Consultation results: Biodiversity Data, Tools and Approaches
Version: 3 February 2022

Summary

About the consultation

- Financial institutions are increasingly seeking to integrate biodiversity in financial decision making, but they need adequate methods and tools to do so. While we are seeing a rapid evolution of financial biodiversity methodologies, financial institutions need to get a better understanding of how to apply these. The Finance for Biodiversity Foundation (FfB Foundation) works to provide practical insights to financial market participants and fill this gap.
- The FfB Foundation carried out a public consultation in November-December 2021, with the following two goals: 1) To use it as a basis to develop a practical guide for financial institutions on biodiversity data, tools and approaches; and 2) to use it as a working document of the FfB Foundation to get an overview of innovative and best practice approaches among financial institutions to biodiversity.
- This consultation was open for financial institutions, corporates, accountants, NGOs, governments, and regulators, as well as other relevant stakeholders.

This document compiles the results of the consultation.

Content of the consultation results

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Each chapter starts with the original explanation on this chapter that was provided in the consultation.

Some guidelines to read the results

- We received 30 responses on the consultation. In case a question has not been answered by all respondents, the deviating number of respondents for that specific question is indicated in brackets after the question: (n=…).
- Some questions were shown only to financial institution respondents. This is indicated in front of the question: '[FI's only]'
- Questions containing overly detailed or sensitive information have been left out.
- Unless indicated otherwise, the tables with the results of multiple-choice questions show the percentage of respondents to that question that chose a specific answer. These are rounded to 1%, meaning that totals do not always amount exactly to 100%.
- Answers in these tables are (in most cases) ordered from most to less frequent. The order can thus deviate from the order in the questionnaire.
- Responses to open questions were analysed through grouping answers, or fragments of answers, with similar content together (inductive coding). A summary was written for each question based on this analysis.

Consultation results. Characterization of respondents

Question 2. Indicate the type of organisation you represent:

Financial institution	83%
NGO	7%
Corporate/private sector	3%
Other*	7%

*'Individual' & 'Investment consultant'

Question 3. In what region is your organisation headquartered?

Europe	87%
North America	10%
Asia	3%
Africa and Middle East	0%
Latin America and Caribbean	0%
Oceania	0%

Question 7. [FI's only] Please indicate the type of financial institution you represent. (n=24)

Asset manager	58%
Private bank	25%
Public financial institution	4%
Insurance company	4%
(Impact) fund	4%
Development bank	0%
Pension fund	0%
Other*	4%

* 'Retail fund'

Question 8. [FI's only] Please indicate the type of asset classes your organisation owns or manages. (n=24)

Listed equity	88%
Corporate bonds	83%
Sustainable bonds	83%
Sovereign bonds	71%
Impact funds	71%
Private equity	67%
Corporate loans	63%
Mortgages and real estate	63%
Project finance (e.g. infrastructure, industrial projects, public services)	63%
Natural capital	21%
Commodity trade	13%
Other*	4%

* 'Carbon bank'

Chapter 1. Importance of biodiversity for financial institutions

Boundaries of Earth systems

The Holocene period, which started 11,700 years ago, is the only state of the Earth system in which human societies can thrive. However, human activities impact the functioning of the Earth system to a degree that threatens its resilience. Out of nine critical processes that regulate the current state of the Earth system, climate regulation and biosphere integrity – which includes genetic diversity – are the two most influential and essential. They provide overarching stability to the planet[1]. Biosphere or biodiversity is defined as the variety among living organisms from all sources, including terrestrial marine and aquatic ecosystems and the ecological complexes of which they are part.

Diversity increases resilience

The planetary boundaries of biosphere integrity, climate regulation and other critical processes have been crossed due to human activities. This hugely reduces the resilience of the Earth system and could cause it to shift out of the Holocene state, which has so far provided a conducive environment for humans.

Genetic diversity can be understood as an 'information bank', which provides the long-term capacity of living organisms to adapt to changes in their abiotic environment in resilient and innovative ways. The reduction of the genetic diversity of crops and the lack of effective protection of crops' wild relatives already induce a reduction of agriculture's resilience against perturbations, pests, diseases, extreme weather events and climate change. Hence, biodiversity loss is threatening food security and human societies directly[2].

Nature is more than capital

Nature, or natural capital, is an asset 'just' like manufactured capital (roads, buildings) and human capital (health, knowledge). It is productive, resilient and adaptable because of biodiversity. Yet, Nature is more than a purely economic asset. Life could not persist without Nature: we are 'embedded in Nature'[3]. The total value of natural ecosystem services is estimated at $125tn commensurate to 1.5x global GDP[4]. Economic sectors such as agriculture, forestry and textile are particularly reliant on Nature, as 71 of the 100 most used crops providing 90% of our food depend on pollination[5]. Yet, societies' current demand on Nature by far exceeds its resources: about 1.6 Earths are currently required[3]. Government subsidies for agriculture alone amount to $540bn each year, two-thirds of which are detrimental to the environment[6]. This is jeopardizing the capacity of Nature to provide ecosystem services over the long term. The stock of natural capital per person already declined by 40% over the last thirty years[3] and a collapse of key ecosystem services would result in $2.7tn of economic losses by 2030[7].

