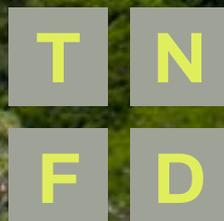




TNFD

PROPOSED TECHNICAL SCOPE

Recommendations
for the TNFD



Bringing together a Taskforce on
Nature-related Financial Disclosures

June 2021

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Introduction and Goal

1.1 Introduction

1. Nature¹ is a broad and complex subject often lacking unified definitions, standards and metrics geared towards facilitating corporate and financial institution risk management. However, across science, public opinion, non-financial companies and financial institutions, there is a rapidly increasing awareness of both the impact and dependency that businesses have on nature, and what “nature” in its considerable diversity represents. It is essential to enable organisations to understand and account for this in their daily decisions.
2. In September 2020, an international financial sector-led Informal Working Group (IWG) was established to plan a Taskforce on Nature-related Financial Disclosures (TNFD). The IWG comprises representatives from non-financial companies, financial institutions, regulators, NGOs and governments, and was brought together to define a recommendation for the technical scope and operating model of a TNFD and launch it in 2021.
3. The TNFD, once launched, will develop a framework for organisations² (non-financial companies and financial institutions) to report and act on evolving nature-related risks. The framework will address both how nature may impact the organisation, but also how the organisation impacts nature. It is our hope that this will create opportunities for the protection and restoration of the natural capital assets upon which our world economy depends, and so better align economic activities with the Sustainable Development Goals (SDGs) and help to ensure respect for internationally-recognised human rights – including the rights of indigenous peoples and local communities that play a key role in safeguarding nature.
4. This framework will serve as a mechanism to help organisations understand, disclose and manage the financial risks and opportunities³ associated with the deteriorating state of nature and a transition to an economy consistent with meeting future nature-related international agreements such as the UN Convention on Biological Diversity (CBD) and the ambitions set out in its forthcoming Post-2020 Global Biodiversity Framework. The need to align with and draw from existing initiatives, frameworks and standards, and not duplicate existing work, will be central to the TNFD’s approach.

