics-April-2020-200420.pdf

CONCLUSION



This reference guide lists biodiversity related investment activities based on the use of proceeds. In the future IFC may consider developing an approach to biodiversity finance based on results such as ESG-linked loan/bond or Sustainability-linked loan/bond, where the terms and conditions are linked to the achievement of corporate level ESG targets.

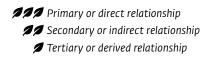
ANNEX I



Mapping Biodiversity Finance Activities under the Green Bond Principles and Green Loan Principles.

The table below is indicative and relates the biodiversity finance activity with the respective Green Bond Principles/Green Loan Principles' environmental objectives. By being indicative, this table does not constitute eligibility criteria and is provided only as a reference. For specific projects, it may need to be complemented by additional information on the project's context and environmental standards applied.

The table below maps the eligible biodiversity finance activities and the degree in which they relate to each of the environmental objectives of the Green Bond/ Green Loan Principles: climate change mitigation, climate change adaptation, natural resource conservation, biodiversity conservation, and pollution prevention and control.



	GREEN BOI	ND/GREEN LOA	N PRINCIPLES'	ENVIRONMEN ^T	TAL OBJECTIVES
Ã	K	42	***************************************		≡ ¶°
Biodiveristy Finance Group and Economic Activity	Pollution Prevention and Control	Natural Resource Conservation	Biodiversity	Clima Mitigation	te Change Adaptation ³⁰
I. Investment activities that generate biodiversity/nature co-benefits while supporting business operations	AAA	22	an a	Micigation	Adaptation
A. PRODUCTIVE LAND USE/ AGRICULTU	RE				
 Climate smart agriculture, focused on one or more of the following: 					
a. Rehabilitation of degraded lands with a share of native species.	9	22	99	222	1
b. Reduction in synthetic fertilizer use by at least 20% to avoid downstream eutrophication, promote use of bio-fertilizer and other organic solutions (E.g. composting).	222	999	99	222	
c. Reduction in pesticide use by at least 20% and use of bio-solutions.	222	222	222		
d. Intercropping/ use of cover crops.		22	1	22	
e. Significant reduction of tillage or implementation of no till practices.		222	99	222	
f. Cultivation of species that can more readily adapt to variations in production cycles, water quality/quantity and temperatures.		22	22	1	222
g. Infrastructure that prevents run-off of agrochemicals into rivers or coastal basins	999	222	22		
h. The use of sustainable agricultural practices/varieties/ technology or infrastructure that increases crop yields/ quality on existing land without increasing environmental footprint and in so doing creates opportunities for reduced conversion pressure on forested/high biodiversity areas.	9	22	0	22	
i. Financing traceability mechanisms, data and technologies used to prevent deforestation and monitor biodiversity benefits at the corporate level or along the supply chain.	9	99	999	99	
j. Efficient irrigation - promote efficient water allocation, water recycling, sustainable reuse of grey water, and rainwater baryesting and		444		44	

222

of grey water, and rainwater harvesting and

utilization of low water consumption native

species.

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Further assessment is required to be performed to confirm any contribution to adaptation, based on location and industry. Adaptation is always context-specific and requires a granular assessment that applies the Joint Multilateral Development Banks' Methodology for Climate Finance Tracking. This methodology applies the three step criteria to determine an activity's contribution to adaptation, which involves (1) Identification of the physical climate risk (2) Identify of the vulnerability of the activity to the above referred physical climate risk (3) Documentation of how the