Nature dependencies of economies

Mapping linkages between ecosystem services and the economy is key to evaluating the risks of cascading effects and assessing resilience and interdependencies[8]. Modelling biodiversity scenarios similar to climate scenarios would help in this regard. Recent models, for example the Bounded

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[1] Planetary boundaries: Guiding human development on a changing planet, Steffen et al, 2015

[2] Global assessment report on biodiversity and ecosystem services, IPBES, 2019

[3] The Economics of Biodiversity: The Dasgupta Review, HM Treasury, 2021

[4] Changes in the global value of ecosystem services, Costanza et al, 2014

[5] European Business and Biodiversity Campaign, IUCN, 2019

[6] A multi-billion-dollar opportunity: Repurposing agricultural support to transform food systems, FAO, UNDP, UNEP, 2021

[7] The Economic Case for Nature: A new global Earth-economy model, World Bank, 2021

[8] Biodiversity and financial stability: building the case for action, NGFS, 2021

Global Economy[4], show the interdependence between the regulation and maintenance of ecosystem services. Furthermore, the Global Earth-Economy Model demonstrates the devastating and cascading effects when ecosystem services collapse. Non-extractive sectors, for example, can contract by 8% in economic business activity[9]. However, even such models do not provide complete solutions, accounting for all methodological challenges related to the biodiversity topic, including:

  i.   non-linear dynamics and possible tipping point behaviour caused by crossing the planetary boundaries of the biosphere system;
  ii. non-substitutability of natural capital by human capital, as illustrated by a collapse of food supply; and
  iii. an absence of universal metrics to measure nature loss in contrast to climate change.

Urgency to act

The existing technical constraints should not be an excuse for not acting. Instead, financial market participants should start acting now given our dependencies on Nature, as well as the physical and transition risks arising from the above-mentioned linkages. Financial institutions can, for example, develop biodiversity strategies and reduce pressures on Nature by redirecting financial flows from nature-negative to nature-positive activities.

To be able to better integrate biodiversity risk and opportunities into financial decision making, we need to reconnect biodiversity data and tools with scientific imperatives on how to deal with biodiversity loss. This is especially relevant in the context of new regulation, which incentivises companies and financial institutions to act on biodiversity.

Figure: Drivers of biodiversity loss and examples of declines in nature
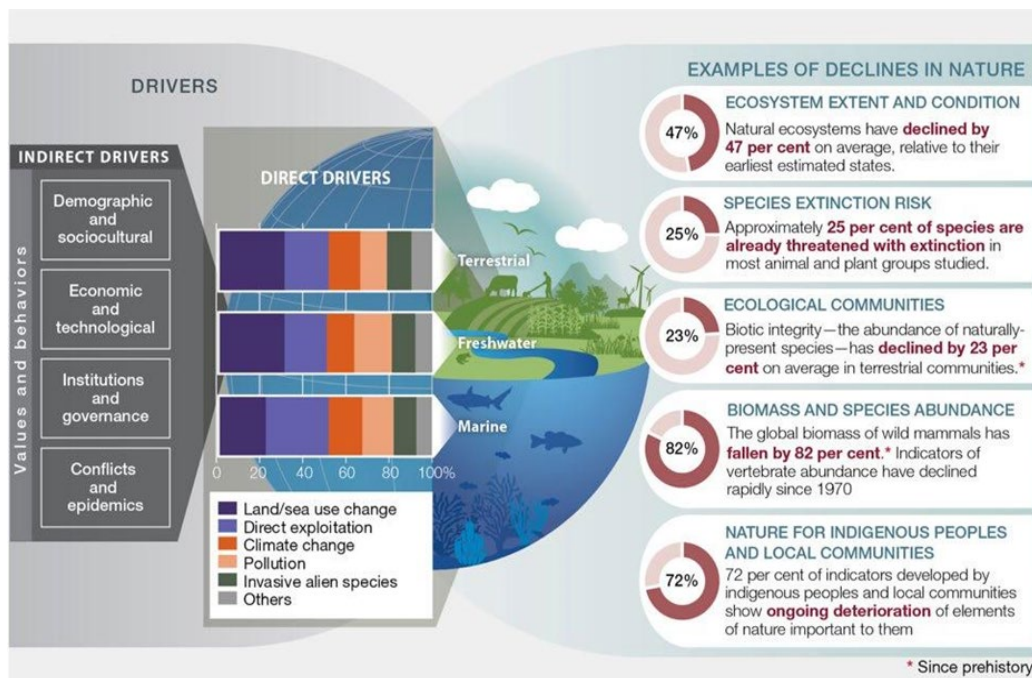
Source: IPBES Global assessment report on biodiversity and ecosystem services, 2019

Consultation results - chapter 1

Question 10. [FI's only] Please indicate how long your organisation has been working on biodiversity. (n=22)

	Not yet	Less than two years ago	Three to five years ago	More than five years ago
We started to investigate biodiversity as a topic	0%	52%	19%	29%
We developed a biodiversity policy or strategy	41%	45%	5%	9%
We fully integrated biodiversity into our investment and financial decision making	57%	33%	5%	5%
We fully integrated biodiversity into our operations, all our staff is trained and applies our biodiversity policy or strategy	86%	10%	0%	5%

Question 11. [FI's only] What motivates your organisation to work with biodiversity? Please indicate on a scale from 1 (not applicable) to 6 (our core motivation). (n=22)
The table below shows the average scores for each item. Standard deviations varied between items in the range of 1.1-1.4.

