

ACT NOW!

The why and how of biodiversity integration by financial institutions



Contents

Management summary	3
1. Introduction	5
1.1 How is this Guide useful to financial institutions?	5
1.2 Key contribution: The V-process for biodiversity integration.....	6
1.3 Reading guide	6
2. Explore: Understanding the science behind biodiversity.....	7
2.1 What are investors expected to act upon and why? Key biodiversity concepts	7
2.1.1 Our dependence on nature: Ecosystem services	8
2.1.2 Our impact on nature: Drivers of biodiversity loss	9
2.1.3 Nature degradation: Risks to assets, companies, and financial institutions.....	10
2.1.4 Acting upon dependencies, impacts, risks, and opportunities.....	11
2.2 What are financial institutions already doing?.....	13
2.3 How can the biodiversity approach of financial institutions be science-based?	14
3. Assess and Prioritize: Learning about biodiversity measurement and metrics.....	16
3.1 What can financial institutions measure today?.....	16
3.1.1 Impact measurement approaches leading the way	16
3.1.2 Assessment of dependencies and positive impacts	19
3.2 Where can financial institutions find biodiversity data?.....	20
3.2.1 Using ESG data as a starting point.....	20
3.2.2 Reported versus modelled data	20
3.2.3 Regulation and corporate engagement: Two main levers for reported data	21
3.3 Using ready-made biodiversity solutions	22
4. Integrate: Getting started on biodiversity financial integration.....	23
4.1 Choosing your approach to biodiversity integration	23
4.1.1 How to approach biodiversity integration?.....	23
4.1.2 Aligning biodiversity integration with regulatory incentives.....	26
4.2 The V-process.....	27
4.3 Using one or multiple biodiversity metrics?	29
4.4 Building internal knowledge and capacities on biodiversity	31
5. Set targets: Developing a biodiversity target	32
5.1 Aligning financial institutions' targets with global biodiversity goals and targets.....	32
5.2 Target setting process	34
6. Track progress: Increasing transparency and continuously improving.....	36
6.1 Monitoring performance.....	36
6.2 Continuously improving	38
6.3 Reporting on biodiversity	40
7. The way forward	41
8. Sources and more readings.....	42
9. Glossary	43
Colophon	44

Management summary

1. Why should I start integrating biodiversity into my activities now?

Nature is vital for the existence and development of human societies. All economic activities depend on the state of natural capital, and biodiversity plays an important role in ensuring the quality and resilience of this natural capital. However, the same economic activities are driving an alarming rate of biodiversity loss worldwide. This creates a physical, transition and systemic risks to society at large, as well as to the financial sector. Policy and regulation are emerging through a new Global Biodiversity Framework under the Convention on Biological Diversity with – we hope – far reaching goals and targets that will act to halt and reverse the loss of nature globally. Financial institutions have a key role to play in the delivery of these targets but must act now to prevent further loss of nature and reduce the risks posed by this to society and investment return.

2. Where should I start when integrating biodiversity?

Drawing from several standards and frameworks*, the V-process proposes five steps that financial institutions could take to integrate biodiversity into their activities:

- 1 **Explore** the latest scientific evidence and data on biodiversity loss, its drivers, dependencies, risks and opportunities.
- 2 **Assess** your impacts and dependencies **and prioritize** your key activities, sectors, pressures and geographies
- 3 **Integrate** biodiversity into your risk mitigation approach, strategies and policies, **and set targets** to reduce negative impacts and increase positive impacts on biodiversity
- 4 **Act** by engaging with companies, reallocating financing and supporting nature-based solutions
- 5 **Track progress** towards your targets, both for external reporting and to continuously improve

Section 1.3 outlines in which chapter information about each of these steps can be found.

* The V-process was developed based on the following frameworks: [Science-based targets for nature. Initial Guidance for business](#) by Science-Based Targets Network (SBTN); Five commitments in the [Finance for Biodiversity Pledge](#); [LEAP Nature Risk Assessment Approach](#) by TNFD; Overview of European Central Bank's supervisory expectations in the [Guide on climate-related and environmental risks](#) (Box 1, p. 4-5)

3. How can my biodiversity approach be science-based?

A science-based approach should capture not only risk mitigation (e.g., exclusion of high-risk / high-impact sectors), but also investment and financing of the avoidance and reduction of negative impacts, and the promotion of positive impacts. Chapter 2 summarizes the key scientific knowledge on the drivers of biodiversity loss, economic activities' dependencies on nature, and the risks arising from biodiversity loss. Not all drivers of loss, dependencies and risks identified by science are covered by the frameworks, measurement approaches and metrics currently available. However, a lot can be done already with the available approaches.

4. What should I know about biodiversity measurement and metrics?

Different measurement approaches and metrics cover different dimensions of biodiversity. They can be divided into biodiversity footprinting tools (i.e., footprints) and spatial tools (i.e., maps). You may need to use multiple indicators to fully measure biodiversity impacts, dependence and performance and it is important to understand and be transparent about their limitations. Methodologies for assessing negative impacts are most developed (although some drivers of loss are yet to be covered), whereas assessments of dependencies and positive impacts are emerging. Chapter 3 discusses what financial institutions can measure today, where (reported and modelled) biodiversity data can be found, and what to keep in mind when applying ready-made biodiversity solutions.

5. How can I align my biodiversity approach with current and upcoming regulation?

We expect that the following upcoming regulatory initiatives will influence the finance sector most strongly: (i) the EU Corporate Sustainability Reporting Directive (CSRD) and Sustainable Finance Disclosures Regulation (SFDR), (ii) national regulations, and (iii) the to be agreed CBD's Global Biodiversity Framework. They focus mainly on disclosure, global action, and target setting. We recommend tracking and engaging with regulatory developments, but not to wait for them to be complete get started on biodiversity integration.

6. How can I set meaningful targets on biodiversity?

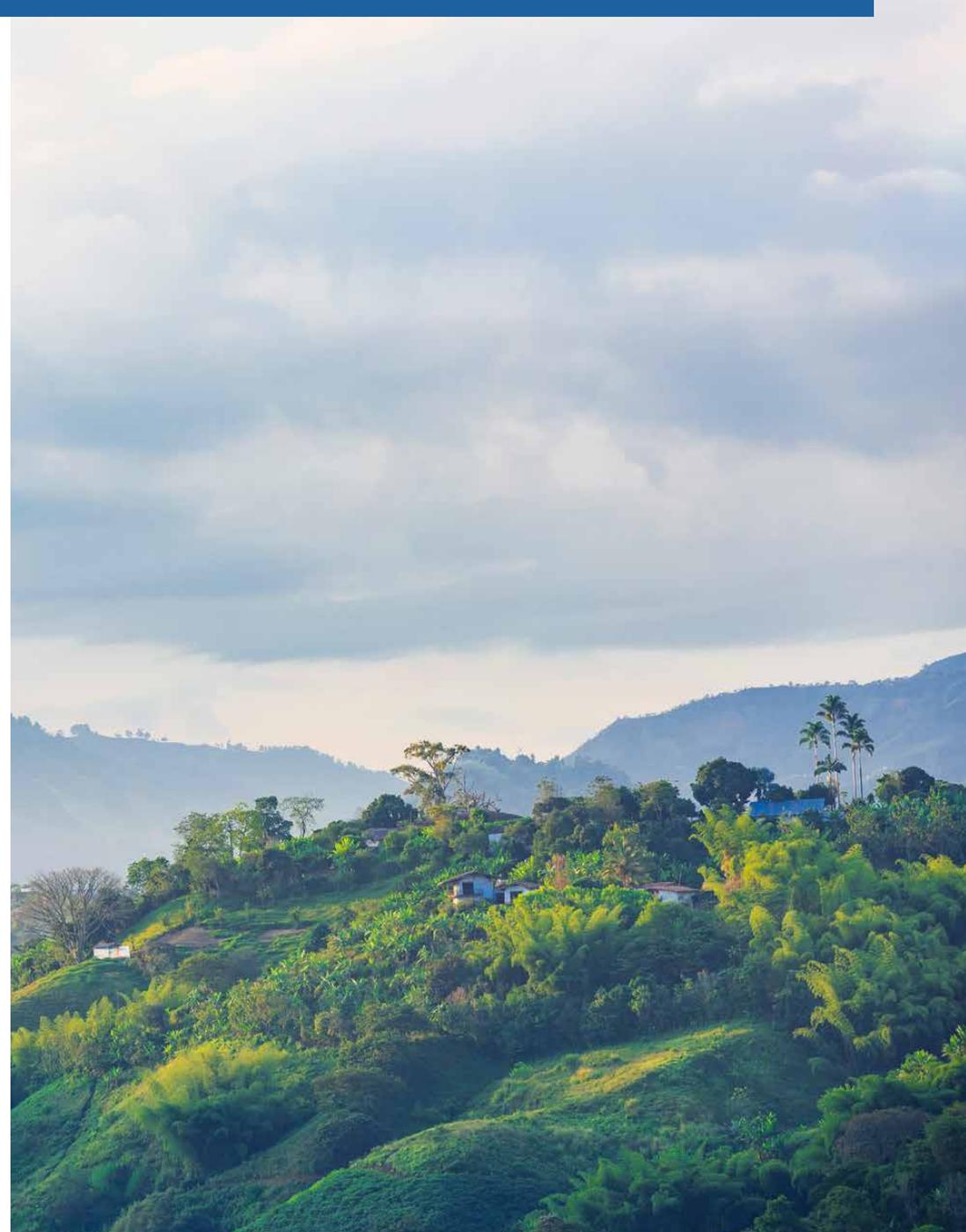
Setting outcome-oriented science-based targets that reflect targets being set by the Convention on Biological Diversity for biodiversity is fundamentally transformative because it requires financial institutions to put ecosystems at the heart of their actions. Before setting targets, you will first need to define your biodiversity measurement approach – taking into account alignment with the post 2020 Global Biodiversity Framework and Science Based Targets for Nature. Chapter 5 discusses the target setting process and alignment with global biodiversity goals.

7. How should I monitor, report on and continuously improve my biodiversity performance?

Monitoring biodiversity-related impacts, dependencies and risks over time allows you to improve your biodiversity approach and performance. Additionally, process indicators (e.g., percentage of value chain transparency, percentage of portfolio assessed for biodiversity impacts) can feed into such internal learning and improvement as well. For external reporting, we recommend aligning with upcoming regulations at regional (e.g., EU), national and global levels, as well as with the upcoming versions of the TNFD framework and the GRI 304 Biodiversity. Chapter 6 discusses monitoring, reporting, and continuous improvement in more detail.

8. Where can I find more information and resources?

This guide offers an introduction to biodiversity integration by financial institutions. References to further reading can be found throughout the whole document, as well as in Chapter 8.



1. Introduction

More and more financial institutions are becoming aware of the urgent need to reverse biodiversity loss. This increased awareness has led to questions about how financial institutions can - or should - integrate biodiversity into their activities. This guide aims to answer some of them in a pragmatic way. Biodiversity is a relatively new and complex topic, and a lot is currently 'work in progress': global targets are being negotiated, biodiversity footprinting tools are emerging, regulations and standards are being drafted. Amidst these developments, this guide focuses on the question: 'What can financial institutions do now?'. Because, if we are to reverse nature loss in this decade, the finance sector needs to act now. We hope this guide will support financial institutions in doing so.

This Guide has been developed by members of the Impact Assessment working group of the Finance for Biodiversity Foundation (FfB Foundation). It builds on the authors' practical experience and knowledge. The Guide also leverages on the results of a [consultation](#) organised by Finance for Biodiversity Foundation in November/December 2021, that was designed to gain a better understanding of where the financial sector stands when it comes to integrating biodiversity issues into financial decision-making. Despite the small sample size (30 respondents), the FfB consultation results represent a valuable source of information on how financial institutions currently approach biodiversity. The results of another study, amongst Principles for Responsible Banking signatories (see [Guidance for banks](#), p. 16), have also been taken into consideration in the development of this Guide. These provided additional information on the current state of biodiversity integration amongst banks, showing that only a small proportion of PRB signatories are actively working on biodiversity integration.

1.1 How is this Guide useful to financial institutions?

This is an operational Guide bringing together the information that financial institutions need to be aware of when embarking on the process of biodiversity integration. It includes information on what other financial institutions are doing, regulations and policies, relevant scientific insights, and developments in the field of biodiversity measurement approaches. This Guide aims to support all financial institutions in integrating biodiversity in their decision-making irrespective of their level of maturity on biodiversity.

This Guide focuses on the integration of biodiversity considerations into financial decision-making rather than into the management of financial institutions' office locations. It mostly refers to decision-making linked to financing or investing in companies, thus not covering sovereign bonds. It is not designed to ensure compliance

with any regional, local, or international legal standards. Nor does it recommend any specific sustainability strategy, metric, or approach, but rather guides financial institutions on the right questions to ask when developing a biodiversity approach, as well as on the support and frameworks available for implementing it.

1.2 Key contribution: The V-process for biodiversity integration

There are several frameworks, standards, commitments and recommendations that set out how the finance sector should manage and disclose the impacts, risks and opportunities related to biodiversity loss (e.g., work by the Taskforce on Nature-related Financial Disclosures (TNFD), Science-Based Targets Network (SBTN), Finance for Biodiversity Pledge, European Central Bank, and others). They converge on five steps that can serve as a basis for biodiversity integration (Figure 1). We propose this five-step process, the V-process, as a possible plan of action for financial institutions who wish to start acting on biodiversity now: 1) Explore, 2) Assess & Prioritize, 3) Integrate & Set targets, 4) Act, 5) Track progress. The V-process builds on the TNFD LEAP approach for nature-related risk and opportunity assessment, adding the 'target setting' and 'act' parts from a financial institution perspective. The combination of steps in the V-process enables financial institutions to fully integrate biodiversity into their policies and activities, allowing them to respond to the requirements of the key frameworks and standards in an aggregated manner by following one single process. The V-process is explained in more detail in Section 4.2.

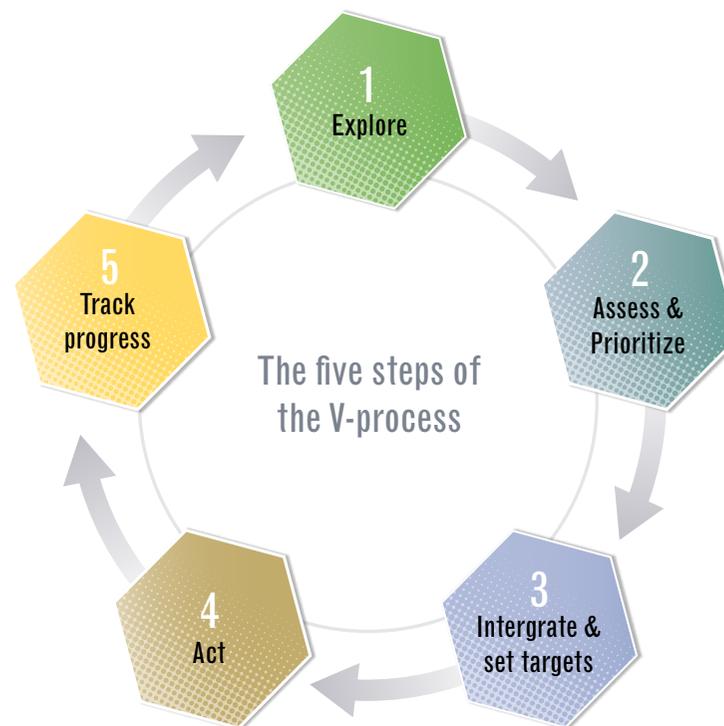


Figure 1. The five steps of the V-process

1.3 Reading guide

In the following chapters, we will provide guidance and references for each of the steps of the V-process. Chapter 2 sets the scene by introducing some key biodiversity concepts and discussing how biodiversity integration by financial institutions can be based on science (Step 1. Explore). Chapter 3 discusses the data and metrics currently available for financial institutions to assess how their investee companies are linked to biodiversity, and to prioritize

areas for action (Step 2). Chapter 4 zooms in on the process of biodiversity integration itself (Step 3), proposing the V-process as a framework for doing so. Target setting (also part of Step 3) is described in more detail in chapter 5, both from a content and a process perspective. The V-process's fourth step (Act) is the only step that does not have a dedicated chapter in this Guide. Instead, we refer to our [Guide on engagement with companies](#) for additional

guidance to financial institutions looking to engage with corporates on biodiversity. The final step of the V-process, tracking progress, is the subject of chapter 6. This Guide is concluded with an outline of next steps (Chapter 7), suggestions for further reading (Chapter 8), and a glossary (Chapter 9).