	GREEN BOI	ND/GREEN LOA	N PRINCIPLES'	ENVIRONMENT	TAL OBJECTIVES
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Biodiveristy Finance Group and Economic	Pollution Prevention	Natural Resource		Climat	te Change
Activity	and Control	Conservation	Biodiversity	Mitigation	Adaptation
2. Regenerative agribusiness: farming and grazing practices that, among other benefits, rebuild soil organic matter and restore degraded soil biodiversity, and enhance and maintain ecosystem function; sustainable fiber production and other activities that focus on recuperation of the ecosystem through improved land management and operate throughout the supply chain.		222	222	22	
3. Investment in certified sustainable crop production with demonstrated biodiversity benefit - agricultural production that does not impose any harm to environment, biodiversity, and quality of agricultural crops. (Note: closely linked to climate smart and organic agriculture)	9	0	222	9	
4. Investing in alternative production or production practices, e.g. hydroponics, alternatives to beef to reduce pressure on land and prevent land conversion. This would include agricultural practices that contribute to the protection of wildlife, especially endangered and threatened species (wildlife friendly options) and in businesses that promote wildlife friendly practices to improve land management and reduce demand for bushmeat (which may have positive impact on reducing zoonotic diseases). Note: closely linked to climate smart and regenerative agriculture.		111	99	9	
B. FRESH WATER / MARINE SUSTAINABL	E PRODUCTIO	N			
1. Biodiversity Friendly Fishing:					
a. Repopulation of native species in rivers and other water bodies.		11	999		
b. Land-based production of high value niche marine products (e.g. crustaceans, sea urchins, ornamental corals and fish).					
c. Production practices consistent with an approved Fishery Improvement Project (FIP).	9				
d. Adoption of production practices to meet, keep, or exceed best practice certification. standards (e.g. Marine Stewardship Council (MSC) certification standard for the fishing industry.		9	9		
e. Production, trade or retail of seafood products with the blue MSC label.			1		

GREEN BOND/GREEN LOAN PRINCIPLES' ENVIRONMENTAL OBJECTIVES

GREEN BOND/GREEN LOAN PRINCIPLES' ENVIRONMENTAL OBJECTIVES

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Biodiveristy Finance Group and Economic Activity	Pollution Prevention and Control	Natural Resource Conservation	Biodiversity	Climat Mitigation	e Change Adaptation
2. Sustainable aquaculture production: Aquaculture that is certified as following best practice (e.g. Aquaculture Stewardship Council).	9	9		9	
3. Improved sustainable fisheries and fishery practices: operations compliant with gear restrictions/modifications, offtake and sourcing procedures, vessel modifications (e.g. reducing by-catch).		9	9		
4. Biodiversity friendly shipping					
a. Ballast water treatment on shipping vessels to prevent contamination with invasive species.	222				
b. Installation of membrane bioreactor type water treatment for all blackwater and greywater on shipping or cruising vessels.	111				
c. Installation of bilge water treatment in shipping vessels.	222		0		
d. Retrofitting shipping vessels to reduce noise pollution harmful to ocean mammal species.	222				
e. Solid waste reception and processing facilities at ports and terminals.	222		1		
5. Waste/plastics management to protect fresh water and marine habitats					
a. Manufacturing or retail of compostable and biodegradable products, including plant-based plastics and packaging solutions (in locations where compostable facilities are readily available) that displace traditional products that impact marine and freshwater biodiversity.	22		8		
b. Manufacturing, trade finance and retail of low carbon and biodegradable materials (e.g. Lyocell) as alternative to cotton and fossil-based fibers.	99	22	9	99	
c. Urban drainage systems that prevent plastic and pollutants runoff to fresh water and marine habitats.	111	99			
d. Flood mitigation that prevents plastic, solid waste or pollutants runoff to fresh water and marine habitats.	222	99	9		222
e. Use of recycled plastics for manufacturing in a circular economy approach in areas close to fresh water and marine habitats.		9	22	222	