A severe systemic risk that needs to be addressed	5
Opportunities for more robust investments and financing	4.4
To meet (upcoming) regulation	4.3
For reputational reasons	4.0
To meet a growing demand from clients	3.9
Other*	-

* Including link to climate targets, SDGs, CBD objectives and natural capital

Question 12. [FI's only] What place does biodiversity currently occupy in your organisation's overall sustainability policy? (n=22)
In the table below, the multiple-choice alternatives are in the same order as in the consultation itself.

Biodiversity is a separate topic	23%
Biodiversity is mixed with other aspects of environmental (e.g. climate change) or wider sustainability (e.g. social) topics	46%
Biodiversity is included in sector specific policies/approaches	5%
A mix of the above	23%
Biodiversity is not explicitly mentioned in our overall sustainability policy	0%
Other*	5%

* 'Not yet implemented, but we target a mix between 2 and 3'

Question 13. In your opinion, how should biodiversity ideally be integrated into a financial institution's overall sustainability policy? (n=27)
In the table below, the multiple-choice alternatives are in the same order as in the consultation itself.

Biodiversity should be included as a separate topic	19%
Biodiversity should be mixed with other aspects of environmental (e.g. climate change) or wider sustainability (e.g. social) topics	22%
Biodiversity should be included in sector specific policies/approaches	11%
A mix of the above	44%
Biodiversity should not be mentioned explicitly in a sustainability policy	0%
Other*	4%

* '2 and 3'

Question 16. [FI's only] To what extent have you integrated or are you planning to integrate biodiversity into: (n=22)

	We have integrated it	We are planning to integrate it	We are not planning to integrate it	Not applicable
Engagement dialogues with companies	62%	38%	0%	0%
Shareholder votings	25%	60%	10%	5%

Other:

- We have integrated it: 'Signing on to investor letters e.g. on commitment deforestation', 'Investment in natural capital', 'Investment into a dataprovider elaborating lifecycle bidoversity footprint indicator'.
- We are planning to integrate it: 'Exclusion policy and impact measurement and targets setting', 'Exclusion policy', 'We try to value companies dependency on ecoservices and vulnerabilities as well as risk of being associated with biodiversity losses. We also plan to try to spot, among peers, those having implemented more credible policies in terms of fostering agro-ecology, sourcing alternative (plant based, cultivated, obtained via precision fermentation) proteins etc..'

Chapter 2. Scientific foundation of biodiversity investment practices

One of the key challenges financial institutions are facing today is the question of how to approach biodiversity investing given the large variety of terms and concepts used in this field. Biodiversity loss is a scientific fact. Scientific studies have declared a biodiversity crisis and prove that a complex net of interdependencies between nature and global economic systems exists. But defining the concrete actions that financial institutions and corporates should take to mitigate the crisis can be difficult. Various initiatives are therefore trying to 'translate' the scientific evidence to an 'operational language' that the private sector can use and understand.

These 'translations' of scientific biodiversity concepts by industry-led initiatives seek to clarify terms and increase the understanding of biodiversity issues to support the private sector with developing relevant solutions. While that is positive, the translations might also have an unintended side effect: they could complicate the biodiversity topic by introducing a multitude of different but interrelated terms and concepts into the language the private sector uses.

In our opinion, financial institutions should always ensure that the link to science remains, irrespective of which 'language' or approach they adopt. Global biodiversity imperatives (by IPBES and the upcoming Global Biodiversity Framework) demand that we act in line with scientifically proven needs of biodiversity protection. Regardless of our operational processes and choice of approaches, we should concentrate on tackling concrete biodiversity issues.

Consultation results - Chapter 2.

Question 18. How is your biodiversity approach linked to or based on science? (n=26)
In the table below, the multiple-choice alternatives are in the same order as in the consultation itself.

Our approach refers to scientific work	27%
We rely on operational approaches using our internal expertise or providers and external consultants	23%
A mix of both	46%
Other*	4%

* 'We didn't define a biodiversity approach yet. As a first step we would like to work with leading data providers. We then aim to integrate on a best effort basis a scientific approach.'

Question 19. [FI's only] What biodiversity policy and/or measurement approach have you adopted? Please indicate on a scale from 1 (not adopted) to 6 (fully adopted). (n=22)
The table below shows the average scores for each item. Standard deviations varied between items in the range of 1.4-1.8.