2. Explore: Understanding the science behind biodiversity

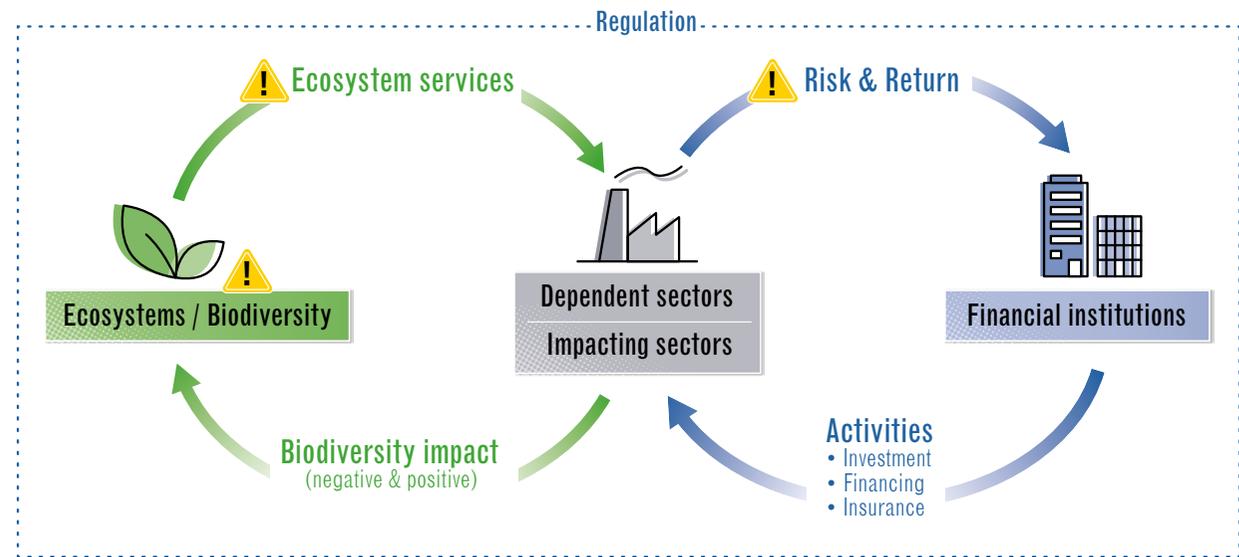
Hadrien Gaudin-Hamama & Alexis Gouin

We are all part of nature, and nature is vital for the existence and development of human societies. However, the diversity of life on Earth is in rapid decline due to the consequences of economic activities. Through their financing activities, financial institutions are connected with natural ecosystems around the world. This chapter outlines some key scientific concepts that illustrate the connections between the financial sector and biodiversity.

2.1 What are investors expected to act upon and why? Key biodiversity concepts

There is a growing consensus within the finance sector that biodiversity loss represents a severe systemic risk that needs to be addressed. The systemic nature of biodiversity loss is easily understood once we consider all the services nature provides to our economies and societies. Our long-term survival, but also our day-to-day quality of life, and all economic activities, depend on the state of natural capital and biodiversity. It is thus key to mitigate the negative impacts that economic or social activities have on natural capital. The representation of biodiversity loss as 'the next systemic risk' underlines the urgency to act now. The development of regulation to halt biodiversity loss is increasing transition risks (including reputational risks) and is further encouraging its consideration by the finance sector.

Figure 2 shows how financial institutions are connected to natural ecosystems through the activities of the companies



that they finance, insure, or invest in. Depending on their sector and activities, these companies depend on nature, impact nature, or do both. In the next sections, we will explain the elements of Figure 2 in more detail.

Figure 2. The relationship between financial institutions, companies and ecosystems. Adapted from 'Finance for One Planet', Community of Practice 'Financial Institutions and Natural Capital', 2016.

2.1.1 Our dependence on nature: Ecosystem services

Nature, or natural capital, could be seen as an asset 'just' like manufactured capital (roads, buildings) and human capital (health, knowledge). It is productive, resilient and adaptable because of biodiversity. Yet, natural capital (including biodiversity) is more than a purely economic asset. Human societies would not be able to persist without it – the [Dasgupta Review](#) eloquently pointed out that we are 'embedded in nature'. Economic sectors such as agriculture, forestry and textiles are particularly reliant on biodiversity. [The European Business and Biodiversity Campaign](#) shows that 71 of the 100 most used crops, providing 90% of our food, depend on pollination.

Usually, three types of ecosystem services are distinguished: provisioning services, regulating services, and cultural services (see Figure 3). Provisioning services are the most visible, and capture our dependence on products such as food, water and timber. Although less visible, regulating services, such as climate regulation, soil fertility regulation and water storage, are essential to environmental stability. Finally, cultural services relate to recreational, symbolic and spiritual values people attach to nature and biodiversity. According to the World Economic Forum (WEF) report [Nature Risk Rising](#), \$44 trillion of economic value generation – over half the world's total GDP – is moderately or highly dependent on ecosystem services. The total value of these ecosystem services was estimated at US\$ 125tn/year, commensurate to 1.5x global GDP ([Costanza et al, 2014](#)). Biodiversity loss is leading to a reduced capacity of ecosystems to provide such services.



Figure 3. Overview of the types of ecosystem services commonly distinguished.

Source: *Natural Capital in the Netherlands: Recognising its true value*. PBL (The Hague), 2016.

2.1.2 Our impact on nature: Drivers of biodiversity loss

Businesses may impact ecosystem services and contribute to biodiversity loss when their operations or value chains result in one or several of the direct drivers of biodiversity loss (also called pressures) identified by IPBES, namely:

- **Land and sea use change** - the largest factor driving biodiversity loss, mostly related to agricultural activities, soft commodity production, cattle raising as well as resource extraction, urbanisation and infrastructure development.
- **Overexploitation of natural resources** - the second largest cause of biodiversity loss in the terrestrial realm and the first most important in the marine realm; especially caused by overlogging, overgrazing and overfishing due to insufficient regulation and enforcement.
- **Climate change** - an important catalyst for ecosystem degradation, ocean acidification and desertification.
- **Soil, water and air pollution** - driven by chemical emissions, oil spills, unmanaged wastewater, microplastics, residues of crop protection agents and emissions of pharmaceuticals amongst others.
- **Spread of alien invasive species** through trade or tourism can destabilize ecosystems.

These five direct drivers of biodiversity loss stem from a variety of human and economic activities, including production assets expansion, resource extraction, deforestation, artificialization of soils, etc. As Figure 4 shows, underlying these activities are indirect drivers such as production and consumption models, demographic trends, economic and technological developments, etc.

Financial institutions need to work on assessing and quantifying the degree to which their investments contribute to the drivers of biodiversity loss. This knowledge can help financial institutions to allocate capital to less impactful companies.

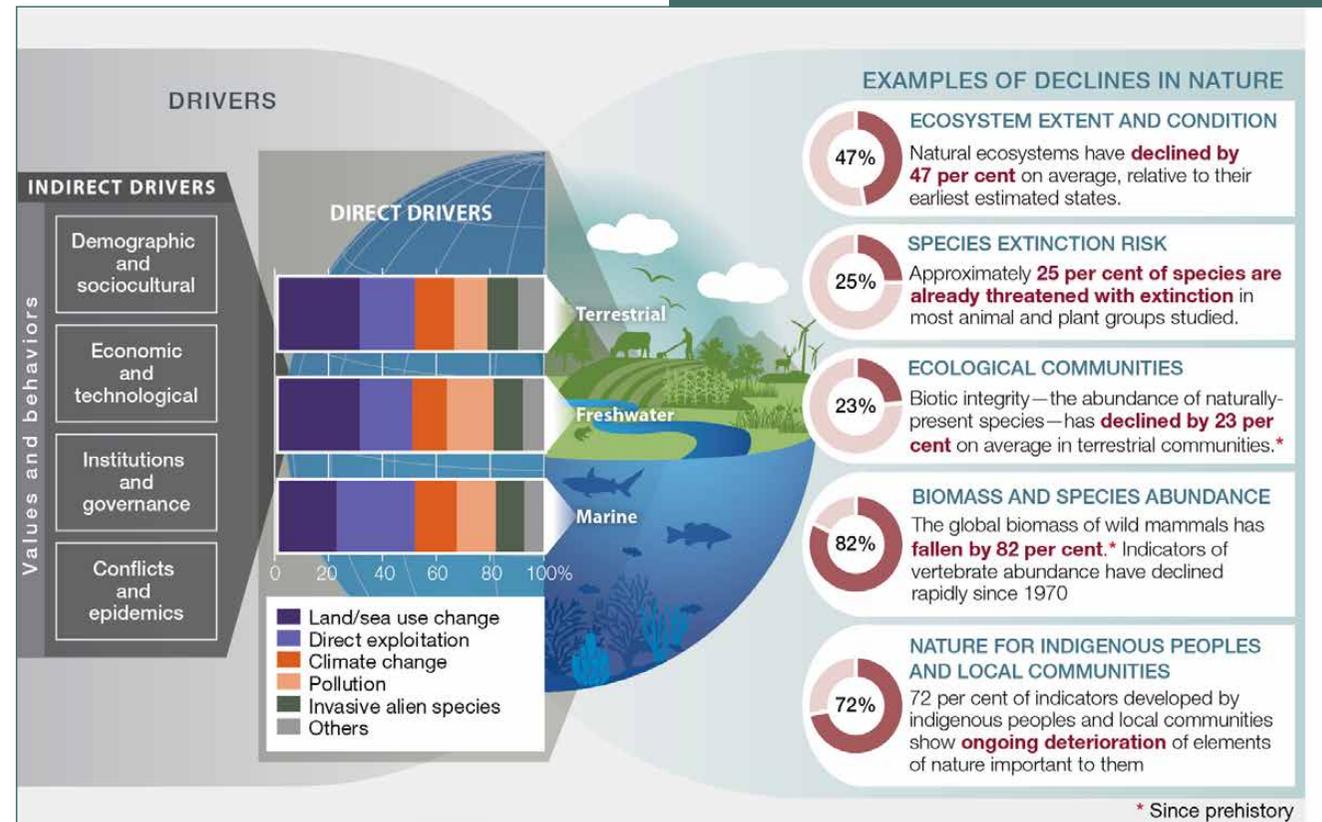


Figure 4. Drivers of biodiversity loss.

Source: *Global Assessment Report on Biodiversity and Ecosystem Services*. IPBES, 2019.

2.1.3 Nature degradation: Risks to assets, companies, and financial institutions

According to the [Dasgupta Review](#), the stock of natural capital per person declined by 40% over the last thirty years. This is, at least in part, due to the drivers of biodiversity loss discussed above. Further loss of biodiversity would jeopardize the capacity of nature to provide ecosystem services over the long term. This dynamic is bringing along increasingly severe risks for companies, financial institutions and society as a whole. These risks can be subdivided into several categories, namely physical risks to assets and production processes, transition risks (which include policy and legal, market, reputation and technological risks), and systemic risks to society as a whole (see Figure 5).

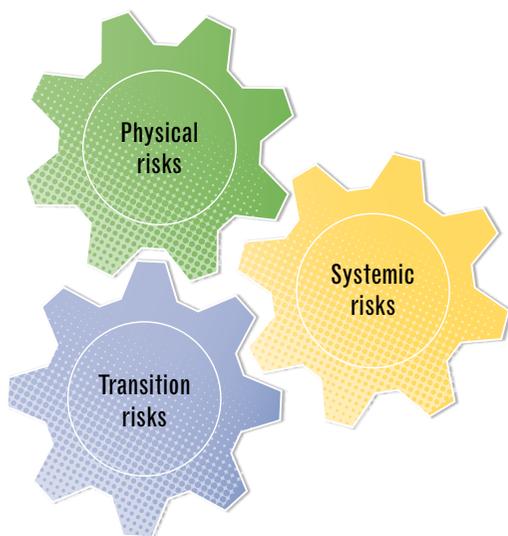


Figure 5. Risks arising from biodiversity loss.

Physical risks: The risks that arise directly from a decline in ecosystem services. Production processes are exposed to physical risks (e.g., crop failure, difficulties to source raw materials, etc.) to the extent in which they depend on ecosystem services such as pollination, soil fertility, etc. A decline in regulating ecosystem services (e.g., coastal protection, water buffering, prevention of heat islands, etc.) can furthermore cause risks to physical assets such as buildings and infrastructure.

Transition risks: Companies also face transition risks if their business models are misaligned with new developments aimed towards achieving a nature-positive economy. Such new developments could include new regulations, shifting consumer preferences, etc. that negatively influence their business. An example of transition risk is liability risk, the risk that legal responsibility for the destruction of natural capital is attributed to an individual company or a group of companies. If companies are attributed such responsibility, this often brings along important financial and reputational costs.

Systemic risks: The risk arising from the breakdown of the entire system, rather than the failure of individual parts. It results from interactions between risks, in particular cascading interactions of physical and transition risks. One loss triggers a chain of others and stops systems from recovering their equilibrium after a shock. For example, organisations can generate acute physical risk by removing coastal marshes, leading to potential damage costs linked to loss of coastal infrastructure from storms. This can also generate a transition risk, specifically policy and liability risk (if that action was or becomes illegal) and reputation risk (if it is negatively perceived by consumers). If sufficient organisations in that region remove coastal marshes, then whole region of industry may suffer from a lack of protection from coastal storms, resulting in systemic risk.

When companies and/or particular activities or assets are subject to physical or transition risks and contribute to the rise of biodiversity-related systemic risk, financial institutions investing in or financing those companies or assets face potential **financial risks**. These financial risks may become vital for financial institutions themselves.

The climate-biodiversity nexus: compound risks

The risks above are amplified by the interaction of biodiversity loss with the consequences of climate change. Taking the agricultural system as an example, physical risks arise both from biodiversity loss (e.g., reduced crop diversity, reduced pest and disease control) and from climate change (e.g., shifting weather patterns, increased probability of extreme weather events), thus undermining the resilience of the human food system. Climate and biodiversity risks interact with each other and must be considered together in ESG management. As the compounded effects of climate change and biodiversity loss amplify the systemic risks for our social and economic systems, it is key to treat climate, biodiversity and human societies as coupled systems.

Key readings on biodiversity-related risks

- [Biodiversity and financial stability: building the case for action](#). Central Banks and Supervisors Network for Greening the Financial System (NGFS) & International Network for Sustainable Financial Policy Insights, Research, and Exchange (INSPIRE), 2021.
- [Nature Risk Rising. Why the Crisis Engulfing Nature Matters for Business and the Economy](#). World Economic Forum, 2020.
- [Nature-related risk and opportunity management and disclosure framework](#). V0.2 Beta Release. Taskforce for Nature-related Financial Disclosures (TNFD), 2022.
- [The nature of risk. A framework for understanding nature-related risk to business](#). WWF, 2019.
- [Nature's next stewards. Why central bankers need to take action on biodiversity risk](#). WWF, 2021.
- [Indebted to Nature - Exploring biodiversity risks for the Dutch financial sector](#). Dutch Central Bank (DNB), 2020.
- [A "Silent Spring" for the Financial System? Exploring Biodiversity-Related Financial Risks in France](#). Banque de France, 2021.
- [Nature-Related Financial Risks in Brazil](#). World Bank Group, 2021.
- [An Exploration of Nature-Related Financial Risks in Malaysia](#). World Bank Group, 2022.
- [Financial risks of nature loss](#). UK POST, 2022.
- [Climate-Nature Nexus. An investor guide to expanding from climate- to nature-data](#). UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) & Finance for Biodiversity Initiative, 2022.

2.1.4 Acting upon dependencies, impacts, risks, and opportunities

Awareness of the risks caused by biodiversity loss, as well as an understanding of how economic activities contribute to drivers of loss and depend on nature, can drive us to develop biodiversity-positive outcomes (Figure 6). Improving the state of biodiversity can even present opportunities for corporates and financial institutions. Drawing from mitigation and conservation hierarchies, [SBTN](#) proposes four actions that companies can take to protect biodiversity. The list below shows these four actions and how they can be supported by financial institutions:

- **Avoid** negative impacts on biodiversity – can be supported by shifting finance flows away from activities that damage nature, (e.g., exclusion policies, Do No Significant Harm-principle), supporting zero

deforestation and zero waste (circular economy) commitments, etc.

- **Reduce** negative impacts on biodiversity through mitigating drivers of loss – can be supported by incentivising innovation and biodiversity-friendly production methods (e.g., circular use of materials, nutrients, and water), incentivising alternative business models and engagement with suppliers.
- **Restore and Regenerate** ecosystem health and/or productivity – can be supported by financing solutions that have a direct positive impact on biodiversity (e.g., restoration and protection of ecosystems, regenerative agriculture) and finding innovative financing models (e.g., sustainable blue bonds, natural asset companies).
- **Transform** the wider technological, economic, institutional, and social system and change underlying values and behaviours – can be supported by incentivising new partnerships across supply chains and sectors, engaging with policymakers, and supporting products that can shift consumer behaviour (e.g., shift towards plant-based proteins).