GREEN BOND/GREEN LOAN PRINCIPLES' ENVIRONMENTAL OBJECTIVES

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Biodiveristy Finance Group and Economic Activity	Pollution Prevention and Control	Natural Resource Conservation	Biodiversity	Climat Mitigation	e Change Adaptation
f. Plastic recycling facilities in areas close to fresh water and marine habitats.	222	0	99	222	
g. Reuse or repurposing of plastics in areas close to fresh water and marine habitats.	222	9	99	222	
6. Manufacturing or retail of ocean and water friendly household products (e.g. biodegradable and phosphate free detergent, shampoos, soaps, deodorants, cleaners; microbead free toothpaste; non-plastic packaging).	ø		9		
7. Reduction of downstream eutrophication through the replacement of phosphate or nitrogen based synthetic fertilizers (linked also to improved agricultural practices).	999	99	22	22	
8. Prevention of sewer and wastewater runoff into waterways.	222	1	99		
9. Upgrading wastewater treatment plants (agricultural, industrial, commercial, residential, or city level) in areas close to fresh-water and marine habitats.	999	9	9		
C. FORESTRY AND PLANTATIONS					
1. Reforestation/Afforestation - reforestation with native species resulting in biodiversity benefits (e.g. water quality, water supply in areas of critical ecological flow) and other ecosystem services, including carbon sequestration (Note: this is also part of watershed management under NBS).		99	999	222	9
2. Reforestation on previously forested land with native or naturalized non-monoculture species adapted to changes in climate (note: use species that more readily adapt to variations in production cycles, water quality/ quantity and temperatures).		22	222	222	9
3. Afforestation (plantations) or natural forest regeneration on degraded lands to benefit nearby protected and conservation areas through creation of production buffer zones or biodiversity corridors, especially when adjacent to or connecting virgin forest or protected areas.		222	22	222	9
4. Native non-timber forest products linked to forest conservation, soil retention and recovery, alternative livelihoods.		222	999		

	GREEN BOND/GREEN LOAN PRINCIPLES' ENVIRONMENTAL OBJECTIVES				
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Biodiveristy Finance	Pollution	Natural		Climat	te Change
Group and Economic Activity	Prevention and Control	Resource Conservation	Biodiversity	Mitigation	Adaptation
5. Improved sustainable forest management projects. (e.g. Forest Stewardship Council www.fsc.org)		222		222	
6. Sustainable tree-crops production (including organic) such as cacao (https://www.iso.org/standard/64767.html), coffee (sustaincoffee. org), including greening supply chains		9	9		
7. Agroforestry Systems (linked to sustainable agricultural practices) – mixed tree and crop production, using native or naturalized species, appropriate for local climate conditions.			22	9	9
D. TOURISM/ECOTOURISM SERVICES					
1. Sustainable or Ecotourism Tourism ventures that meet established standards for best practices and conserve or restore habitats or avoid increasing the footprint (e.g. www. ecotourism.org, https://greenglobe.com/standard/).		9	9		
2. Tourism concessions and operations inside marine and terrestrial conservation areas, that create opportunities or incentives for enhanced biodiversity protection or reduced biodiversity threat – e.g. economic (alternative livelihoods), social (supporting changing norms or behaviors through education/best practice), fiscal (profit sharing user fees with conservation areas). Tourism operations must meet recognized ecotourism standards.			999		
3. Ecotourism ventures and operations outside conservation areas (e.g. in buffer zones or which provide finance for protected area budgets) consistent with ecotourism principles (See also above additional points).		8	22		
E. OTHER INVESTMENTS					
 Projects designed to avoid impact on ecologically sensitive areas in circumstances with weak regulation or enforcement. 			99		
2. Infrastructure projects opting for 'green' over 'grey' solutions or that include components of green infrastructure.			22	1	

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Biodiveristy Finance Group and Economic Activity	Pollution Prevention and Control	Natural Resource Conservation	Biodiversity	Climat Mitigation	te Change Adaptation
3. Investment in technology that supports the identification, monitoring and verification of biodiversity and business impacts (e.g. GIS for biodiversity protection).		9	222		
II. Investments in biodiversity/ nature conservation as the primary objective	9	222	222	9	,