Biodiversity risk mitigation	3.1
Biodiversity opportunities/positive solutions	2.9
Biodiversity impact measurements at portfolio level	2.6
Biodiversity-related financial risk assessments	2.6
Biodiversity dependencies	2.2
Biodiversity impact measurements at client level	1.9

Question 21. [FI's only] Which asset classes does your biodiversity policy and/or measurement approach cover? (n=21)

As the number of answers differs between asset classes, the table below show absolute numbers (number of respondents that chose each option) rather than percentages.

	Covered	Not covered, but we do own/ manage this asset class	Not applicable to our organization	No answer
Corporate bonds	13	5	1	2
Listed equity	13	6	1	1
Green bonds	11	6	3	1
Impact funds	10	5	4	2
Project finance (e.g. infrastructure, industrial projects, public services)	9	3	5	4
Sovereign bonds	8	7	3	3
Corporate loans	6	4	6	5
Private equity	6	7	6	2
Mortgages and real estate	4	7	5	5
Natural capital	3	0	11	7
Commodity trade	2	1	9	9

Question 22. [FI's only] Does your biodiversity policy and/or measurement approach differ between asset classes, and if yes, how? (n=15)

Summary of responses: Some respondents adapt their biodiversity approach to the asset class they are investing in, namely with specific approaches to sovereign issuers, impact funds and green bonds, and real assets (e.g. directly managed assets, infrastructure, natural capital). However, globally almost no distinction is made between global equity and fixed income biodiversity approaches.

Question 23. [FI's only] Does your biodiversity policy and/or measurement approach include sector-specific guidance, metrics, etc.? (n=22)

No	41%
Partially	41%
Yes	18%

Question 24. [FI's only] If you replied yes or partially, which sectors do you target? (n=13)

Agriculture, forestry and fishing	100%
Mining and quarrying	69%
Electricity, gas, steam and air conditioning supply	54%
Construction	46%
Manufacturing	46%
Water supply, sewerage, waste management and remediation activities	39%
Wholesale and retail trade	31%
Real estate	31%
Transportation and storage	23%
Accommodation and food services	23%
Professional, scientific, and technical services	8%
Human health and social work services	8%
Other*	8%

* 'Chemicals'

Question 25. In your opinion, what would be the key elements in biodiversity measurement for financial institutions? (n=18)

Summary of results: Most respondents agreed that spatially explicit data, data on positive and negative impacts (relative to regional/global biodiversity trends), and data on dependencies are key elements for biodiversity measurement by FIs. Furthermore, some respondents highlighted the importance of a sector-specific approach, reported data, alignment with science and with existing frameworks, and an easy to digest outcome.

Chapter 3. Biodiversity metrics and measurement tools

For financial institutions, it is challenging and time consuming to navigate through currently available or emerging biodiversity tools and data. The Finance for Biodiversity Guide on biodiversity measurement approaches maps the six most used measurement approaches: CBF, BFFI, STAR, GBSFI, BIA-GBS and ENCORE.

We have created an additional inventory of data, tools and solutions developed for financial institutions and/or issuers. In this inventory, we classify tools for financial institutions into four categories: biodiversity solutions by global ESG providers, dedicated biodiversity tools, early-stage innovative players and so-called 'other solutions'. Additionally, some financial institutions are supporting their clients or investee companies to develop and apply tools that assess their impact.

According to our observations, dedicated biodiversity tools can be split into two main approaches: those based on life cycle assessments (LCA) and those relying on geolocation specific data and information. They are complementary. The LCA approach can better answer the question, "Which value chain activities put the most pressure on biodiversity at a given point in time?", whereas the geolocation approach provides additional insights on where it is preferable to act on location-based recovery.

Our inventory results have shown that, as of today, specialised tool developers work mostly on negative impacts. Only a few of them cover dependencies, meaning that not all aspects of scientific biodiversity frameworks are integrated into todays' tools. Moreover, IPBES' drivers of biodiversity loss and IPBES nature contributions (ecosystem services) are not fully covered by any of the referenced data and metrics solutions. This is due to limitations in data and models/methodologies. Most difficult to address seem to be the drivers of invasive species, direct exploitation of resources and impacts on marine biodiversity. Going forward, biodiversity tools will have to align better with science.

We also noticed that global ESG providers have developed biodiversity solutions with various maturities and that these, to some extent, differ between geographical regions (of the client portfolio). The providers tend to focus on developing biodiversity metrics and tools which satisfy the majority of their clients and respond to local or regional regulatory requirements. While their solutions are a first step to tackle biodiversity issues -- for example by providing financial institutions with positive and negative screening solutions -- few of them are working on tools dedicated to biodiversity impact assessments or other biodiversity-related assessments.

As explained above, financial institutions face difficulties when they are trying to design a completely science based, fully informed (with all relevant data) and optimal (using efficient tools) biodiversity approach. Despite this, we believe that financial institutions can actively contribute to the global goal of mitigating biodiversity loss already today, given the rising ambition and the high pace at which biodiversity solutions are being developed.

Consultation results - Chapter 3.