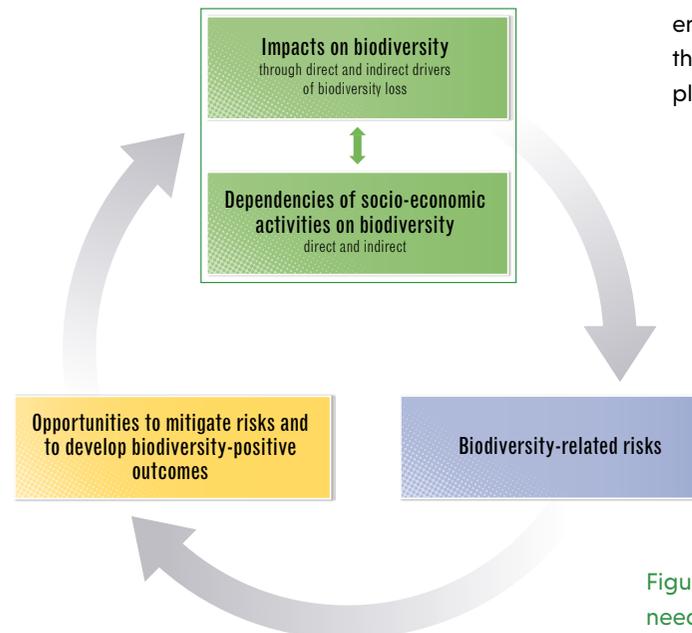
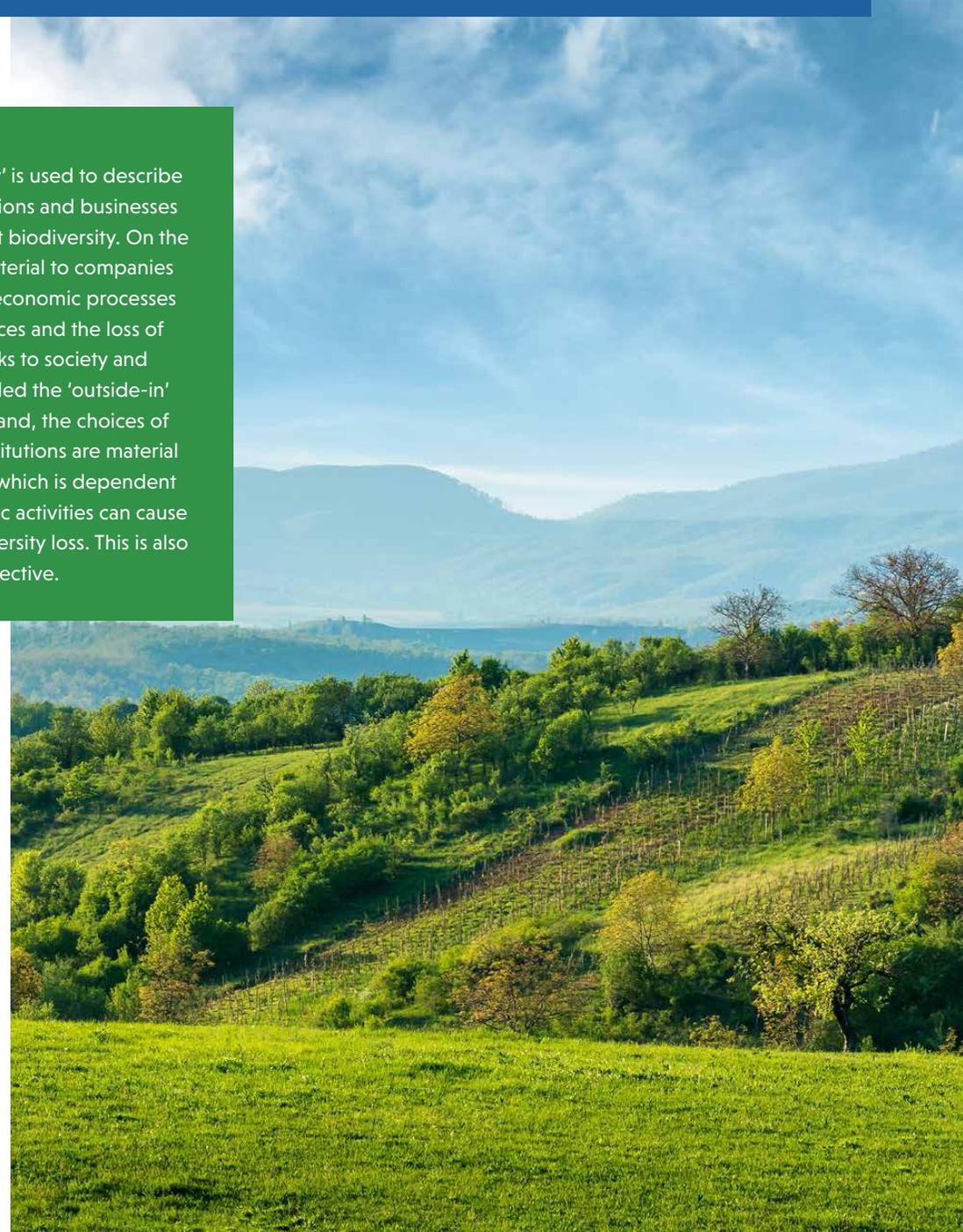


Figure 6. Key interrelated elements financial institutions need to address when acting on biodiversity.

Avoiding negative impacts from the outset is usually more cost-effective than repairing the damage afterwards. And even more importantly, some aspects of biodiversity loss (e.g., species extinction, release of carbon stored in peatlands) cannot be restored on a meaningful timescale; they can only be avoided. That is why 'avoid' and 'reduce' are the two key components of a valid biodiversity loss mitigation hierarchy. Corporate actions can thus deliver a wide range of actions that are positive for biodiversity (see frameworks such as the [OP2B Framework for Regenerative Agriculture](#), the [Source-to-Sea Framework for Marine Litter Prevention](#), [EU Zero Pollution Action Plan](#), [Safe and Sustainable-by-design chemicals](#), the [Water in Circular Economy and Resilience \(WICER\) Framework](#), the [cascading biomass principles](#), the circular economy waste hierarchy, and Moerman's ladder for food waste reduction). Some of these have direct business benefits. [TNFD](#) refers to them as nature-related opportunities, i.e., activities that create positive outcomes for organisations and nature by avoiding or reducing impact on nature or contributing to its restoration. Such opportunities can occur when organisations mitigate the risk of biodiversity loss or through the strategic transformation of business models, products or services, or through investments in nature such as nature-based solutions. As summarized in Figure 6, financial institutions need to address impacts, dependencies, risks and opportunities in an integrated manner to effectively act on biodiversity.

Double materiality

The term 'double materiality' is used to describe the fact that financial institutions and businesses both depend on and impact biodiversity. On the one hand, biodiversity is material to companies and financial institutions as economic processes depend on ecosystem services and the loss of biodiversity brings along risks to society and the economy. This is also called the 'outside-in' perspective. On the other hand, the choices of companies and financial institutions are material to biodiversity and society (which is dependent on biodiversity), as economic activities can cause both drive or restore biodiversity loss. This is also called the 'inside-out' perspective.



2.2 What are financial institutions already doing?

Biodiversity as an issue started attracting significant global financial industry attention in recent years. As recently as 2020, however, ShareAction reported that only 11% of the top 75 asset managers by AUM had a biodiversity policy ([‘Point of no returns. Part IV’](#)). In the same year, KPMG identified less than 10% of financial institutions amongst the world’s 250 largest companies by revenue to be disclosing impact on biodiversity ([‘The time has come’](#)).

At the time of writing, 103 financial institutions with €14.7 trillion AUM have signed the [Finance for Biodiversity Pledge](#) with a commitment to both action and transparency on impact and performance. However, action is still relatively recent, and the capacity of staff to understand and act to integrate biodiversity into investment decision making is limited. The FfB consultation results suggest that most financial institutions adopt biodiversity risk mitigation strategies first and then advance towards biodiversity-positive solutions. Biodiversity-related approaches are mostly developed to comply with regulatory reporting requirements, while the integration of biodiversity into actual decision-making and financial processes is still early stage.

Most of the asset managers that responded to the FfB consultation evaluate biodiversity risk using internal qualitative methodologies and related exclusion lists and engagement policies. Some are also using aggregate biodiversity footprint indicators. Some asset managers with natural capital assets (e.g., forestry, agriculture) have specific biodiversity frameworks in place for high-stake sectors.

As for banks, the most progressive ones have established dedicated biodiversity policies with exclusion lists, net zero deforestation commitments, protection of high conservation value areas, and requirements for traceability of raw agricultural commodities in upstream supply chains. Biodiversity approaches differ not only between banks and investors, but also between asset classes.

FAQ

Why are financial institutions acting on biodiversity?

The main reason for FfB consultation respondents to act upon biodiversity loss is the intrinsic motivation to mitigate a severe systemic risk, although, recognition of opportunities for more robust investments and financing, reputational risk management and compliance with regulations are also important drivers.

What aspects of biodiversity are financial institutions focusing on?

The nature of the financial institute determines whether impacts or dependence are prioritised. Banks and insurance typically adopt a risk-based approach to investment and are interested in evaluating their exposure to sectors most at risk of collapse of ecosystem services, hence evaluating dependencies first. Asset managers typically evaluate the impacts of their investments on biodiversity first. This supports their decision-making on optimized capital allocation for impact and eventual risk mitigation as well as promoting biodiversity-positive solutions.

Are financial institutions prioritizing the right drivers of loss?

We notice financial institutions see land use change, pollution and climate change as the three drivers of loss that should be covered by measurement tools and acted upon most urgently. The identification of land use change as the main pressure on biodiversity is in accordance with scientific consensus. However, this overlooks the direct exploitation of species, identified by IPBES as the second-most important driver of loss in terrestrial and freshwater realms and the primary driver of marine biodiversity loss. This is due to the current lack of valid data, metrics and approaches. The availability of data and metrics is elaborated upon further in Chapter 3.

2.3 How can the biodiversity approach of financial institutions be science-based?

The previous two sections outlined key scientific concepts that shed light on the interdependence of the financial sector and biodiversity (section 2.1) and outlined what financial institutions are currently doing (section 2.2). In this section, we bring the two together by asking to what extent it is feasible for financial institutions today to develop a biodiversity approach that is aligned with the scientific imperatives to act on biodiversity loss.

According to our observations, biodiversity integration by financial institutions often starts with impact or risk mitigation. An impact-mitigation and risk-based approach – e.g., the exclusion of sectors with physical and transition risks, such as deforestation-linked commodities, agrochemicals, and fossil fuels – is useful to mitigate financial institutions' financial risks. However, this approach is not sufficient to reverse biodiversity loss as it can only guide investment into low-impact sectors. We consider that building a comprehensive methodology for investment and financing of both the reduction of negative impacts and the promotion of positive impacts on biodiversity could be the next step for financial institutions to advance on biodiversity.

Although science is concrete and clear on what needs to be considered when it comes to biodiversity, the financial industry is still lacking proper frameworks, tools, and metrics to address the issue fully. Financial institutions' operational and technical capacities to fully understand and address biodiversity-related impacts, dependencies, risks, and opportunities are limited by data availability and quality and a lack of broadly agreed methodologies. Lack of capacity

is also a challenge – the issue is complex, and adaptation of internal processes requires a level of understanding of the issue that may be lacking within a financial institution. Even though both biodiversity assessment and biodiversity

integration by the financial sector are in an early stage, we need to keep our eyes on the horizon and be aware of the issues yet to be measured.

FAQ

Is a general ESG methodology sufficient to address biodiversity issues?

A general ESG methodology could be a good starting point but is not sufficient to identify and mitigate the most material impact drivers on biodiversity. Indeed, the materiality of biodiversity risk and of the IPBES drivers of loss differs among sectors. For example, in the food sector most risks (land use and direct exploitation) are in the upstream supply chain, while in the energy sector most (but not all) impacts arise from direct operations (GHG emissions), and in the chemicals industry most of the impacts are located downstream (pollution). To link different biodiversity elements (i.e., drivers of loss, ecosystem services, dependencies and biodiversity-related risks) with different approaches, financing activities, asset classes and sectors is to create a complex matrix, which would only partially be captured in a general ESG approach.

Is a specific methodology on biodiversity always justified?

A specific methodology for biodiversity assessment is justified in order to embrace the full complexity of biodiversity loss and to ensure that actions taken by financial institutions correspond to, and target, real problems based on scientific evidence. It is important to always keep the link with science throughout the development of biodiversity-related methodologies, metrics, and tools by continuously adapting your existing approaches as scientific understanding develops.

Can biodiversity impact mitigation differ per asset class?

Yes, different asset classes could require a different approach. For non-listed investments (e.g., infrastructure), a project-based, a localized approach to risk identification and impact mitigation is often used – for example, based on environmental impact assessment and management plans. Instead, impact mitigation for listed equities relates to reducing pressures on biodiversity from activities by corporates. Assessment of these pressures is often based on modelled data. We notice that biodiversity policies of financial institutions most often cover corporate bonds, including green bonds, and listed equities, but also project finance and impact funds. Not only impact mitigation, but also methods and metrics may differ per asset class. See Chapter 3 of this Guide for more information on biodiversity assessment.

Biodiversity monitor with dairy farmers by Rabobank

Rabobank developed, together with WWF-NL and The Sustainable Dairy Chain the biodiversity monitor for the dairy sector. The monitor is a uniform standard used to quantify biodiversity efforts by dairy farmers on their own farms and beyond. The biodiversity monitor uses Key Performance Indicators (KPIs) to measure the influence of individual dairy farmers on biodiversity. The KPI's are: % of permanent grassland, % of protein produced by own farm, nitrogen soil surplus, ammonia emissions, greenhouse gas emission, % of herb rich grassland and nature & landscape.

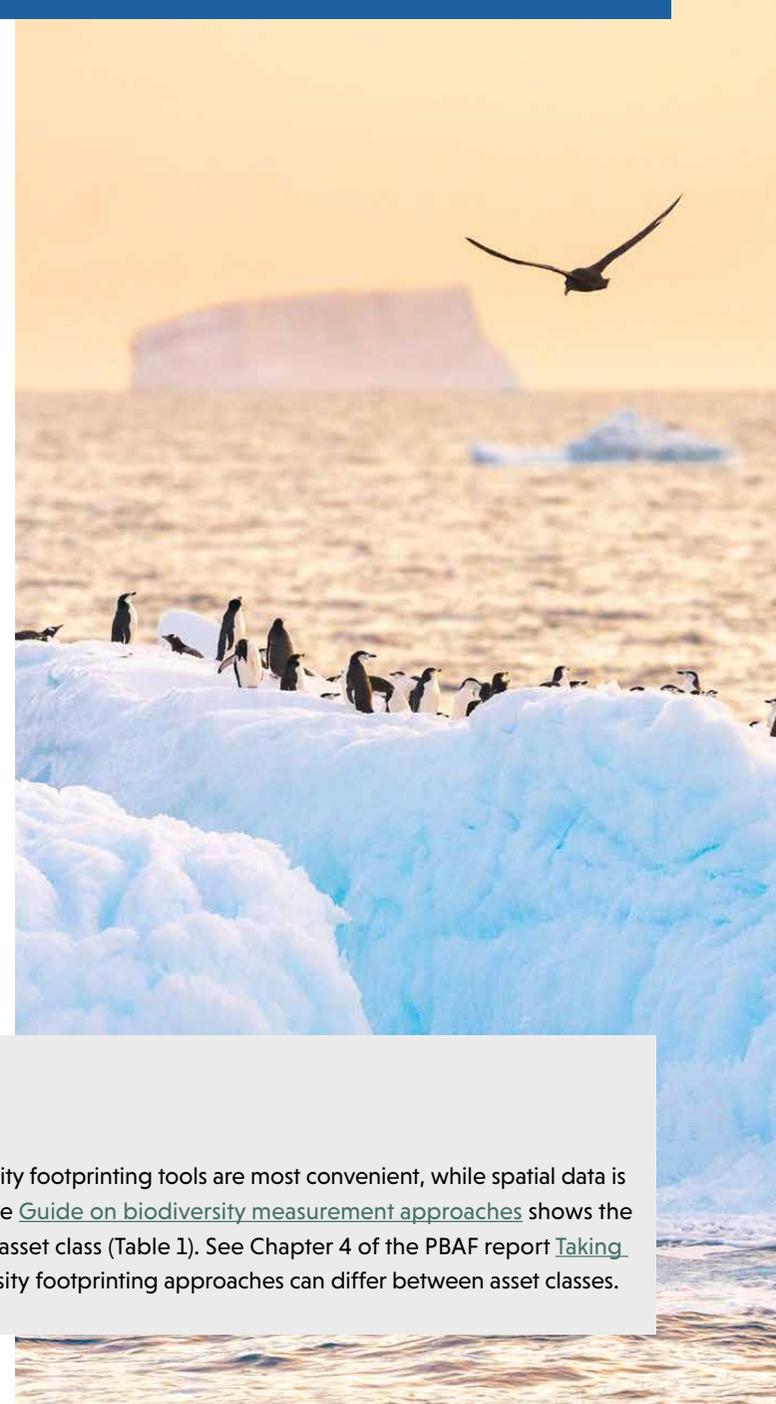
The monitor is part of the financing and sustainability policy of Rabobank. Based on this, customers can qualify for a discount on their existing and new finance interest rates. The biodiversity monitor is also integrated in the "On the Way to Planet Proof" certificate. This certificate can be applied to Impact Loans with attractive interest rate conditions. This financing policy, in which the monitor is applied, incentivizes dairy farmers, ultimately leading to a more sustainable loan portfolio for Rabobank.

Rabobank continues their collaboration with stakeholders. Currently, a Biodiversity Monitor for arable farming is under development by the Branche Organization Arable Farming, Rabobank, Province of Groningen and WWF-NL.



3. Assess and Prioritize: Learning about biodiversity measurement and metrics

Alexis Gouin & Hadrien Gaudin-Hamama



Financial institutions can use different types of metrics and data to assess how their investee companies are linked to biodiversity. This chapter provides a general overview of the approaches currently available, showing how each type of approach is linked to a different aspect of biodiversity.

3.1 What can financial institutions measure today?

A desire to act quickly on the issue of biodiversity and the need to avoid and reduce impact in the first instance, is leading financial institutions to base decisions on the data and metrics that are most available today: data and metrics on negative biodiversity impacts. Biodiversity measurement approaches can help financial institutions assess their potential biodiversity impact, enabling them to set policies and targets and to report publicly on their potential biodiversity impacts.

3.1.1 Impact measurement approaches leading the way

For financial institutions, it can be challenging and time-consuming to navigate through currently available or emerging biodiversity measurement tools and data. The [Guide on biodiversity measurement approaches](#) maps the seven most-used measurement approaches: Biodiversity Footprint

Financial Institutions (BFFI); Biodiversity Impact Analytics powered by the Global Biodiversity Score (BIA-GBS); Corporate Biodiversity Footprint (CBF); Global Biodiversity Score for Financial Institutions (GBSFI); Global Impact Database (GID); Exploring Natural Capital Opportunities, Risks and Exposure (ENCORE); and the Integrated Biodiversity Assessment Tool (IBAT), and highlights which tools might be the most suitable for specific organizational focus areas, business applications and asset categories.