A. CONSERVATION LAND USE/ TERRESTRIAL HABITAT CONSERVATION

1. Public private partnership for the conservation of legally protected and internationally recognized areas and for the conservation of biosphere (e.g., no modification of natural soil chemistry, protection of habitats that provide ecosystem services, etc.).		0	939	22	9
2. Investment in land for conservation or restoration to create biodiversity credits (e.g. Mitigation Banking). (Note: these could be linked to conservation easements set up to provide offsets via protection/ management/restoration).		222	222	22	
3. Conservation easements /servitudes /right of ways. Conservation easements earmark land for biodiversity conservation on private land while allowing owners to retain certain private property rights (some of these may be directly related to biodiversity credits/ mitigation banking).			222		
4. Payments for ecosystem services or investments in mechanism and conservation trust funds that support payment for ecosystem services directly linked to nature and biodiversity conservation.		9	222	9	
5. A public-private partnership mechanism that rewards/reduces tax paid by private landowners to implement new privately managed protected areas adjacent to existing protected areas; investments in oversight and verification mechanisms to ensure correct use.		9	222	9	
6. Rewildling (strong linkage to restoration) and habitat creation for wildlife/recreation, etc.		9	222	1	
7. Fire management/ fire risk reduction - programs that finance management and interventions that directly reduce fire threats and that have demonstrated a benefit to biodiversity.	9	9	22	22	99

LOAN PRINCIPLES' ENVIRONMENTAL	

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Biodiveristy Finance	Pollution	Natural	 	Climat	te Change
Group and Economic Activity	Prevention and Control	Resource Conservation	Biodiversity	Mitigation	Adaptation
Activity	and Control	Consei vacion	blourversity	Mitigation	Adaptation
8. Investment in REDD+ ventures to generate carbon credits (post Paris Agreement framework).			222	222	
B. FRESH WATER AND MARINE HABITAT	CONSERVATION	ON			
1. Investment in wetland conservation/ restoration to create biodiversity credits to establish wetland mitigation banks for delivery of credits.		99	222		
2. Investment in conservation / restoration of marine areas (sea grass beds, coral mangroves, etc.) that protect important species and improve habitats. In some cases, these interventions can be designed to deliver credits (marine habitat bank).		999	999		
3. Provision of services for restoration of natural habitats (e.g. use of drones to plant mangroves; monitoring services to enforce fishing quotas; repopulation of native species in a landscape).		999	999		
4. Measures that achieve at least 20% reduction of water use per unit of product in areas next to rivers with critical ecological flow.		999	22	22	
5. Conservation of critical marine habitats that provide services or important ecological functions.		222	222		
6. Nutrient credit schemes to reduce the amount of discharge of pollutants into water bodies (nutrient trading in regulated markets).	999		22		
III. Investment in nature-based solutions (NBS) where biodiversity/nature is used to enhance ecosystem services	99	99	22	9	9
A. NATURE-BASED SOLUTIONS					
1. Natural Infrastructure investments that prevent runoff of agrochemicals into rivers or coastal water basins (e.g. swales, biofiltration).	999	99	99	9	
2. Constructed wetlands for water treatment (primary through tertiary).	222		99	1	

	GREEN BOND/GREEN LOAN PRINCIPLES' ENVIRONMENTAL OBJECTIVES				
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Biodiveristy Finance Group and Economic	Pollution Prevention	Natural Resource		Climate Change	
Activity	and Control	Conservation	Biodiversity	Mitigation	Adaptation
3. Watershed management practices to decrease run-off, siltation, increase recharge.	9	222	9		9
4. Natural infrastructure to reduce water temperatures of used water discharged into water ways.	222	9	99		
5. Natural infrastructure or combination of natural and grey infrastructure for storm water management solutions (e.g. parks, green walls and roofs).	9	999	22	9	9
6. Conservation or rehabilitation of wetlands to reduce flooding and soil/water salination.		99	999		9
7. Conservation or rehabilitation of mangroves to reduce flooding and soil erosion and to sequester carbon.		99	222	222	9
8. Conservation or rehabilitation of coral reefs to reduce storm surges and flooding.		99	222		222
9. Use of forest buffers and agricultural strips to avoid nutrient and sediment run-off.		9	22	1	
10. Parametric insurance schemes for green/blue infrastructure (Coral reefs, fisheries, aquaculture, coastal protection).			111		222
11. REDD+ and forestry projects/grassland projects to sequester carbon (linked to activities in agriculture and forestry).			999	222	

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BIODIVERSITY FINANCE REFERENCE GUIDE