Question 26. [FI's only] How are you planning to use/using biodiversity measurement tools? (n=22)

We (are planning to) work with several tools to measure biodiversity impact and/or dependencies (dashboard approach)	50%
We (are planning to) work with one tool to measure biodiversity impact and/or dependencies	41%
We are not yet (planning to) using tools to measure biodiversity impact and/or dependencies	9%

Question 27. [FI's only] What are your expectations and preferences towards data providers and tool developers? (n=22)
Summary of responses: Most respondents prefer to work with a specialist tool developer, some however opt for more basic biodiversity information issued by a global ESG provider.

Question 31. [FI's using tools] Looking at the biodiversity footprint as a potential measurement approach, do you consider it to be useful for your portfolio/investments/business? (n=20)

Yes	65%
Maybe	35%
No	0%

Question 32. [FI's using tools] What pressures/drivers of biodiversity loss are used in your methodology? (n=20)

Land use change (e.g. deforestation, infrastructure)	95%
Climate change	85%
Pollution	85%
Sea use change	40%
Direct exploitation of species	40%
Invasive species	20%
Other*	10%

* 'Freshwater use change', 'to be defined'

Question 33. [FI's using tools] What is the scope of the methodology you use? (n=19)

All direct and indirect upstream and downstream impacts (scope 1, 2 and 3)	63%
Only direct impacts (scope 1 and 2)	16%
Direct impacts and upstream impacts (scope 1, 2 and 3)	11%
Other*	11%

* 'not sure', 'to be defined'

Question 34. [FI's using tools] Does your methodology cover: (n=18)

	Yes	Partially	No
Terrestrial biodiversity	89%	11%	0%
Aquatic (freshwater) biodiversity	41%	41%	18%
Marine biodiversity	18%	24%	59%

Question 35. [FI's using tools] Are your tools sufficient in providing the biodiversity measures or metrics you want to apply at portfolio level? (n=20)

Partially	50%
No	40%
Yes	10%

Question 36. [FI's using tools] Please explain the answer you have given above. (n=14)
Summary of responses: The two main limitations of the tools mentioned by respondents include (1) limitations in coverage (e.g. aquatic and marine biodiversity, invasive species, emerging countries, and some asset classes are not covered), and (2) dependence on modelled data and sector averages (thus not allowing for comparison of companies in the same sector). In a more general sense, respondents noted that tools and metrics are currently still maturing.

Question 37. In your opinion, what aspects of biodiversity should be measured and valued to show the changes in the state of biodiversity? (n=27)

Ecosystem integrity	82%
Species richness	70%
Habitats	63%
Ecosystem functioning	63%
Genetic diversity	48%
I do not know	11%
Other*	11%

* 'soil quality, protection of fragile zones', 'Species Abundance' & 'ecosystem connectivity'

Question 38. In your opinion, what drivers of biodiversity loss should be covered most urgently? Please indicate on a scale from 1 (not urgent) to 6 (highly urgent). (n=27)
The table below shows the average scores for each item. Standard deviations varied between items in the range of 0.3-1.2.

Land use change (e.g. deforestation, infrastructure)	5.9
Pollution	5.4
Climate change	5.4
Sea use change	5.3
Direct exploitation of species	4.8
Invasive species	4.6
Other*	-

* 'corruption', 'fragile zones protection', public policy', 'soil quality' & 'the financial sector'

Question 41. This question is about the criteria you use when selecting an approach for measuring negative impacts on biodiversity. To what extent are the following criteria important to you when selecting a tool? Please indicate on a scale from 1 (not important) to 6 (highly important). (n=27)
The table below shows the average scores for each item. Standard deviations varied between items in the range of 0.7-1.7.

The tool (and the data it uses) should be well aligned with science.	5.6
The tool should be commonly accepted by market practitioners.	5.1
The tool should combine geolocation-specific and LCA-based approaches.	5.0
The tool should be geolocation specific.	4.9
The tool should be LCA based.	4.9
The tool should express negative impacts on biodiversity in multiple metrics (e.g. separate metrics for different realms, drivers of loss, etc.)	4.5
The tool should use innovative biodiversity-specific data (satellite imagery, Environmental DNA (eDNA), etc.)	4.4
The tool should express negative impacts on biodiversity in one single metric (e.g. mean species abundance (MSA), potentially disappeared fraction (PDF) or other)	3.7
Other*	-

* 'Each tool is adapted to a specific asset class'

Question 42. Please clarify your answers to the question above. (n=14)

Summary of responses: Alignment with science is crucial to the respondents. However, in the light of multiple potential solutions, financial institutions are making up their minds on (1) using one versus multiple metrics and (2) using LCA versus geolocation data approaches. For the former issue, single metrics are perceived to be useful for portfolio level aggregation, heat-mapping exercises, communication and monitoring and creating a common language. Multiple metrics, however, offer a more contextual understanding and are needed for selecting investments and identifying the most material drivers of loss. For the latter issue, respondents advocate for a combination of LCA and geolocation data approaches.