FAQ

Can biodiversity impact assessment differ per asset class?

Yes. For listed equities / fixed income asset classes, biodiversity footprinting tools are most convenient, while spatial data is relevant for asset classes for which the location is known. The [Guide on biodiversity measurement approaches](#) shows the applicability and maturity of measurement approaches per asset class (Table 1). See Chapter 4 of the PBAF report [Taking biodiversity into account](#), for a description of how biodiversity footprinting approaches can differ between asset classes.

Most of the FfB consultation respondents currently rely on biodiversity footprinting approaches. These approaches use life-cycle analysis (LCA) models to assess corporates' impact on biodiversity through their contribution to drivers of loss. Biodiversity footprinting approaches are currently largely based on modelled data and provide financial institutions with a proxy of companies' real biodiversity impact. The newly appearing spatial data may become an interesting supplement to the LCA-approach, making the eventual conclusions about biodiversity impacts more concrete. Table 1 compares the two approaches.

Type of approach	Measurement tools
Biodiversity footprinting approaches <ul style="list-style-type: none"> Model the pressures (e.g., emissions, resource use) and associated biodiversity impact throughout the whole value chain (both upstream and downstream) based on input/output-databases and biodiversity impact models. Answer the question: 'What activities/companies/sectors put the most pressure on biodiversity at a given point in time?' Most convenient for listed equities / fixed income asset classes. 	All biodiversity footprinting tools (i.e., BFFI, BIA-GBS, GBSFI, CBF and GID) are based on LCA models.
Spatial approaches <ul style="list-style-type: none"> Use the geographical position of objects (e.g., assets, production locations, protected areas, species) to study the relation between them. Answer the question 'Where it is preferable to act?' (e.g., 'Which site needs extra efforts in terms of biodiversity restoration?'; 'Which site offers most opportunities for positive impact?'). Most convenient for asset classes for which the GPS details are known (e.g., project finance, infrastructure, and building). 	Integrated Biodiversity Assessment Tool (IBAT), Nature Metrics, ENCORE: Map with hotspots of natural capital depletion

Table 1. Comparison of biodiversity footprinting versus spatial approaches and tools

Key readings on biodiversity measurement approaches

- [Finance for biodiversity. Guide on biodiversity measurement approaches.](#) F@B Community & Finance for Biodiversity Foundation, 2022.
- [Critical assessment of biodiversity accounting approaches for businesses and financial institutions. Discussion paper for EU business & biodiversity platform. Update report 1.](#) Business@Biodiversity Platform, 2018.
- [Critical assessment of biodiversity accounting approaches for businesses and financial institutions. Discussion paper for EU business & biodiversity platform. Update report 2.](#) Business@Biodiversity Platform, 2019.
- [Assessment of Biodiversity Measurement Approaches for Businesses and Financial Institutions: Update Report 3.](#) Business@Biodiversity Platform, 2021.
- [Taking biodiversity into account. PBAF Standard v 2022. Biodiversity impact assessment - Overview of approaches.](#) PBAF, 2022.

Underlying the choice between a biodiversity footprinting or spatial approach lies the question what aspect of biodiversity loss one is targeting as most urgent to address. These dimensions are multiple. Financial institutions must make an important and not always clear-cut decision. All dimensions of biodiversity – genetic, species, and ecosystems – show interlinked responses to human-induced drivers of loss. Table 2 summarises the different biodiversity dimensions and their coverage by biodiversity measurement approaches. Despite its importance, ecosystem integrity (see [Planetary Boundaries framework](#)), is not included in this iteration of this document. Although metrics and data on this biodiversity aspect do exist (e.g., [Ecosystem Integrity Index](#), [WWF Living Planet Reports](#), [IUCN's Red List of Ecosystems](#)), these have not yet been translated into measurement approaches that can easily be used by financial institutions.

Financial institutions may need to use multiple indicators to fully measure biodiversity. If selecting only one indicator, the limitations of that approach should be carefully considered before choosing the one they will use to build a biodiversity strategy. Transparency on methodological limitations and data quality issues will be key to help the financial community to progress. Impact measurement approaches are still maturing and are likely to continue to evolve.

Biodiversity aspect	Measurement tools
Measuring biodiversity through the occurrence of threatened species enables decision-making on location of assets. Issues relate to the lack of consensus on potential trade-offs on which species are more relevant to protect.	Spatial tools: IBAT (Red List maps) and Nature Metrics provide lists of threatened species per area. The Species Threat Abatement and Recovery (STAR) metric in IBAT shows the contribution that investments can make to reducing threatened species' extinction risk. The TNFD Beta Framework V0.2 provides guidance on materiality of species.
Measuring the impact of economic activities on species can consider the number or abundance of species. Two measures are being widely used in the finance sector currently 1) Mean Species Abundance (MSA) which quantifies the decrease in abundance and total surface disturbed over time and 2) the Potentially Disappeared Fraction (PDF)-metric shows the percentage of species lost on 1 m ² (land) or in 1 m ³ (water) in one year. This supports the identification of activities most impactful to nature. This supports the identification of activities most impactful to nature.	Many biodiversity footprinting tools (i.e., BIA-GBS, GBSFI, CBF and GID) express their results in changes in abundance (using MSA). The PDF-metric is used by the BFFI footprinting tool, and partially integrated into GID. Spatial tools: For project-based investments, physical species surveys or other approaches (e.g., eDNA, bioacoustics) can be used to assess species' occurrence and abundance.
Measuring (changes in the) flow of ecosystem services allows evaluation of the comprehensive costs of economic activities. Yet, this is only a proxy for biodiversity as it measures flows produced by natural capital which is underpinned by biodiversity rather than biodiversity itself. Assessing ecosystem services can also help to map corporates' dependencies on nature. Note that more methodological work is required to align the different evaluation modes currently used for different ecosystem services and to make sure all essential services are covered.	The ENCORE and TEEB databases respectively provide a list of key ecosystem services and a monetary valuation of these ecosystem services. Some biodiversity footprinting tools (e.g., GID) translate changes in abundance into the associated loss of ecosystem services. The SwissRe Biodiversity and Ecosystem Services Index shows which countries and sectors are most dependent on ecosystem services.

Table 2. Comparison of different biodiversity aspects and associated measurement approaches

3.1.2 Assessment of dependencies and positive impacts

Until recently few methodologies existed to evaluate investment dependence on nature. Alongside the evolution of approaches to measure the negative impact of investments, methodologies are being developed to measure **dependencies** on nature. The assessment of both negative impacts and dependencies will allow financial institutions to understand both sides of the double materiality concept, thus increasing the relevance of biodiversity loss for their businesses.

Measuring **positive impacts** remains difficult based on the current tools, despite increasing demand from financial institutions. In its [2022 Standard](#), PBAF defines positive impact on biodiversity as *"more animals, plants and/or microbes, improving the health of a natural ecosystem, in a specific location and timeframe, as a result of a human intervention. Examples of such interventions are reforestation (if executed properly) or nature restoration, but also the installation of a water treatment facility."* Key to positive impact is the delivery of 'more' biodiversity rather than the reduction of pressures. A variety of approaches to assessing positive impact are emerging:

- 1 The use of ESG data to assess the biodiversity strategy of a company. However, ESG data is less relevant to identify business models that generate concrete tangible positive impacts and can only provide a proxy for performance on the ground
- 2 Direct measurement of biodiversity in local samples (e.g., using eDNA). However, this is limited to manufacturing sites and other specific assets.
- 3 Monetary evaluation of ecosystem services generation (using Natural Capital Protocol, The Economics of Ecosystems and Biodiversity (TEEB) or 'shadow pricing').

However, valuation approaches can be subjective as they are partly based on human preferences for such services.

- 4 Evaluating the reduction of IPBES pressures and the associated reduced negative impact on biodiversity. Current footprinting approaches use modelled data rather than company-specific data and are not sensitive to changes in corporate practices (although work is underway to address this). Such approaches often do not provide observational data on the state of nature (using Biodiversity Intactness Index – BII).

According to PBAF, in defining positive impact, financial institutions need to be clear on:

- **Where the positive impact is occurring** (in what landscape, waterbody, or seascape)
- **When it is occurring** (have numbers of species increased, or when are they expected to, and how sustainable is that progress / is it expected to be)
- **What** (which species have benefited or are expected to benefit from the investment)
- **Why** (why did species numbers and/or diversity increase, or why are these expected to increase)

Defining what is meant by positive impact and how to measure it is still a work in progress with none of the footprinting approaches currently able to comprehensively assess this. A further question that will need to be explored is how positive and negative impact combine – is investment in a company with 10% revenue dedicated to 'positive impact' products acceptable or not, for example? In conclusion, to enable a proper evaluation of biodiversity impacts and performance, financial institutions will need to use a tool which combines biodiversity footprinting with a spatial approach, is aligned with science, covers all pressures, is easy to aggregate at portfolio level and focuses on ecosystem integrity to show

the changes in the state of biodiversity. Such an 'ideal' approach does not yet exist; however, this does not mean that financial institutions cannot act on biodiversity. Addressing negative impacts in the first instance is imperative for financial institutions aiming to reverse biodiversity loss by 2030, and this should be the starting point for impact measurement.

3.2 Where can financial institutions find biodiversity data?

3.2.1 Using ESG data as a starting point

ESG data providers primarily use information disclosed by companies. Their purpose is to provide financial institutions with their opinion on ESG risk management based on the quality of companies' ESG policies. These policies are supposed to cover the most material ESG issues, including biodiversity. As such, ESG data providers are able to provide financial institutions with both positive screenings ('best-in-class' approach) and negative screenings (exclusion of 'controversial' or harmful activities). Indeed, through the use of ESG providers, financial institutions are able to screen companies on their contribution to biodiversity loss, especially related to the main direct drivers of loss. Close to one third of the FfB consultation respondents prefer to work with a global ESG data provider rather than with a specialized biodiversity tools provider to obtain basic information on clients' biodiversity performance. However, it should be noted that the focus of such data is on evaluation of the quality of management response and are rarely combined with risk exposure or measures of actual impact on biodiversity on the ground.

A biodiversity approach based on ESG data could look as follows:

- Identify priority sectors to focus on, both in terms of impacts and dependencies (see Key readings)
- Assess exposure to these sectors
- Use basic information from ESG data providers to screen investments/financings to assess quality of biodiversity management systems and controversies and provide insight into potential pressures on biodiversity (e.g., climate footprint, water use).

- Use the result of this analysis as a basis for investment/financing decisions, and/or for engaging with clients. In order to further translate pressures into impacts, financial institutions would need to use a specialized (biodiversity footprinting or spatial) biodiversity measurement approach.

3.2.2 Reported versus modelled data

In an ideal world, companies' sustainability reporting would include both qualitative data on their biodiversity policies, and quantitative data on their contribution to biodiversity pressures and nature restoration activities. However, the lack of broadly agreed metrics and standardised ESG data poses a significant barrier. In the absence of reported data, biodiversity footprinting tools offer information on companies' modelled impacts on biodiversity. More than half of the FfB consultation respondents are monitoring biodiversity impact using modelled data, but they are asking tools to be very transparent about their methodologies.

It is encouraging to see that the lack of reported company data does not constitute an excuse for inaction by the financial sector. The ongoing development of measurement approaches providing modelled data may help financial institutions to gain expertise on the complex topic of biodiversity and identify hotspots for action across a complex business and portfolio.



Key readings on high-impact and high-dependency sectors

- [Beyond 'Business as Usual': Biodiversity Targets and Finance](#). UN Environment Programme, UNEP-FI & Global Canopy, 2020.
- [Science-Based Targets for Nature. Initial Guidance for Business](#). Science Based Targets Network (SBTN), 2020.
- [The Biodiversity Crisis is a Business Crisis](#). Boston Consulting Group, 2021.
- [Identifying high-impact and high-dependency sectors with biodiversity measurement tools](#), 22 July Finance@Biodiversity Community workshop results, 2021.
- [Guide on engagement with companies](#). Finance@Biodiversity Community & Finance for Biodiversity Foundation, 2022.
- [Nature-related risk and opportunity management and disclosure framework](#). V0.2 Beta Release. Taskforce for Nature-related Financial Disclosures (TNFD), 2022.
- [Finance & Biodiversity. Understanding and acting](#). Forum pour l'Investissement Responsable & Iceberg Data Lab, 2020.

Mirova testing investor footprint with a food-corporate

For a conviction-driven asset manager like Mirova, it is possible to make investment choices that favour the protection of biodiversity even without being able to quantify the impact of assets on biodiversity precisely. However, much like the developments underway on climate change, the emergence of relevant impact indicators for biodiversity would make it possible to refine assessments and accelerate the consideration of these issues. In an engagement with Bonduelle, Mirova tested the impact of input data quality on biodiversity impact assessment. Bonduelle offers plant-based proteins, which reduce food systems' impact on biodiversity through reduced land use. A biodiversity footprinting tool based on the 'Global Biodiversity Score' was used to assess the company's biodiversity impact, using three different types on input data:

- 1 Averaged environmental data at sector & country level, combined with information of Bonduelle's sales broken down per product
- 2 Refined environmental flows data provided by Mirova's ESG food sector analyst
- 3 Accurate data provided by Bonduelle

The results showed that modelled data overestimates some pressures versus others. Hence, disclosures help refining biodiversity impact assessment. Ensuring traceability of raw materials along the value chain is therefore key to better assess biodiversity impacts. Furthermore, the project showed that assessing biodiversity impact is human resource intensive for asset managers, which induces the need for external data providers. Integrating sustainable practices such as labelling and certifications can help companies improve their footprint.

3.2.3 Regulation and corporate engagement: Two main levers for reported data

There is widespread optimism in the financial sector that companies will start reporting on the (negative) biodiversity impacts of their direct operations and upstream supply chains, and on their contribution to biodiversity conservation in the coming years. This will reduce financial institutions' dependence on modelled data. Upcoming regulation is expected to stimulate proper disclosure and address the problem of data accessibility and quality, at least in the EU. If financial institutions want to have access to unreported data in the meantime, corporate engagement is key to increase transparency and inform decision-making (see also [Guide on engagement with companies](#)).

3.3 Using ready-made biodiversity solutions

Today, some data providers offer ready-made biodiversity assessment and reporting solutions. Financial institutions only need to provide a list of their investments/clients to the data provider. In return, they receive an assessment that identifies biodiversity impacts related to these investments/clients, and sometimes also dependencies and risks. Financial institutions may use this information directly within their ESG annual reporting, relying completely on the work of the provider. Even if such solutions may seem convenient under the regulatory pressure to report on biodiversity, it is important to keep in mind that the ultimate responsibility for the biodiversity data published in ESG reports lies with the financial institution and not with the provider. Thus, financial institutions should understand the underlying methodology, its strengths and limitations and should not hesitate to deep dive into methodological and data choices made by the provider.

FAQ

What can turnkey solutions be used for?

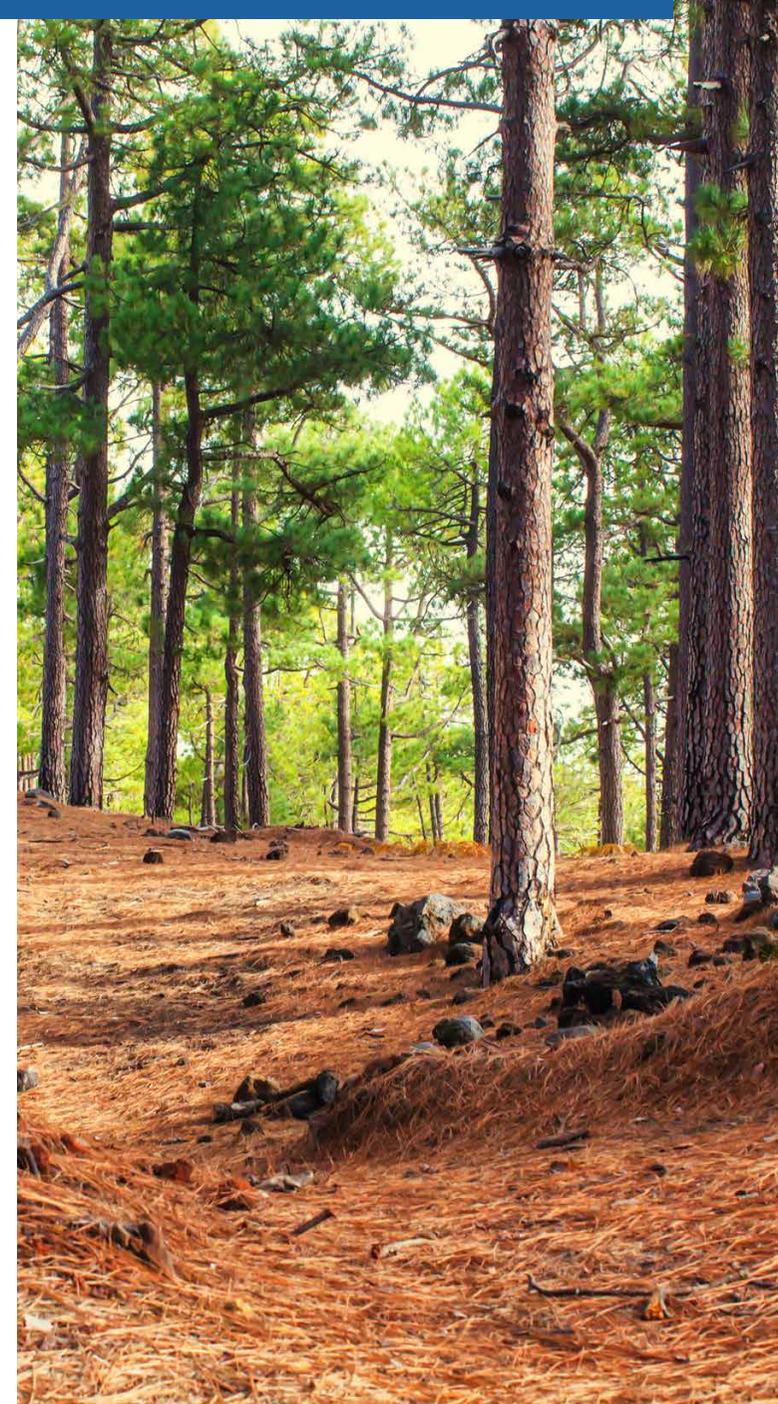
When it comes to assessing (negative) impacts at portfolio level, a ready-made solution would help financial institutions by:

- Aggregating the impacts at portfolio level and comparing to a benchmark (some footprinting tools can avoid double counting when doing so)
- Disclosing impacts by pressures and realms
- Identifying the main contributors (sectors or companies)
- Giving illustrations (e.g., translation of MSA.km² at portfolio level into a number of soccer fields)

As such, these ready-made biodiversity solutions are helpful for financial institutions willing to assess and report on their negative impacts. They may constitute a first step towards understanding biodiversity performance or even setting biodiversity targets at portfolio level. Equivalent solutions start appearing to measure dependencies.

What should I keep in mind when applying ready-made tools?

Financial institutions should deep dive into the methodologies used by these ready-made solutions. Currently, most data on biodiversity impact are modelled data, representing a proxy for real impacts on the ground. As of today, biodiversity footprinting tools are mostly used for reporting, and maturing to feed into financial decision-making. Financial institutions will need to gain expertise on biodiversity when working with existing metrics and solutions to integrate biodiversity into everyday decision-making. Basic biodiversity understanding (as provided in Chapter 2), transparency on methods and limitations, and sometimes even common sense are key when getting started on biodiversity integration. We advise peer-to-peer learning and exchanging experiences with tool developers for gaining expertise, interrogating results, and further improving the tools.



4. Integrate: Getting started on biodiversity financial integration

Liudmila Strakodonskaya & Deepshikha Singh

This chapter focuses on the process of biodiversity integration which is shaped by legal incentives as well as practical considerations and the need to align with scientific imperatives. Even though there are technical constraints to biodiversity measurement, financial institutions should and can act already now to develop biodiversity strategies and reduce pressures on nature by redirecting financial flows to nature-positive activities.

4.1 Choosing your approach to biodiversity integration

4.1.1 How to approach biodiversity integration?

Today, most financial institutions are only beginning to consider the impacts of their investments on biodiversity and associated biodiversity-related risks and opportunities. In many cases, financial institutions address biodiversity through already existing issue-specific approaches (e.g., deforestation, ocean protection, etc.). Those could provide a starting point for biodiversity integration and grow to include biodiversity in its entirety. There is currently no strong view shared amongst financial institutions on how biodiversity integration should be conducted; it is a work in progress.

In a joint report by the Paulson Institute, the Nature Conservancy and Cornell Atkinson Centre for Sustainability ([Financing Nature](#)), the global biodiversity financing gap is estimated at US\$ 711 bn/year. Immediate action from financial institutions is essential to close this gap and meet the proposed global goal for biodiversity. But how should financial institutions integrate biodiversity into investment decision making? Choosing an approach is a challenge, especially because of high uncertainty about how data, methods, and regulations will develop. Financial institutions getting started on biodiversity integration, regardless of their level of advancement, often ask the same questions while working on the development of their biodiversity approaches:



FAQ

Can my approach be comprehensive right away (cover all aspects of biodiversity)? Or should I progress step by step?

It is currently difficult to put in place a comprehensive approach, given that knowledge, data and metrics on biodiversity will evolve in the coming years. A step-by-step approach taking into consideration best available scientific evidence and data and tools' limitations is a pragmatic and credible approach. However, try to go beyond addressing only companies' direct impacts on biodiversity: considering value chain impacts from the start is key to reversing biodiversity loss. Two topics critical to biodiversity are already standardised to some extent: deforestation and climate change. As such, financial institutions should ensure that companies establish a deforestation policy with robust commitments, as well as a climate strategy with concrete action plans and science-approved climate-related targets that integrate the role of nature in climate mitigation and adaptation. This can serve as a starting point for corporates to address biodiversity, however, over time the approach must encompass a broader perspective on biodiversity.

Should I concentrate on negative impacts only or do I also include positive impacts in my approach?

Given the huge biodiversity financing gap, it is crucial 1) to identify solutions that reduce the negative impacts of economic activities on nature, and 2) to develop nature-positive solutions. However, no portfolio level biodiversity measurement approaches currently allow to assess positive impacts on biodiversity. This may rapidly change as some tool developers are developing positive impact methodologies and metrics (situation in 2022). Also, in some regions (e.g., EU) taxonomies of biodiversity-friendly activities could be developed by respective regulators. As soon as methods and frameworks become available, positive impacts should be included.

Should I also consider biodiversity dependencies / ecosystem services in my approach?

Historically the focus of biodiversity measurement has been on impact measurement. Increasingly there will be an expectation from stakeholders for companies and those that invest in them to understand the dependence the companies have on nature. Emerging disclosure requirements through the CSRD and GRI require consideration of dependencies. Studies by French and Dutch Central Banks have shown the significant value of dependencies to the finance sector and their consideration could provide new insight into biodiversity-related risks and opportunities. Assessment of dependencies (and impacts) is included in the TNFD LEAP approach for nature-related risk and opportunity assessment. The ENCORE tool can be used to provide initial insight into potential exposure to risks relating to dependence on ecosystem services within a portfolio. Tools such as BIA-GBS offer calculations of potential dependence on ecosystem services across an investment universe and other tools were developing this capability at the time of writing in 2022.

Should I set up a separate biodiversity policy or do I include it into wider environmental or sustainability commitments?

Although biodiversity is sometimes represented as a 'new' topic, it has always been part of sustainable investing, albeit not fully understood or addressed. Many financial institutions consider that biodiversity should be included as a separate topic within their strategies – and this is recommended as a way of demonstrating understanding of the issue and clearly signalling the institution's commitments and intended actions. At the same time, it is important to establish a link between biodiversity and other environmental or social issues, and to include biodiversity into sectoral policies when in place.

Federal Finance Gestion uses a geolocation tool (IBAT) for infrastructure assets

Schelcher Prince Gestion launched infrastructure debt funds to finance projects that bring tangible solutions to climate change mitigation. These funds finance different categories of brownfield and greenfield projects such as renewable energy (wind, solar), electric charging stations, energy efficiency, as well as telecom infrastructures such as fiber or data centers. The funds are classified article 8 or 9 (SFDR) depending on their percentage of alignment with the European Taxonomy (respectively 50% or 80%). In order to be aligned with the EU Taxonomy, eligible projects need to go through the 'Do No Significant Harm' (DNSH) screening. One of the six environmental objectives is the protection and restoration of biodiversity and ecosystems. Federal Finance Gestion, who provides Schelcher Prince Gestion with ESG expertise, looks at biodiversity through different lenses. A methodology developed with ICare is used to understand to what extent the sponsor (owner of the project) deals with the different aspects of DNSH-requirements, including biodiversity. This first analysis is coupled with a study of the environmental impact of each project. This includes the use of spatial data from IBAT to identify how close projects are to protected areas or key biodiversity areas. If projects are located close to such areas, Federal Finance Gestion's team engages with sponsors and/or borrowers to get additional information on environmental impacts assessments and proposed mitigation measures. In this case, spatial data is helpful to strengthen biodiversity due diligence which is then used to engage with the main stakeholders of the project.

Biodiversity-screened Exchange-Traded Fund by HSBC

HSBC Asset Management has introduced the first biodiversity-screened Exchange-Traded Fund (ETF), which is listed on Euronext: [HSBC World ESG Biodiversity Screened Equity UCITS](#) ETF. The product contains a proprietary combination of biodiversity and ESG screening criteria, providing investors with a unique opportunity to help mitigate biodiversity risk globally.

A comprehensive set of biodiversity data is evolving. Whilst HSBC continues to enhance its assessment criteria, the organisation is able to provide investors the early option to improve the management of biodiversity-related risks at the portfolio level, covering a range of issues (such as deforestation and water). HSBC has partnered with Iceberg Data Lab (IDL) who use the 'Corporate Biodiversity Footprint' (CBF) to identify the impact of corporations on biodiversity across the globe using a framework that looks at four drivers of loss: land use, climate change, air and water pollution. As part of this, the portfolio excludes companies with no or poor IDL scores. The ETF also has additional filters to exclude companies involved in pesticide production, animal testing, weapons typically used for hunting, palm oil, whaling, and those with controversies. HSBC's journey doesn't end at screening. The asset manager engages with companies on biodiversity, specifically on key themes around deforestation, water, and circularity by design, and continues to develop additional metrics that can address other key areas of concern for biodiversity.

Listed equity biodiversity fund by AXA IM

AXA IM launched its first [listed equity biodiversity fund](#) in April 2022. The fund aims to prevent and mitigate biodiversity loss through a listed equity impact approach with three key elements: using a consistent and measurable impact framework to analyze companies; ESG and impact company engagement; actively aligning with nature-related UN SDGs.

The fund invests in best-in-universe companies offering innovative products and solutions to address issues such as pollution on land and water, land degradation, fauna and flora destruction, desertification, and overconsumption. AXA IM identified four key investment areas that contribute to the preservation of biodiversity: sustainable materials; land and animal preservation; water ecosystems; recycling and recirculation.

Within the investment process the investment universe is narrowed down with a combination of quantitative screens and qualitative analysis. AXA IM then uses a bottom-up stock selection approach and pro-actively monitors company ESG risks (including climate and biodiversity risks) within the fundamental financial analysis and ESG-impact analysis. The asset manager has also developed a framework for engaging with companies on their biodiversity impact based on a five-stage checklist that is used to track biodiversity integration by companies: 1. Determine the exposure, 2. Assess readiness, 3. Develop action plan, 4. Track change on the ground, 5. Align with science-based targets. The portfolios impact on biodiversity is assessed with the Corporate Biodiversity Footprint.

4.1.2 Aligning biodiversity integration with regulatory incentives

Some of the key policy and regulatory developments expected to shape financial institutions' management, disclosure and target setting on biodiversity (in order of expected level of influence) are:

- The EU's [Biodiversity Strategy](#) aiming to establish a network of protected areas on land and at sea, as well as the EU sustainability reporting standards for corporates and financial institutions (Corporate Sustainability Reporting Directive (CSRD) and Sustainable Finance Disclosures Regulation (SFDR) respectively) integrating biodiversity-related disclosure requirements for the first time
- National regulation like the UK's [Environment Act](#) giving companies and financial institutions the duty to set legally binding targets to halt species decline by 2030; or the French [Art 29 of the Energy and Climate Law](#) requiring financial institutions to use a biodiversity footprint indicator.
- The UN [Convention on Biological Diversity](#) (CBD) setting high-level goals to "halt and reverse biodiversity loss by 2030", and drafting the Post-2020 [Global Biodiversity Framework](#) (GBF) to implement these goals. There is growing momentum for including the financial sector in the GBF.

Note, however, that financial institutions should not only manage their compliance with regulation but, go beyond this to respond to the scientific and social imperatives to reverse biodiversity loss. This could imply commitments going beyond regulation as new data, methodologies and tools become available. In the meantime, several financial institutions are advocating for more precise biodiversity regulation that would provide incentives to act and would address some of the barriers to halting and reversing biodiversity loss such as subsidies for fossil fuels and harmful agriculture practice. They are also calling for guidance on the general direction to take, the methods and indicators to use, and the issues to address (e.g., deforestation, climate-biodiversity interlinkages, marine biodiversity, impacts from agriculture).

The CBD's Post-2020 Global Biodiversity Framework

The UN [Convention on Biological Diversity](#) (CBD) is expected to finalize and adopt its Post-2020 [Global Biodiversity Framework](#) (GBF) at the COP15 UN Biodiversity Conference, held in Montreal in December 2022. A [first draft of GBF](#) was prepared by the Open Ended Working Group (OEWG) and presented in July 2021. It sets out an ambitious plan to implement broad-based action to bring about a transformation in society's relationship with biodiversity. It is structured along four 2050 goals and 10 milestones with 21 targets for 2030. The framework was refined during COP15 negotiations in 2021, and during further meetings throughout 2021 and 2022 and is expected to be adopted in December 2022. By October 2021, 196 countries had already adopted the [Kunming Declaration](#), in which they commit to "ensure the development, adoption and implementation of an effective post-2020 Global Biodiversity Framework (...), to reverse the current loss of biodiversity and ensure that biodiversity is put on a path to recovery by 2030 at the latest, towards the full realization of the 2050 Vision of 'Living in Harmony with Nature'" (p.3). As an observer member to the CBD, the Finance for Biodiversity Foundation is [advocating for including the role of the financial sector in the GBF](#).

FAQ

What are central banks expecting from financial institutions in terms of biodiversity?

Central banks are anticipated to address biodiversity-related financial risks similarly to their current approach on climate risks (e.g., see the European Central Bank's supervisory expectations in its '[Guide on climate-related and environmental risks](#)'), including requesting financial institutions to provide transition plans. Central banks are likely to align with the [Network of Central Banks and Supervisors for Greening the Financial System](#) (NGFS) recommendations to address biodiversity-related financial risks through stress testing. Note that some NGOs are calling on central banks to use their supervisory tools (e.g., capital charges, concentration limits, liquidity requirements) to provide stronger incentives for banks to act despite data limitations (see [2021 SUSREG Annual report](#) and [2022 Call to action](#) by WWF). We recommend financial institutions start as soon as possible with biodiversity integration, as capacity building is time-consuming.

Are the current legal incentives on biodiversity sufficient to help financial institutions to fully address this topic?

Most FfB consultation respondents do not consider that current regulation provides sufficient incentives on biodiversity. There is a need to go beyond regulation through voluntary commitments to mitigate the negative impacts on biodiversity related to land use change, and to promote transition towards biodiversity-friendly business models (including investments in natural capital as an asset class). See also Section 5.1 for more information on regulatory incentives related to target setting by financial institutions.

4.2 The V-process

Beyond the regulatory trends discussed above, financial institutions see industry standards and global commitments emerging. The [Finance for Biodiversity Pledge](#) is among the key commitments by financial institutions today, and other global cross sector standards (for corporates and financial institutions) are represented by the [TNFD](#) and [SBTN](#) standards under development. Together, these standards and frameworks not only incentivize biodiversity integration by financial institutions, but also influence financial institutions' approach to biodiversity. Closer analysis shows that they converge on five steps that could serve as a basis for biodiversity integration, presented here as the V (i.e., 5 step)-process.

The V-process was developed based on the following frameworks:

- [Science-based targets for nature. Initial Guidance for business](#), by Science-Based Targets Network (SBTN), with 'Assess', 'Interpret & Prioritize', 'Measure, Set & Disclose', 'Act' and 'Track' as the five steps for setting science-based targets for nature.
- The [Finance for Biodiversity Pledge](#), with 'Collaborate & share knowledge', 'Engage with companies', 'Assess impact', 'Set targets' and 'Report publicly' as the five commitments.
- [LEAP Nature Risk Assessment Approach](#), by TNFD, with 'Locate', 'Evaluate', 'Assess' and 'Prepare' as guidance for nature-related risk and opportunity assessments.
- The [Guide on climate-related and environmental risks](#) (Box 1, p. 4-5), with thirteen supervisory expectations by the European Central Bank.

The five steps of the V-process are:

- 1 **Explore** the latest scientific evidence and data on biodiversity loss, its drivers, dependencies, risks and opportunities.
- 2 **Assess** your impacts, dependencies, risks and opportunities and **prioritize** key activities, sectors, pressures and geographies
- 3 **Integrate** biodiversity into your risk mitigation approach, strategies and policies, and **set targets** to reduce negative impacts and increase positive impacts on biodiversity
- 4 **Act** by engaging with companies, reallocating financing and supporting nature-based solutions
- 5 **Track progress** towards your targets to continuously improve and for external reporting

The V-process is presented in detail in Table 3, showing for each step how financial institutions could proceed to effectively integrate biodiversity into their activities based on the tools and data available. Given that 2030 is right around the corner and that the global biodiversity financing gap is huge, financial institutions should start introducing biodiversity into their activities immediately. The V-process provides a possible plan of action. It should always be applied bearing in mind the interlinkages between biodiversity, climate, and social issues.