Question 43. To what extent do you see added value for integrating dependencies/ecosystem services as a metric in financial decision making? (n=25)

It might perhaps be meaningful, but we do not know enough yet to make a decision	60%
Yes, we are using/planning to use data on dependencies	20%
Yes, we are using/planning to use true pricing, taking ecosystem services into account	8%
No, we don't see added value for integrating dependencies/ecosystem services in financial decision making	0%
We would like to include ecosystem services as a metric, but experience the following constraints: *	12%

* 'data, methods accessibility', 'pricing is still very difficult', 'FTE capacity / secialist knowledge'

Question 44. There are discussions ongoing about how biodiversity measurement methodologies and metrics will converge towards generally accepted methods, indicators and criteria. In your opinion which biodiversity methodologies and metrics are already commonly accepted by the market? (n=17)

Summary of responses: Almost half of the respondents mentioned MSA (or MSA.km^2) as commonly accepted and convenient metric that is gaining traction in the market and used by both specialist and ESG data providers. Other metrics that were mentioned, include PDF, species richness, indigenous vegetation cover, indicators on animal welfare, companies' activities in protected areas, presence of controversies on the topic, land use and land use change, deforestation and land cover / no-tillage. Furthermore, some respondents referred to PBAF, SBTN, ENCORE and TNFD as influential standard setters. Finally, some respondents noted that, in their opinion, there are no commonly accepted methodologies or metrics yet, as multiple methodologies coexist.

Question 45. To what extent do you find it useful to define one aggregated biodiversity indicator to assess the impact of financial institutions on biodiversity? Or do you consider it more efficient to use multiple metrics for different purposes, issues and applications when it comes to biodiversity? (n=19)

Summary of responses: Responses were divided quite evenly between those advocating for one metric and those advocating for multiple metrics.

- Reasons for using multiple metrics included: relevance within sector-based approaches; need to cover the complexity of biodiversity and avoid oversimplification; need for action perspective (understanding drivers to know what to do); and the familiarity of the financial sector with indicator dashboards.
- Reasons for using a single metric included: this being a good starting point; usefulness for financials with limited knowledge/time/capacity; belief that a single metric would speed up implementation; allows for comparability, monitoring, reporting and communication.

Some respondents advocated a combination of both approaches.

Chapter 4. Biodiversity data, targets and evolving regulatory landscape

Although biodiversity data and tools are still under development, we see a global movement calling on stakeholders to act now on biodiversity loss. This movement is supported by an increasing number of local and global regulators. We expect that the availability and quality of biodiversity data will gradually improve with increasing regulation (e.g. EU Corporate Sustainability Reporting Directive (CSRD)) and the work of industry-led initiatives (e.g. SBTN, FfB Pledge and Foundation, Taskforce on Nature-related Financial Disclosures, Partnership for Biodiversity Accounting Financials).

We expect that regulation on disclosure will help to increase the share of reported data versus modelled data, often provided via biodiversity tools today. However, multiple regulatory initiatives could also generate confusion if they offer financial institutions and corporates diverse incentives and require from them different disclosures and approaches. Alongside our inventory of data and tools, we investigated several legal standards which require corporates and financial institutions to consider biodiversity and noticed a strong need for alignment.

Specifically, it seems that biodiversity approaches promoted through various regulations vary under different legal standards (for instance, the EU Sustainable Finance Disclosure Regulation (SFDR) refers specifically to 'impacts on nature', whereas the EU CSRD seems to also cover 'nature dependencies'). Moreover, some regulations, like the EU SFDR, explicitly propose to financial institutions biodiversity metrics they should apply. Yet, the link between the proposed metrics and the scientific imperatives is often not explicitly established, and currently available data and tools do not specifically address the metric required. Additionally, the interpretation of the double materiality principle regarding biodiversity may vary under different legal rules (EFRAG defines that sustainability matters are both financially material and material as regards to their environmental and social impacts[9]).

This can make it difficult for financial institutions and corporates to set common global targets and goals and to work against biodiversity loss. What can financial institutions expect and ask from issuers/clients today and to what extent can they consider issuers/clients to be accountable for biodiversity issues? What data can financial institutions disclose themselves? How can a financial institution set up a nature-positive ambition or other biodiversity-related global goals and develop an effective approach to achieve these? These are the questions we still need to find answers to.

Consultation results - Chapter 4.

Question 46. What aspects of biodiversity data seem most well developed to you today? Please rank the aspects in sequence with the most well-developed aspect at the top. 1 = best developed; 6 = less developed (n=24)

The table below shows the average scores for each item. Standard deviations varied between items in the range of 1.0-1.8.