	1 Explore	2 Assess & Prioritize	3 Integrate and set targets	4 Act	5 Track progress
Proposed process for biodiversity integration by financial institutions	<ul style="list-style-type: none"> Build and share knowledge on biodiversity, incl. the drivers, impacts, dependencies, ecosystem services, risk and opportunities Continuously explore scientific evidence on biodiversity, its (economic) value (ecosystem services) and drivers of its loss Identify most impactful sectors, commodities, products and countries As data and standards progress, explore possibilities to identify and invest in biodiversity solutions 	<ul style="list-style-type: none"> Assess impact of FI activities on biodiversity (portfolio, sectoral and investment/client level) Prioritize key activities, sectors, locations and pressures Map the value chain of activities and identify most impacted biomes and ecosystems Identify exposure to activities highly dependent on key ecosystem services and resources (incl. genetic resources) Analyze spheres of influence and prioritize sectors and geographies based on identified impacted locations, dependencies and pressures 	<ul style="list-style-type: none"> Set up a biodiversity risk mitigation approach to progressively orient financing allocation from biodiversity-risky to biodiversity-positive activities Measure baseline and develop biodiversity targets both on reducing negative and increasing positive impacts with consideration of biodiversity-climate-sustainability interlinkages Disclose baseline measurements & targets set Embed biodiversity in risk management and decision-making processes throughout activities incl. advisory ones by means of a risk control framework, strategies and policies Integrate a taxonomy of biodiversity-related activities 	<ul style="list-style-type: none"> Train staff Engage with companies individually or collaboratively Reallocate financing from negatively impactful companies, sectors, or geographies to activities with biodiversity-positive outcomes, following the mitigation hierarchy (avoid, reduce, restore) Support nature-based solutions with biodiversity co-benefits under companies' climate neutrality targets Continuously develop knowledge by piloting emerging indicators and approaches to improve the biodiversity impact assessments 	<ul style="list-style-type: none"> Monitor biodiversity-related impacts, dependences, risks & opportunities Monitor changes and continuously improve Disclose your progress based on the targets set and the results/impacts of your actions Ensure proper assurance
Databases & tools	<ul style="list-style-type: none"> Commodity supply chain data: Trase, SPOTT, OEC, Forest 500, Water Risk Filter Location-specific data: Global Forest Watch, ENCORE Hotspot database SBTN Sectoral Materiality Tool, CSR Risk Check, Natural Capital Protocol Sector Guides Data developed by global ESG data providers (including biodiversity controversies data) 	<ul style="list-style-type: none"> Biodiversity footprinting tools (negative impacts): BFFI, BIA-GBS, CBF, GID, etc. (see Guide on biodiversity measurement approaches) A value chain tool can be selected based on the SBTN tool database Dependencies analysis: ENCORE Dependencies database; new solutions under development by footprinting tools Geolocation data: IBAT Monetary converters: TEEB Positive impact data is yet to be developed 	<ul style="list-style-type: none"> Science-based targets for nature: SBTN Alignment with current and future taxonomies, such as the biodiversity taxonomy currently being developed by the EU Guidance for banks on Biodiversity Target-setting Post-2020 Global Biodiversity Framework CBD headline indicators Post-2020 indicators Glossary of datasets External consultants 	<ul style="list-style-type: none"> Guide on engagement with companies Collaborative engagements overview Additional data sources: Forest 500, SPOTT, SBTN Corporate Engagement Program 	<ul style="list-style-type: none"> TNFD Framework Global ESG and biodiversity-specific data providers Internal analysis and track records Engage with transparency
Key recommendations	<ul style="list-style-type: none"> Widen your view on biodiversity, and broadly identify the most impactful commodities, countries, sectors, activities, etc. 	<ul style="list-style-type: none"> Consider recourse to services of a specialized biodiversity data provider Develop internal expertise Adopt a value chain measurement approach Separate reporting on impacts and dependencies from reporting on risk and opportunities 	<ul style="list-style-type: none"> Make sure that your approaches are aligned with applicable reporting recommendations (e.g., indicators for setting targets), but do not hesitate to act beyond them Ensure full transparency on adopted methodology and indicators 	<ul style="list-style-type: none"> Engage with most material companies / sectors with respect to their biodiversity footprint throughout the value chain 	<ul style="list-style-type: none"> To the degree possible, ensure 3rd party verification of target achievement

Table 3. Proposed process for biodiversity integration, key recommendations, databases and tools linked to each of the V-process steps

4.3 Using one or multiple biodiversity metrics?

The V-process proposed above provides guidance for financial institutions willing to integrate biodiversity into investment decision-making, but there is one key point that remains to be clarified. Financial institutions could either use one main tool or metric to structure their biodiversity approach, or structure different pillars of their approach around different tools and metrics (dashboard approach). There is currently no consensus on which approach is best. But asking the right questions may facilitate financial institutions to find a solution to this dilemma.

The majority of financial institutions surveyed expects regulation to provide guidance on metrics to use, which would potentially inform science-based biodiversity target setting in the future. Prescribing metrics that are relevant across all sectors risks leading to a box ticking exercise with little impact on investment decision-making. Given the current state of evolution of biodiversity metrics and measurement, remaining principles-based will encourage the exploration of different approaches required to result in a robust approach to measurement.

FAQ

Can I use one single metric or measurement approach to capture the full complexity of biodiversity?

Application of metrics needs to proceed with caution to ensure the CBD goals are tracked and delivered, results are effective, and concerns regarding greenwashing are allayed. Some financial institutions advocate that a single metric is needed to provide a view on biodiversity performance. Although this is a good starting point (like the tons of CO₂ emissions for climate change), increasingly it is thought that using a single metric will be inadequate to describe the complexity of biodiversity. Currently, for example, biodiversity footprinting approaches can estimate potential impact, but the resulting score does not encompass dependence on ecosystem services, nor does it identify potential issues linked to organisations operating in or near ecologically sensitive areas (which the STAR metric provides greater insight into). Such footprinting approaches are useful across financed interventions for heat-mapping and prioritization exercises, but currently lack the input data and the accuracy to measure actual rather than potential impact or performance. The complexity of biodiversity as an issue means that focusing on a single metric is unlikely to give a full picture of performance on the issue.

Are there commonly accepted biodiversity metrics that I could use?

Currently, the topic is still opened and new indicators and measurement tools are under development. Some metrics like MSA and PDF (see Table 2) are gaining traction in the market and in the investment industry today, and are convenient for portfolio heat maps and reporting. Currently largely based on modelled data, footprinting tools generate outcomes in MSA and PDF. For understanding the real 'on the ground' impact and complementing footprinting tools based on modelled data, we recommend using multiple metrics.

In which cases do I need to adopt a dashboard approach to address biodiversity?

The idea of a dashboard (the use of multiple tools/metrics) is mentioned by half of the respondents to the FfB Consultation. It refers to more advanced biodiversity approaches, where financial institutions aim to address each of the key issues related to biodiversity crisis (drivers, biomes, locations, commodities, etc.) in the most effective way. The TNFD is advocating metrics to enable evaluation of drivers of nature loss, ecosystem services and the state of nature, for example. These are likely to result in both physical and monetary measures of risk and opportunity. One could imagine application of current footprinting approaches to evaluate potential impact from drivers of loss combined with a measure of extinction risk such as that provided by the STAR metric. We anticipate that in the medium term a more sophisticated dashboard approach will be required.

To what extent should my biodiversity data and tools be sector-specific?

As the materiality of drivers and dependencies varies by sector and region (e.g., see SBTN's sector-level materiality assessment of drivers of loss, in '[Initial Guidance for Business](#)', p. 21), it could make sense to focus on the most material drivers/dependencies first. This would imply adjusting one's measurement approach per sector or region to capture only the issues that are relevant for the specific industry. Although there could be a value in doing so, it is important not to completely disregard aspects that are expected not to be material as the materiality of those issues may change over time.

FAQ

Can I expect regulations to specify concrete metrics, and if so, what metrics are attracting the financial sector's attention today?

The FfB Consultation revealed that more than half of our respondents would like legal rules to suggest concrete metrics. Among the impact metrics they would expect regulation to support would be km².MSA (area in km² where biodiversity has been affected). We recommend that financial institutions familiarise themselves with applicable regulations; some local regulations are specific in terms of metrics they would like reported, while upcoming regional and global regulations seem to remain more principle-based. It is envisioned that global initiatives such as the TNFD and SBTN will provide a common basis for biodiversity integration by corporates and financial institutions.

La Française's quest for a footprinting tool

La Française has a wide range of sustainable investment products in both equity and credit markets. Its sustainable investment policy considers climate change and biodiversity as important pillars and La Française has been analysing biodiversity, water, and waste issues as part of the qualitative and quantitative assessments within its ESG assessment framework.

However, with the new regulatory and market developments La Française realised the need for a dedicated biodiversity strategy, specifically to quantify the impact and dependencies of its portfolio investments on nature. Having signed the Finance for Biodiversity Pledge, the asset manager is committed to set a biodiversity target before 2025. The current footprint needed to be assessed to provide a baseline. La Française thus started looking for a science-based and scalable footprinting tool with good coverage for its investment universe.

After several conversations with tool providers over the last 6 months, the conclusion was that more than one tool will be needed to get a holistic view on biodiversity.

- La Française is currently using ENCORE data to monitor and report the high/very high negative impacts and dependencies for its portfolio through a proprietary sector mapping tool.
- This will have to be completed with a footprinting solution based on MSA.km², through subscribing to a third-party provider.
- To configure a 'nature positive' portfolio, La Française wants to monitor the positive impact that its investee companies can have. This will be done through the proprietary sector mapping tool in relation to the SDGs relevant to La Française's natural capital approach.



4.4 Building internal knowledge and capacities on biodiversity

The integration of biodiversity into financing activities requires building capacity within the organisation to understand and act on the issue.

FAQ

How can I grow knowledge on biodiversity?

Many financial institutions work with data providers and/or consultants to gain biodiversity knowledge and integrate biodiversity into their internal processes and decision-making. Third-party specialists remain the key source of biodiversity expertise today. Peer-to-peer exchange and engagement in initiatives aimed at addressing data and methodological issues are also important ways to build knowledge. The FfB Foundation (see [Publications](#)), PBAF, and TNFD (see [Knowledge Bank](#)) are all initiatives that can help drive change and improve understanding of biodiversity whilst building the capacity of those engaged within them.

What capacity is already in place in financial institutions?

As part of FfB Consultation, we asked financial institutions about the ways biodiversity integration impacts their internal organisation. Almost half of our respondents have already recruited internal staff (≤ 1 full-time equivalent) specifically dedicated to biodiversity or are planning to do so in 2022. The most advanced financial institutions have 1 to 2 people working on biodiversity internally to carry out internal research and analysis and drive the overall approach.

What can I expect from market initiatives today?

The role of industry initiatives is to provide guidance and shared frameworks, to bridge the gap between science and practice, and to create a platform for collaboration and sharing amongst peers. Industry initiatives act as pioneers, taking action before regulation is in place, and promoting the appropriate regulations to be formulated. To be effective, industry initiatives should leave space for more systemic responses (e.g., regulation) to emerge.

Which initiatives can I join for building and exchanging knowledge on biodiversity integration?

Industry initiatives such as the [Finance for Biodiversity Foundation](#) provide a great platform for financial institutions to benefit from collaboration. There are many other successful initiatives (e.g., [PBAF](#), [EU Finance@Biodiversity Community](#), [UNEP FI](#), [TNFD](#)) which are good platforms for sharing best practices, road testing, technical support, and building a common language and capacity. All of them aim to enable synergies to accelerate the much-needed transition. They cater to different actors in the financial ecosystems – for example, PBAF's work is more relevant from an accounting perspective, strengthening biodiversity footprinting approaches while TNFD and FfB's work can be used by financial institutions to advance on biodiversity integration. The [Overview of initiatives for financial institutions](#) helps financial institutions to understand what initiatives are out there, and who is doing what.

Should I distribute responsibilities on biodiversity?

More and more financial institutions have group level policies to raise awareness of their operational teams (e.g., asset management teams, sustainable investment teams, risks teams) on biodiversity. They are combining this with bespoke training sessions and are integrating biodiversity into responsibilities across the team activities.

Reducing impacts on nature will require immense collective action. All stakeholders need to work in tandem, regardless of where they are in their biodiversity journey.

5. Set targets: Developing a biodiversity target

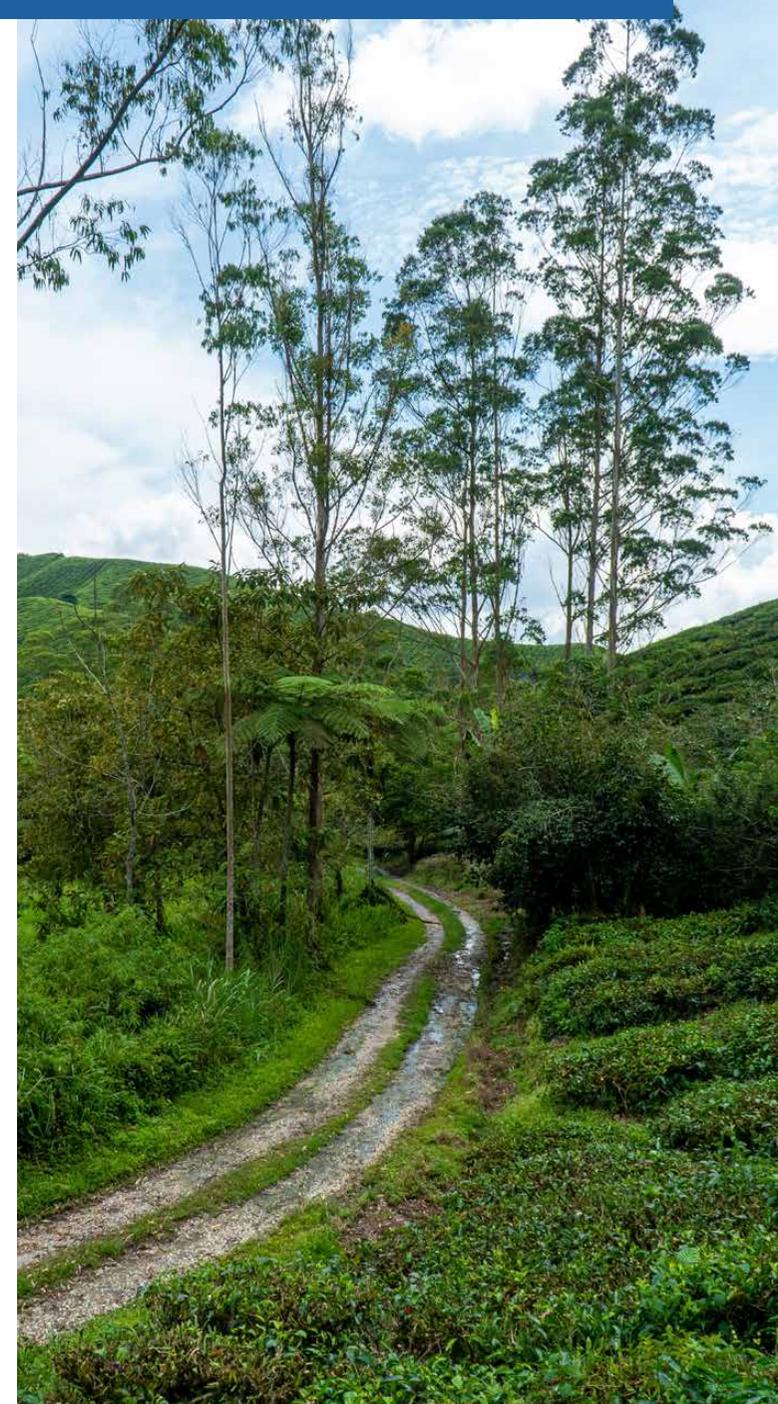
Deepshikha Singh & Liudmila Strakodonskaya

After determining how to integrate biodiversity into the financial and investment activities, financial institutions should work to set science-based targets on biodiversity. Timebound, quantitative targets on biodiversity can transform business practice if grounded in sound science and embedded within the institution's investment processes. Financial institutions should set targets that drive investment decisions that align financial flows to biodiversity policy requirements, reducing investment pressures on biodiversity and incentivising investments that deliver nature-positive outcomes.

5.1 Aligning financial institutions' targets with global biodiversity goals and targets

Global targets for biodiversity are currently in flux. Although the CBD's Post-2020 Global Biodiversity Framework is still under discussion (see text box in Section 4.1.2), consensus seems to suggest the following global target for nature: 'becoming nature-positive'. According to SBTN's '[Initial Guidance for Business](#)', this translates to no net loss of nature from 2020, a net positive state of nature by 2030, and full recovery by 2050.

So how can financial institutions set up an ambition to become 'nature-positive ambition' or align with other biodiversity-related global targets? Setting targets for biodiversity requires investors and businesses to understand the impact they have or can have on the world – taking an 'inside-out' perspective on double materiality predominantly. In order to be effective and transformative, financial institutions should commit to biodiversity targets that are science-based, quantified, linked to policy targets, and time bound. Here are some questions that financial institutions may be asking themselves when setting targets.



FAQ

What regulatory incentives do I have to set targets on biodiversity?

First and foremost, adoption of the GBF is expected to accelerate the expectations on financial institutions to integrate biodiversity into investment decision making, aligning financial flows with the global 'nature-positive' targets. Several other global and regional, legal and industry incentives are demanding action from financial institutions as well (see also Section 4.1.2). These incentives mostly align in terms of final ambitions, but financial institutions need to watch out for local or regional variations (if any) in terms of timing or actions required. France, for example, has adopted a progressive approach to interpretation and implementation of SFDR rules, expecting financial institutions to report on biodiversity-related impacts from holdings from June 2022.

What are the benefits and risks from emerging global biodiversity targets?

About four out of five respondents to the FfB consultation consider that the emergence of global biodiversity targets is a positive trend. They have the potential to create incentives for action, provide a shared language (including standardization and increased comparability of measurement), and create new business opportunities for companies and financial institutions (related to positive biodiversity impacts). However, since such targets have yet to be agreed, their scope and impact is difficult to assess. To deliver a reversal of nature loss, targets such as 'nature-positive' must be clearly defined, supported by robust metrics, measurement and assurance processes (see also WBCSD's Practitioner's Guide [What does nature-positive mean for business?](#)). Without this, there is a risk that such targets will become perceived as greenwashing. Global targets currently lack clear guidance on practical applications and implications. Regulators and policymakers should ensure that such guidance includes consideration of social aspects such that the implementation of global targets aligns with the just transition. We recommend financial institutions to work together with issuers, investees, and clients as well as independent experts and regulators to define 'nature-positive', align in ambition and expectations, and choose the right instruments against existing business-as-usual constraints. Outcome-oriented targets (versus action-oriented ones) are key and will help financial institutions to concentrate on biodiversity loss mitigation and negative impacts reduction and avoid inefficient compensation measures.

What global targets alternative to 'nature-positive' could be formulated?

Responding to the FfB consultation, some financial institutions advocated for alternative global targets like:

- Zero deforestation and land conversion (aligned with definitions from the [Accountability Framework](#)). See, for example, the [Commitment on Eliminating Agricultural Commodity-Driven Deforestation](#).
- Halving the production and consumption footprint on nature (as advocated for by [WWF](#))
- Conservation targets for forests or marine ecosystems
- Traceability targets
- Limits on production according to planetary boundaries
- Payment for ecosystem services

What should be the key features of my approach to biodiversity target-setting and how can I align with science and global targets?

Financial institutions setting a biodiversity target, have to define the scope and process behind biodiversity impact monitoring as well. As outlined in Chapter 2, different biodiversity measurement approaches are available for financial institutions. A key difference between designing targets for climate versus for nature is that most key issue areas for nature (e.g., biodiversity, water availability, land conversion, deforestation) are location-dependent. Eventually, all companies (and the financial institutions financing/investing in them) will be required to pursue action throughout their entire value chain and across the entire life cycle of products or services. Financial institutions need to look for alignment with global targets and science when setting biodiversity targets.

5.2 Target setting process

Quantified, timebound targets on biodiversity enable an organization to demonstrate intent in a way that is measurable, reportable, and verifiable. They also allow tracking and demonstrating progress. But how can a robust biodiversity target be formulated?

FAQ

What things should I consider when setting a biodiversity target?

Relevant questions to ask oneself when setting targets should be:

- What do I want to achieve within my biodiversity goal and why?
- What resources and capabilities are needed to achieve the targets?
- What metrics, indicators and measurement approaches will I use to track my progress?
- Are the targets within reach, and do I have a clear understanding of the commitment to reach them (to avoid greenwashing)?
- By when do I want to achieve these targets?

UNEP-FI and PRB's publication [Biodiversity target setting. Guidance for banks](#) offers further guidance on the topic.

Which steps should I take when setting a biodiversity target?

The following steps could offer guidance towards biodiversity target setting:

- 1 Prioritize worst-performing companies and levers of change** – Investors/banks will need to filter the worst performers in the portfolios to streamline their efforts and have maximum impact towards firm level ambitions. Investing/financing the solution providers (levers of change) can maximise the positive impact from the activities and enable progress toward a wider nature-positive approach.
- 2 Commit to targets** – Financial institutions will need to set portfolio-level targets towards nature and biodiversity in line with global and local developments and voluntary commitments. Currently, there is no clear framework showing what a nature-based target would look like, but one can start with qualitative commitments (see next question) that can translate into quantitative targets as more data and frameworks become available. Financial institutions can also look toward SBTN's work for corporates to develop their own targets. For example, one can monitor the proportion of companies within one's portfolio that has committed to or set their own science-based targets.

- 3 Create a roadmap for implementation** – Any commitment or target is incomplete without a clear roadmap for implementation. The V-process can be used to set up timelines and milestones towards incorporating biodiversity risk and opportunities, which can lead to achieving the targets.
- 4 Include ecosystem approach** – Financial institutions might want to adopt an ecosystems approach when setting targets. SBTN's work has been based on an ecosystem approach, with different targets for land, ocean and freshwater.

As the exact implementation of these steps will differ between different types of financial institutions, you are encouraged to adapt them to your context.

What would a nature-positive commitment from a financial institution look like (viewed from a process, data and content perspective)?

A robust nature-positive commitment by financial institutions would align with science by covering impacts as well as dependencies, would include an action plan with time-bound targets on negative impacts mitigation and positive solutions promotion, and would be based on systematic dialogue (engagement) with issuers/clients to help them to increase awareness and progress on biodiversity. Some examples of biodiversity commitments put forward by financial institutions responding to the FfB consultation were:

- Commitment to assess impact and dependencies (transparently & science-based)
- Commitment to set clear targets and timelines (long-term and intermediate targets and milestones)
- Commitment to engage with companies (including proxy voting policies)
- Commitment to exclude certain companies (create exclusion policy, limit investments in assets that contribute to nature loss, e.g., companies exposed to pesticides, palm oil or fossil fuels)
- Commitment to positive impact (e.g., natural capital investments, green bonds, nature-positive operation of real assets)
- Commitment to disclose (annual reporting on portfolio-level impact, with specialist oversight, being transparent about methodology, scope, coverage, and blind spots)

Such qualitative or process-based commitments are entirely acceptable in the absence of quantified science-based targets for biodiversity.

Setting targets on biodiversity presents additional challenges to financial institutions in today's context, where data and measurement frameworks are not commonly used yet, and regulations are in flux. Also, setting goals for biodiversity is more complex than measuring the reduction of carbon emissions. Within the evolving landscape, we can already start with small steps and progress towards a global goal while the resources are maturing. By committing to act on biodiversity, applying biodiversity measurement approaches and engaging with peers and tool providers, we can help speed up the progress that is very much needed.

FAQ

How can I assess my contribution to global targets? What guidelines are available?

Assessing one's contribution towards the nature-positive target will not be straightforward. Whereas the footprinting approaches provide a general impression of estimated biodiversity impact, an understanding of the locations of a company's key supply chain inputs and operations – both upstream and downstream – will complement this with location-based assessments. SBTN aims to publish a first version of SBTs for nature for companies in Q3 2023. This version will include guidance for Steps 1 (Assess) and 2 (Prioritize). In the meantime, [interim targets](#) for companies are already available. SBTN will also provide guidance on the appropriateness of modelled data in pressure specific SBT methods as they become available in the next two years. This will enable companies to perform baseline measurement and SBT setting for nature-related issue areas. Following this, financial institutions can incorporate these indicators and disclosed metrics and targets to assess their own portfolio footprints and progress on targets. The TNFD framework will also provide guidelines for aligning investment and financing activities with a nature-positive global target, and is aligned with SBTN on target-setting. For sub-targets, such as deforestation and traceability, financial institutions can integrate the associated indicators and frameworks into their biodiversity approach.

Key readings on target setting and KPIs

- [Biodiversity target setting. Guidance for banks.](#) UNEP FI & PRB, 2021.
- [Science-Based Targets for Nature. Initial Guidance for Business.](#) SBTN, 2020.
- [Beyond 'Business as Usual': Biodiversity Targets and Finance.](#) UN Environment Programme, UNEP-FI & Global Canopy, 2020.
- [1st Draft of The Post-2020 Global Biodiversity Framework.](#) UNEP & CBD, 2022.
- [Webinars: Monitoring framework - Proposed headline indicators a.0.1, b.0.1, 9.0.1, 11.0.1, 14.0.2 \(SBSTTA item 3\).](#) CBD Secretariat & UNEP-WCMC, 2022.
- [Indicators for the post-2020 Global Biodiversity Framework.](#) UNEP-WCMC, 2022.
- [Practitioner's Guide. What does nature-positive mean for business?](#) World Business Council for Sustainable Development, 2021.
- [Nature-Related Risk & Opportunity Management and Disclosure Framework. V0.2.](#) TNFD, 2022.



6. Track progress: Increasing transparency and continuously improving

Petra Mannessen & Clinton Adas

The final step of the V-process is for financial institutions to monitor their progress towards the targets set. Continuously re-assessing biodiversity-related impacts, dependencies and risks over time allows financial institutions to continuously improve their biodiversity approach and feeds into annual reporting. The V-process is thus a continuous learning cycle, enabling financial institutions to adapt their biodiversity approach to the newest scientific insights, methodological developments, and regulatory incentives.

6.1 Monitoring performance

Approaches to monitoring will vary according to the nature of the business and investment – monitoring from a stewardship perspective may have a different focus compared to monitoring compliance with loan requirements. Key to any monitoring approach will be ensuring that appropriate key performance indicators are identified for the audience concerned (e.g., supervisor, regulator, rightsholders, stakeholders, etc), that monitoring is done on a timely basis and on a frequency that enables data users to receive the necessary information, and that monitoring provides data that forms the basis of external disclosure. Limitations in the monitoring data must be made clear to its users and considered within the decision the data informs.

FAQ

How do I effectively monitor my biodiversity performance?

Continuous improvement is a widely accepted concept within the field of sustainability (e.g., Best Available Techniques). Biodiversity monitoring itself requires a continuous improvement mindset, as not all biodiversity indicators are developed yet. As discussed in Chapter 3, several tools are available already to carry out high-level assessments of impacts, dependencies, and risks, thus informing prioritization and strategy setting. As long as footprinting approaches reflect potential impacts rather than actual performance, corporate engagement and process indicators are a necessary complement to monitor financial institutions' progress. Examples of such process indicators could be: percentage of value chain transparency, percentage of portfolio assessed for biodiversity impact, percentage of data availability, percentage of clients that reported on their biodiversity impacts. Overviews of available indicators are offered by SBTN (['Initial guidance for business'](#), p. 38) and by the CBD ([Headline indicators; Post-2020 indicators](#)).

FAQ

When will I receive reported data from companies?

Monitoring within banks and asset managers is heavily dependent on corporate disclosures. Current levels of disclosure are still low, which affects client assessments and portfolio monitoring. Approximately four out of five of our FfB consultation respondents expected to receive reported data on biodiversity from companies within two to five years (i.e., first reporting somewhere between 2023 and 2026). This is in line with the CSRD timeline of reporting by FY2023/FY2024. The European Financial Reporting Advisory Group's (EFRAG) technical working paper '[European Sustainability Reporting Standard E4. Biodiversity and Ecosystems](#)' gives an idea of what biodiversity data CSRD foresees to be requested of companies. It is based on the principle that *"the undertaking shall disclose its plans to ensure that its business model and strategy are compatible with the transition to achieve no net loss by 2030 and net gain by 2050"* (Art 15) and consists of 11 disclosure requirements to achieve this – ranging from transition plans; to scenarios; pricing schemes; policies; short, medium and long targets; and action plans in line with IPBES and the CBD.

Once data becomes available either directly from companies or via third party data providers, it can be used to monitor biodiversity performance through evaluation of quantitative impact measures (once developed) and qualitative process-based measures, e.g., quality of commitments, traceability percentages, and data availability. Until corporate-specific impact and performance data is available, we recommend that financial institutions use existing top-down approaches (e.g. biodiversity footprinting) to monitor progress at portfolio level based on sector averages/modelled data and bottom-up approaches based on either quantitative reported impact data of clients or qualitative process data, combined with indicators of biodiversity management quality (e.g., extent of implementation of biodiversity action plans for ecologically sensitive sites) where they are available.

We recommend that, as part of current engagements, financial institutions ensure that companies are aware of upcoming regulations and reporting requirements on biodiversity so that they can be prepared to meet expectations when they come into force. Companies will have different levels of expertise and resource, and financial institutions can use engagement to play a guiding and information sharing role, incentivising and encouraging better disclosure. Companies may rely on the upcoming [SBTN](#) and [TNFD](#) standards, as well as on the [GRI 304 Biodiversity \(update\)](#) planned for Q1 2023), to inform their biodiversity approaches and disclosure. Note that TNFD is a framework that integrates and builds on existing standards, including SBTN. The [Guide on engagement with companies](#) provides concrete guidance on how to engage with companies on biodiversity.

6.2 Continuously improving

The increasing regulatory and supervisory focus on biodiversity means that financial institutions need to adapt a continuous learning cycle within their organization, which is reflected by the V-process's circular representation. A key success factor is to dare to act. Despite imperfect metrics and data, financial institutions should have the confidence to act now. For this, a 'learning by doing' culture is needed. By continuously re-assessing biodiversity-related impacts, new data and metrics will be embedded in financial institutions' biodiversity approach step by step, based on advancing methodologies (see Chapter 3) and increased alignment with science (see Chapter 2). There are sufficient tools, data and knowledge to start in this process today.

FAQ

Wouldn't it be more efficient to wait with biodiversity integration until all frameworks, methodologies and regulations are in place?

Unfortunately, the current rate of biodiversity loss, and the systemic risks associated to it, are so significant and pressing that immediate action is required by businesses, governments, and financial institutions. We cannot afford to wait until the perfect frameworks or methodologies are developed. This is not necessary either, as a lot can be done already with what is currently available, based on common sense. Topics like water pollution, climate and deforestation have been well researched and are already being acted upon across the sector. Furthermore, biodiversity-related frameworks and methodologies can only develop through being implemented, used and tested. A 'learning by doing' culture is needed in the financial sector to tackle biodiversity loss effectively. Doing this can put the sector in the position of 'change agent', driving business to halt biodiversity loss and deliver a nature-positive economy.

How can I promote a culture of 'learning by doing' within my organisation?

Research already teaches us a lot about biodiversity. Nevertheless, biodiversity is a young and emerging field of expertise in the financial sector in comparison to financial accounting, which already exists for centuries, or even compared to climate science. Making this explicit, daring to make mistakes, and embracing a learning culture are key success factors in addressing the issue of biodiversity. Organisations change only if the individuals within them do. Next to knowledge uptake, this is also about soft skills. What helps in this respect is:

- Board level effectively and repeatedly engaging with employees on their vision and strategy on biodiversity (why, what) and the urgency of it (smart goals and target dates if available). Repetition of the message is key.
- Building cultural change capacity to link the organisational culture (values and beliefs) to the biodiversity commitments and strategy, as to prepare the organisation for the change needed. This is a crucial step and influences tools, policies, procedures, trainings, etc, but it is often overlooked. However, like Peter Drucker stated: "Culture eats strategy for breakfast".
- Making explicit the ways in which employees can contribute to the biodiversity goals (even the small first steps) and linking remuneration to delivery of the strategy in responsible individuals
- Diverse and inclusive teams working together on biodiversity integration
- Multidisciplinary teams addressing biodiversity integration across the organisation.

Furthermore, it is important to acknowledge that the long-term benefits of a healthy ecosystem, might sometimes mean strategic choices which involve negative financial impacts on the short term. This can be justified as the financial costs for avoiding negative impacts on biodiversity are generally lower than the costs associated with replacing or restoring lost species or ecosystem services (e.g., high financial costs to replace an extinct pollinator with hand pollination).

Be honest and transparent within your organisation, and also show the business upsides. Scenario planning might help as well. Finally, much can be learned from previous change processes within your organisation – ensure lessons learned from them are brought into addressing biodiversity integration.

FAQ

How can I use my biodiversity monitoring to continuously improve my biodiversity approach?

In the first and second step of the V-process ('Explore' and 'Assess and Prioritize') an assessment of portfolio exposure to biodiversity impacts, dependencies, and risks was used to prioritize key sectors, activities, pressures or geographies for action. Annual updates of such assessments (i.e., monitoring performance) can be used to:

- 1 Evaluate progress on the prioritized key sectors, activities, pressures or geographies. This can give insights on what worked and what did not, thus informing improvement of strategies and action plans.
- 2 Re-evaluate the prioritization of sectors, activities, pressures or geographies. This can lead to action areas being added or shifted over time.

Joining platforms for peer-to-peer learning and knowledge exchange might help to be continuously updated on advances in knowledge and emerging approaches and issues.

What external developments should I look out for and align my biodiversity approach with in the coming years?

For each of the steps of the V-process, external developments expected for the coming years will influence and help shape financial institutions' approach to biodiversity.

Explore:

- New scientific insights (check [IPBES assessments](#) and [WWF Living Planet reports](#))

Assess & Prioritize:

- Methodological developments within biodiversity measurement approaches (check tool developers, FfB [Guide on biodiversity measurement approaches](#))
- New data coming available (check ESG data providers)
- Industry standards on impact assessment (check [PBAF standard](#), [Align](#))

Integrate & Set targets:

- Global Biodiversity Framework (check [CBD](#))
- National regulations (check your government)
- Central bank expectations (check your central bank)
- Guidance on setting science-based targets for nature (check [SBTN](#))
- Soft targets/ industry targets (e.g., zero deforestation)

Act:

- New collaborative engagement projects (check [PRI](#), FfB [Collaborative engagements overview](#))

Track progress:

- EU reporting standards: EU Taxonomy, CSRD, SFDR (check EU)
- National reporting standards (check your government)
- Upcoming Nature-related Risk & Opportunity Management and Disclosure Framework (check [TNFD](#))

All in all, the change process which many financial institutions are currently implementing will be developed in parallel to broader policy and methodological developments. Currently the draft goals and targets in the GBF are ambitious. They are likely, therefore, to accelerate the governmental and supervisory expectations for biodiversity integration by financial institutions. Financial institutions that prepare now for this change will be better positioned to manage risks, realise opportunities and maintain stakeholder relations.

6.3 Reporting on biodiversity

Next to monitoring, reporting on biodiversity is essential and required (already now or in the near future) by regulators and central banks, for example:

- The ECB expects banks to "*publish meaningful and material information & metrics on Climate & Environment for regulatory purposes*" ([Guide on climate-related and environmental risks](#), p. 13)
- In his speech '[Prudential Pathways to Paris](#)', Frank Elderson, member of the Executive Board of the European Central Bank and co-initiator of the Network for Greening the Financial System (NGFS), refers to portfolio transition plans to be drawn up by banks, including references for milestones and yearly targets for every economic sector
- The EU sustainability reporting standards (NFRD, SFDR, EU Taxonomy and CSRD) are incorporating biodiversity requirements for financial institutions and companies.
- The TNFD is developing a nature-related risk and opportunity management and disclosure framework and the Global Reporting Initiative is refining its disclosure requirements on biodiversity

FAQ

What is expected from financial institutions in the (near) future on reporting?