Negative impacts on biodiversity	1.6
Biodiversity-related risks	2.7
Ecosystem services	3.9
Planetary boundaries	4.0
Dependencies	4.2
Positive solutions	4.5

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[9] Proposals for a relevant and dynamic EU sustainability reporting standard setting, EFRAG, 2021 (p 8)

Question 47. The accuracy with which financial institutions can monitor the biodiversity impact of their portfolios depends on the degree to which companies report on their biodiversity impact. In the absence of reported data from companies, financial institutions could use modelled/estimated data to monitor impact. Please insert a percentage number in the blank in the following sentence: "Financial institutions should start monitoring the biodiversity impact of their portfolios once reported data for at least __% of their corporate clients is available." Note: Fill in '0' if you believe that financial institutions should start monitoring impact by using modelled data already today. (n=24)

0	54%
10	17%
25	13%
40	8%
60	8%

Question 48. When do you expect reported data to be available? (n=26)

In two to five years	81%
In one year	8%
Now	8%
In five to ten years	4%
In more than ten years	0%

Question 49. Financial institutions are already able to start monitoring impact by using modelled data. (n=26)

Yes	46%
Partially	35%
No	19%

Question 50. What minimum information would you expect that clients/investees will disclose on biodiversity in the coming year? (n=24)

	Qualitative data	Quantitative data	Both	No data
Data on the negative impacts their direct operations have on biodiversity.	17%	25%	50%	8%
Data on the positive impacts on biodiversity conservation.	46%	8%	33%	13%
Regional/local biodiversity data of a company's operations and production sites	21%	25%	25%	29%
Data on the negative biodiversity impacts upstream in their supply chains.	25%	4%	42%	30%
Data on the negative biodiversity impacts downstream in their value chains.	17%	17%	30%	38%
Regional/local data on ecosystem services and dependencies.	29%	8%	21%	42%
Measurement of ecosystem services and dependencies	25%	4%	21%	50%
Other*	-	-	-	-

* 'Land use (see SFRD indicators / EU Taxonomy): qualitative data', 'Localization: no data'

Question 51. What are your views on how to capture that unstructured data that may already exist and could already be reported? (n=25)

I believe regulation could incentivise companies to report on data	96%
I believe engagement dialogues with companies are a useful way to help structure the currently unreported biodiversity data companies might have.	88%
I believe innovative and interlinked data systems will provide financial institutions with the needed data	44%
I believe the currently unreported biodiversity data companies might have, is of little added value.	4%

Question 52. [FI's only] In your opinion, do the current regulations provide sufficient incentives and guidance for you to act on biodiversity? (n=21)

	Yes	No	I don't know
It provides sufficient incentives	29%	67%	5%
It provides sufficient guidance	9%	86%	5%

Question 53. [FI's only] On what aspects of biodiversity would you like to get more guidance or incentives? (n=13)

Summary of responses: Respondents would like to see more incentives for companies and financial institutions to report/disclose on biodiversity; as well as incentives to avoid negative impacts on biodiversity (e.g. penalization); incentives to transition to nature positive; and incentives for consumer to consume less products that harm biodiversity. Furthermore, respondents expressed a need for guidance on standardization/ harmonization of measurement and reporting, as well as guidance on target setting, and on the valuation of ecosystem services.

Question 54. [FI's only] Should legal rules for financial institutions specify concrete metrics for usage? (n=21)

Yes, legal rules should require concrete metrics.	33%
Yes, but as a suggestion rather than a requirement.	33%
No, legal rules should neither require nor suggest concrete metrics for usage.	14%
Other*	19%

* 'Legal rules may suggest but also explain the link to science to understand why the proposed metrics are good for tackling biodiversity challenge', 'don't know yet', 'It might perhaps be meaningful, but we do not know enough yet to decide' & 'yes, they should require concrete metrics but with a comply or explain clause'

Question 55. [FI's only] If you have answered 'yes' to the questions above, can you provide examples for the potential metrics that should be specified? (n=9)

Summary of responses: Respondents provided the following examples of potential metrics that should be specified:

- MSA.km^2 / MSA.km² per billion euros invested
- Areas (km^2) of land use change
- Dependencies, risks
- Impacts on ecosysem services
- % of the portfolio that is covered
- Something similar to Green Asset Ratio (taxonomy) but in terms of biodiversity

However, about half of the respondents expressed that legal rules should not define specific metrics, but rather outline principles or standards that reporting should adhere to (e.g. drivers of loss to be included, level of granularity, etc.).

Question 56. In your opinion, which regulation and/or industry developed standard has the strongest influence on financial institutions' practices in the field of biodiversity? (n=25)

As the number of answers differs between asset classes, the table below show absolute numbers (number of respondents that chose each option) rather than percentages.

	Strong influence	Some influence	Little or no influence	I don't know	No answer
EU SFRD	10	8	2	4	1
EU CSRD	9	9	2	5	0
National regulation	9	8	3	3	2
Global Biodiversity Framework of the CBD	6	11	3	5	0
Other*					

* 'EU Biodiversity Taxonomy to come: strong influence'

Question 57. How do you interpret the double materiality principle when it is applied to biodiversity? Which aspects of biodiversity topics would be included? (n=15)

Summary of responses: Most answers included a definition of double materiality as including both biodiversity impacts and dependencies. Some answers referred to the acknowledgement of biodiversity loss as a systemic risk, that can impact any part of the portfolio, and that is aggrevated by some companies' activities. Yet other respondents viewed double materiality as a measurement approach, requiring the quantitative assessment of impacts and dependencies / ecosystem services. Other comments included that each sector has its own double materiality; that double materiality leads to pricing of externalities; and that the relevance of different types os risks differs between types of financial institutions.