The financial institutions surveyed felt that current regulations are not providing sufficient incentives nor guidance for either reporting or avoiding negative impacts on biodiversity. The [EU Taxonomy](#) and the [EU Taxonomy Compass](#) (includes information per economic activity) provides welcome clarity on this issue. Extensive raw data requirements for companies are outlined in the [current draft of the CSRD](#). This will allow financial institutions to use reported instead of modelled data, including the much-needed upstream value chain data (more information below). The latest version of the TNFD beta framework (v0.2) is proposing that location data be disclosed – a crucial piece of information to move from potential impact measurement to actual.

The EU [SFDR](#), [NFRD](#), [CSRD](#), [Corporate Sustainability Due Diligence Directive](#) and national regulations are expected to highly influence financial institutions' reporting practices as from 2023/2024, as will the standard of the CBD [Global Biodiversity Framework](#) (in terms of direction on targets and timelines). In the FfB consultation, stronger regulatory efforts are considered a necessary incentive for action on biodiversity by almost all respondents, whilst half of them considered it a constraint/risk as well. In terms of reporting, we recommend that financial institutions follow the upcoming [GRI 304 Biodiversity](#) which [will be updated](#) in Q1 2023 and the draft [TNFD framework](#), next to the aforementioned regulations. V0.3 of the TNFD beta framework will be released in November 2022, followed by v0.4 of the beta framework in February 2023, before TNFD launches its framework in September 2023.

How can I follow upcoming biodiversity reporting regulations?

There are many biodiversity-related initiatives for financial institutions, focussing on one or more steps of the V-process. These initiatives are all focussed on collaboration and the principle of enabling synergies to accelerate the much-needed transition. The FfB Foundation, UNEP FI and PRI provided a comprehensive [Overview of initiatives for financial institutions](#) showing who is doing what. By connecting to a biodiversity-related initiative, financial institutions can share knowledge on upcoming biodiversity reporting regulations. Key amongst these reporting regulations are CSRD, SFDR, EU Taxonomy and national regulations. TNFD, the International Sustainability Standards Board (ISSB) and the Global Reporting Initiative (GRI) are providing voluntary reporting guidelines. Furthermore, the [Biodiversity Strategy Dashboard](#) of the European Commission provides an insight in the EU targets that will be cascaded to national regulations and central banks and subsequently to European companies and financial institutions.

7. The way forward

With this Guide, we outlined why it is important for financial institutions to start embarking the process of biodiversity integration and the steps that can already be taken. In addition to offering pragmatic guidance, we also aimed to inspire our peers by showing that action is possible already today. Even though global biodiversity targets, impact assessment methodologies and reporting frameworks are under development, a lot can already be done with what is available now. With the rapid decline of biodiversity, there is no time to wait until the perfect indicators are ready. If we are to reverse nature loss in this decade, we need to act now. The V-process offers a plan of action for doing so. So let's start!

And let's do so together. As with all complex sustainability challenges, we need to 'learn by doing'. This learning process can be sped up considerably by sharing experiences and exchanging best practices and lessons learned. We therefore urge all financial institutions to embark on the biodiversity journey and to collaborate and share knowledge with peers on lessons learned. Doing so, the financial sector should enter into dialogue with tool developers, regulators, and businesses to ensure alignment of biodiversity measurement approaches, regulations, and policies with science in the first place, but also with the needs of business and finance.

The Finance for Biodiversity Foundation is one of the spaces that facilitate such collaboration and dialogue. It hosts working groups on Impact Assessment, Engagement with Companies, Public Policy Advocacy and Target Setting that enable peer-to-peer learning and collective action.

The FfB Foundation also collaborates with tool developers working towards alignment of biodiversity measurement approaches with the needs of financial institutions (see 'Next steps' in [Guide on biodiversity measurement approaches](#)). As an observer member to the CBD the FfB Foundation is advocating for the inclusion of the financial sector into the Global Biodiversity Framework. Financial institutions from any part of the world are most welcome to join the collective action!

This Guide may be updated in the future with more case studies and guidance on how financial institutions can act to address biodiversity loss. Furthermore, the V-process could be updated in the future to integrate new developments of standards and frameworks on the market. Building on this publication and the working group's activities, we will collaborate further on the topics, such as the climate-biodiversity nexus, and how financial institutions can

effectively treat climate change and biodiversity loss in an integrated way; the interrelations of biodiversity and other sustainability topics, and what this means for biodiversity integration by financial institutions; investment and financing opportunities arising from biodiversity loss mitigation, and assessment of positive impacts.

8. Sources and more readings

Step 1. Explore

[Global Assessment Report on Biodiversity and Ecosystem Services](#). IPBES, 2019.

[The Economics of Biodiversity: The Dasgupta Review](#). Dasgupta, P., 2021.

[Nature Risk Rising. Why the Crisis Engulfing Nature Matters for Business and the Economy](#). WEF, 2020.

[Biodiversity and financial stability: building the case for action](#). NGFS & INSPIRE, 2021.

[The Biodiversity Crisis is a Business Crisis](#). BCG, 2021.

Step 2. Assess & Prioritize

[Finance for biodiversity. Guide on biodiversity measurement approaches](#). F@B Community & Finance for Biodiversity Foundation, 2022.

[Taking biodiversity into account. PBAF Standard v 2022. Biodiversity impact assessment - Overview of approaches](#). PBAF, 2022.

[Critical assessment of biodiversity accounting approaches for businesses and financial institutions. Discussion paper for EU business & biodiversity platform. Update report 1](#). Business@Biodiversity Platform, 2018.

[Critical assessment of biodiversity accounting approaches for businesses and financial institutions. Discussion paper for EU business & biodiversity platform. Update report 2](#). Business@Biodiversity Platform, 2019.

[Assessment of Biodiversity Measurement Approaches for Businesses and Financial Institutions: Update Report 3](#). Business@Biodiversity Platform, 2021.

[Geospatial ESG. The emerging application of geospatial data for gaining 'environmental' insights on the asset, corporate and sovereign level](#). WWF-UK, 2022.

[Integrating Biodiversity into Natural capital Assessments](#). Capitals Coalition and Cambridge Conservation Initiative, 2020.

[Connecting Finance and Natural capital. Finance sector supplement to the Natural Capital Protocol](#). Capitals Coalition, Natural Capital Finance Alliance & VBDO, 2018.

[Climate-Nature Nexus. An investor guide to expanding from climate- to nature-data](#). UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) & Finance for Biodiversity Initiative, 2022.

Step 3. Integrate & Set targets

[Consultation results: Biodiversity Data, Tools and Approaches](#). Finance for Biodiversity Foundation, 2022.

[Finance and biodiversity. Overview of initiatives for financial institutions](#). F@B Community, Finance for Biodiversity Foundation, UNEP FI & PRI, 2022.

[SUSREG Annual report. A baseline assessment of sustainable financial regulations and central bank activities](#). WWF, 2021.

[Point of no returns. Part IV: Biodiversity](#). ShareAction, 2020.

[Integrating biodiversity into private equity. A practical guide for management companies](#). France Invest, 2022.

[High-level business actions on nature](#). Business for Nature.

[Biodiversity target setting. Guidance for banks](#). UNEP FI & PRB, 2021.

[Beyond 'Business as Usual': Biodiversity Targets and Finance](#). UN Environment Programme, UNEP-FI & Global Canopy, 2020.

[Science-Based Targets for Nature. Initial Guidance for Business](#). SBTN, 2020.

Step 4. Act

[Finance for biodiversity. Guide on engagement with companies](#). F@B Community & Finance for Biodiversity Foundation, 2022.

[Finance Sector Chapter](#). Get Nature Positive

[Financing Nature. Closing the Global Biodiversity Financing Gap](#). Paulson Institute, The Nature Conservancy & Cornell Atkinson Center for Sustainability, 2020.

[State of Finance for Nature](#). UNEP, WEF, ELD & Vivid Economics, 2021.

Step 5. Track progress

[Nature-Related Risk & Opportunity Management and Disclosure Framework. V0.2. TNFD, 2022](#).

[The time has come. The KPMG Survey of Sustainability Reporting](#). KPMG, 2020.

[Guide on climate-related and environmental risks. Supervisory expectations relating to risk management and disclosure](#). European Central Bank, 2020.

9. Glossary

- **Abundance:** The population size of a particular species in a particular location.
- **Biodiversity:** 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 part; this includes diversity within species, between species and of ecosystems. (Source: [Convention on Biological Diversity, 1992](#))
- **Biodiversity approach:** A financial institution's approach towards biodiversity integration.
- **Biodiversity assessment:** The activity of measuring or estimating an entity's (e.g., company or financial institution) biodiversity-related impacts or dependencies, for example using biodiversity measurement approaches.
- **Biodiversity footprinting approach:** Biodiversity measurement approach that assesses companies' or sectors' biodiversity impact through quantitatively modelling the pressures (e.g., emissions, resource use) and associated biodiversity impact throughout products' value chains (i.e., Life Cycle Assessment). In the absence of reported company data, calculations are often based on input/output-databases and biodiversity impact models.
- **Biodiversity impact model:** Model used by (or embedded in) Life-Cycle Assessment tools to translate data on companies' contribution to drivers of biodiversity loss (i.e., environmental inputs and outputs) into biodiversity impact. Examples: GLOBIO, ReCiPe.
- **Biodiversity integration:** The process through which a financial institution integrates biodiversity considerations into all the aspects of its organisation and operations, including impact assessment, target setting, financial decision-making, corporate engagement, voting, monitoring and reporting, etc.
- **Biodiversity measurement approach:** A tool, often offered by a commercial tool provider, NGO or governmental organisation, that a financial institution can use to assess its portfolio's and/or clients' interlinkages with biodiversity. A measurement approach can cover (positive and/or negative) impacts on biodiversity, dependencies, and/or biodiversity risks. Each measurement approach, with its embedded methodology, metrics and data, represents biodiversity in a unique way.
- **Biodiversity risk:** Risks to assets, businesses, financial institutions, and/or society at large caused by the decline of nature and biodiversity. This includes physical risks (e.g., loss of agricultural harvest), transition risks (e.g., business risks associated with conservation policies), and systemic risks (e.g., collapse of business sectors due to the interaction of different risk types).
- **Dependency:** Ways in which a specific community, company, value chain, etc. depends on ecosystem services.
- **Driver (of biodiversity loss):** Process caused by human activity that contributes to the loss of nature and biodiversity. The five main drivers identified by IPBES are land/sea use change, pollution, climate change, direct exploitation and invasive species. In this publication, 'pressure' and 'driver' are used as synonyms.
- **Ecosystem service:** Goods and services provided by ecosystems that benefit humans. Usually, three types of ecosystem services are distinguished: provisioning services, regulating services, and cultural services.
- **Habitat:** The area, characterised by its abiotic and biotic properties, that is habitable by a particular species. (Source: [TNFD Glossary](#))
- **Impact (on biodiversity):** Change in the state of biodiversity caused by human activity. Companies can have both a negative impact (through the drivers described above), and a positive impact (through restoration and conservation practices).
- **Input/output-database:** Database used by Life-Cycle Assessment tools, holding information about the environmental inputs (e.g., resource use, land use) and outputs (e.g., emissions, pollution) associated with all kinds of production processes. This information is commonly based on sector averages. Examples: EXIOBASE, Eora.
- **Natural capital:** The stock of renewable and non-renewable natural resources (e.g., plants, animals, air, water, soils, minerals) that together deliver ecosystem services.
- **Nature-positive:** A high-level goal and concept describing a future state of nature (e.g., biodiversity, ecosystem services and natural capital) which is greater than the current state. (Source: [TNFD Glossary](#))
- **Pressure:** See Driver
- **Ready-made solution:** Ready-made biodiversity assessment and reporting solution, offered by a tool provider, to which no other input is required from financial institutions than a list of their investments/clients. Financial institutions receive a full biodiversity reporting as output, which can feed directly into their ESG reporting.
- **Spatial tool:** Biodiversity measurement approach that uses the geographical position of objects (e.g., assets, production locations, protected areas, species) to study the relation between them. A spatial tool could, for example, show which assets are located in or near biodiversity hotspots.
- **Threatened species:** Any species listed in the Red List categories Critically Endangered, Endangered, or Vulnerable. (Source: [IPBES Glossary](#))

Colophon

Initiators

This guide was made by members of the Impact Assessment working group under the Finance for Biodiversity Foundation. It acts as an annex to the Guidance document of the Finance for Biodiversity Pledge, providing more information on the 'Assessing Impact' commitment but also on 'Setting targets' and 'Reporting publicly'. The guide is developed on the basis of the [Consultation on Biodiversity Data, Tools and Approaches](#) conducted in December 2021. We would like to thank our consultation respondents for their precious time and valuable input.

Authors and review

The authors of this guide are active members of the Impact Assessment working group under the FfB Foundation: Co-Chair Liudmila Strakodonskaya (AXA IM), and members Clinton Adas (HSBC Asset Management), Hadrien Gaudin-Hamama (Mirova), Alexis Gouin (Federal Finance), Petra Mannessen (Rabobank), and Deepshikha Singh (Groupe La Française).
Expert review: Annelisa Grigg (Globalbalance)

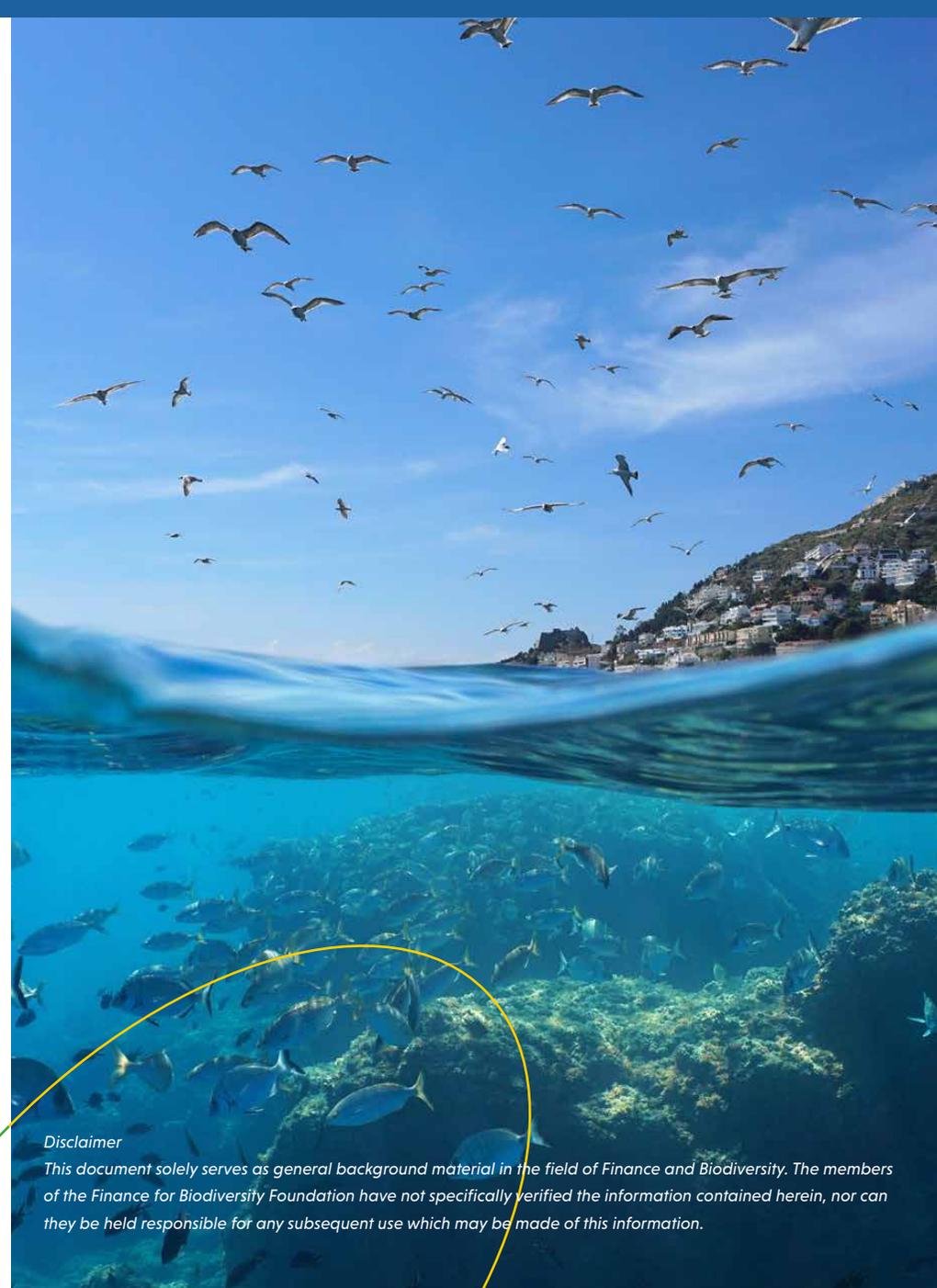
Invitation to join

This guide is one of the many steps in our journey towards fully integrating biodiversity as financial institutions. We encourage financial institutions from all continents to start integrating biodiversity into their activities and decision-making in order to accelerate the transition towards nature-positive business. The Finance for Biodiversity Foundation working groups will continue to collaborate on joint actions. Join us to share your practices and challenges, contributing to reversing nature loss in this decade.

Get in touch

Finance for Biodiversity Pledge and Foundation: Anne-Marie Bor, Iris Hertog and Anita de Horde, info@financeforbiodiversity.org.

December 2022 © www.financeforbiodiversity.org



Disclaimer

This document solely serves as general background material in the field of Finance and Biodiversity. The members of the Finance for Biodiversity Foundation have not specifically verified the information contained herein, nor can they be held responsible for any subsequent use which may be made of this information.