Question 58. In your opinion, what is the role of industry initiatives, such as the FfB Pledge & Foundation, TNFD, PBAF or others, in the definition and uptake of biodiversity action? How do they complement regulation? (n=17)

Summary of responses: Respondents felt that the role of these 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 regulation to be made. In order to be effective, industry initiatives should leave space for more systemic responses (e.g. regulation) to emerge, and governments should make sure to put regulation into place and to align it with what is already being done.

Question 59. Do you consider stronger regulatory efforts targeting financial institutions in the field of biodiversity as an additional constraint/risk or as a necessary incentive/opportunity? (n=23)

Both	48%
Necessary incentive/opportunity	44%
Additional constraint/risk	4%
Other*	4%

* 'It might perhaps be meaningful, but we do not know enough yet to decide'

Question 60. In what field of biodiversity do you expect new regulatory initiatives? (n=16)

Summary of responses: Respondents expect new regulatory initiatives related to (1) specific environmental topics (deforestation, climate-biodiversity nexus, invasive species, marine biodiversity, impacts from agriculture), (2) nature conservation (habitat protection, land conservation, cross-border protection) and (3) policy responses towards business and finance (disclosure and reporting, target setting, incentives for investments in natural capital, and limitations to companies' negative impact).

Question 61. What is your view of emerging global biodiversity targets, like nature positive? (n=24)

To me, the emergence of global biodiversity targets is a positive trend.	83%
I do not know	12%
To me, the emergence of global biodiversity targets is a negative trend.	0%
Other*	4%

* 'Too early to tell'

Question 62. Please elaborate. What benefits or risks do you see? (n=16)

Summary of responses: Respondents expressed the following benefits of global biodiversity targets: they create incentives for action; they create a shared language (including standardization of measurement and increased comparability); and they create new business opportunities for companies and financial institutions (related to positive biodiversity impact). Furthermore, the following risks and challenges were mentioned: oversimplification / lack of scientific basis; problem shifting and offsetting; lack of guidance; and the need for a just transition.

Question 63. Assuming the relevant data/tools are available, which steps in the activities of a financial institution do you consider essential for it to become nature positive? (n=16)

Summary of responses: Taking together all the responses, we identified the following steps:
- Preparation phase (developing awareness, internal skills/expertise/methodology)
- Portfolio analysis (starting point analysis, incl. impact, risks and dependencies of financing activities)
- Target setting & prioritization (prioritize worst-performing companies and levers of change, commit to targets, create a roadmap, include ecosystem approach)
- Adapt investment process (positive and negative screening, exclusion policy, positive impact investments)
- Engagement with companies (in order to quality of biodiversity data and to reduce their negative impact)
- Engagement with other stakeholders (incl. shareholders, policy makers, data providers and peers)
- Disclosure (report progress transparantly).

Question 64. What would a robust nature-positive commitment from a financial institution look like (viewed from a process, data and content perspective)? Please formulate key characteristics. (n=15)

Summary of responses: The following commitments were put forward by respondents:
- Commitment to assess impact and dependencies (transparantly & science-based)
- Commitment to 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, 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, transparancy about methodology / scope / coverage / blind spots).

Question 65. In your opinion, which alternative global targets could be formulated? (n=6)

Summary of responses: Respondents mentioned the following alternative global targets: Zero deforestation & conversion (aligned with definitions from the Accountability Framework), Conservation target, Traceability target, Limit production according to planetary boundaries, Pricing of ecosystem services. General comments about alternative targets included the need to have both granular, sector-specific and regional targets, the need to avoid compensation measures, and the usefulness of action-targets in the absence of outcome-targets.

Colophon

Authors

The consultation of which the results are compiled in this document, was developed by the FfB Foundation members Liudmila Strakodonskaya, AXA IM; Alexis Gouin, Federal Finance Gestion; James Kean, Jupiter AM; Hadrien Gaudin, Mirova; and Petra Mannessen, Rabobank. They collaborated on the consultation as members of the Impact Assessment working group.

Finance for Biodiversity Pledge and Foundation

The Finance for Biodiversity Foundation is a non-profit organization aiming to support a call to action and collaboration between financial institutions worldwide on biodiversity. Our community has grown from 26 financial institutions launching the Finance for Biodiversity Pledge last year to 84 signatory financial institutions from 18 countries by the end of 2021.

The Foundation is hosting three active working groups on engagement with companies, impact assessment and public policy advocacy in which members exchange knowledge, share best practices and collaborate on actions, such as this consultation.

Invitation to join

Financial institutions from all continents are warmly encouraged to join the Finance for Biodiversity Pledge and Foundation and to communicate their commitment at the next launching events. Up-to-date information on the upcoming rounds and deadlines can be found on our website. Financial institutions are invited to take part in this collaboration and to help shape the next steps towards reversing nature loss in this decade.

Contact

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