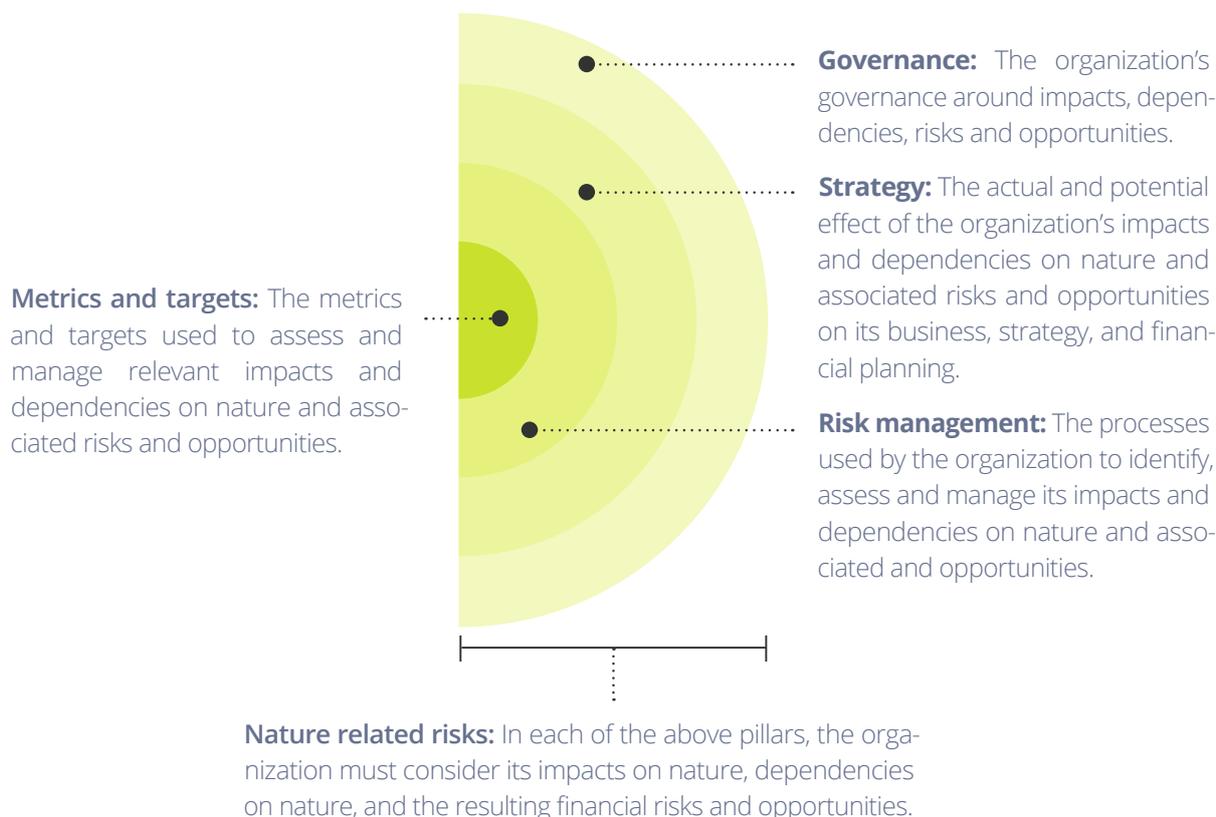
1.2 Goal

5. While progress has been made in many sectors to account for and report on risks associated with nature, this has not resulted in changes that address the currently large scale of nature loss. Many non-financial companies and financial institutions have begun to consider the role of nature in their operations and financing, but there is not yet consensus around a consistent and comprehensive framework to evaluate and manage exposure to the financial risks and opportunities resulting from nature.

The goal of the TNFD is to provide a framework for organisations to report and act on evolving nature-related risks, in order to support a shift in global financial flows away from nature-negative outcomes and toward nature-positive outcomes.

6. The TNFD framework will adopt a four-pillar approach, structured around how organisations operate: governance, strategy, risk management, metrics and targets (see Figure 1 below and the glossary for definitions). This is the same structure used by the Task Force on Climate-related Financial Disclosures' (TCFD) framework. However, in recognition of the particular challenges of measuring nature, broader policy and market developments, and the systemic nature of the risk, the TNFD will incorporate a broader definition of the term "risks and opportunities" into each pillar.
7. We recommend the use of the term "nature-related risks and opportunities" to broadly refer to the risks and opportunities to an organisation posed by the linkages between its activities and nature. In addition to shorter-term financial risks, this includes longer term risks represented by its impact and dependencies on nature. Precise definitions of each of these components are provided in Section 2.2. This means organisations should disclose not just how nature may (positively or negatively) impact the organisation's immediate financial performance ("outside in"), but also how the organisation (positively or negatively) impacts nature ("inside out").

Figure 1 – Core elements of recommended nature-related financial disclosures



Source: IWG TNFD’s Informal Technical Expert Group drawing from TCFD (2017): Recommendations of the Task Force on Climate-related Financial Disclosures

8. This approach to risk is consistent with TCFD’s broad approach to financial materiality that extends beyond immediate risks to consider transition risks through the use, for example, of scenarios. Moreover, it reflects the direction of emerging debate and practice across financial institutions and regulators concerning how environmental risks and opportunities should be managed.⁴ Each organisation’s governance, strategy, risk management, metrics and targets should be designed to mitigate risks to the organisation (“outside in”) including risks associated with its impact on nature (“inside out”). This two-way approach is necessary to robustly identify, assess and manage systemic nature-related risks and, in turn, inform estimations of long-term risks to individual organisations (see definitions and further discussion under Section 2.2).
9. Following from this, the TNFD will broadly seek to align with the two global targets in the CBD’s zero-draft Global Biodiversity Framework of “no net loss by 2030 and net gain by 2050.”⁵ The TNFD framework will provide a structure for organisations to report against the four pillars. The framework will be supported by guidance on how non-financial companies and financial institutions can align their business practices and financing respectively to manage their impacts and dependencies on nature.

10. The TNFD framework will align with and draw from existing initiatives, frameworks and standards relevant to its scope. Building from the important work already done on nature-related risks and opportunities and avoiding the duplication of work is paramount to the TNFD's approach. The TNFD does not intend to develop a standard (either for disclosure or broader activities) itself. The TNFD intends for its outputs to be integrated into existing frameworks and standards in the space, such as those published by GRI, SASB, CDSB and the forthcoming IFRS Sustainability Board (this list is illustrative only).⁶ It will moreover engage with and draw from the work of key bodies and networks, including the Financial Stability Board (FSB) and the Network of Central Banks for Greening the Financial System (NGFS).
11. The Taskforce, when launched, will consider how best to collaborate with relevant standard setters and with whom (see Section 2.3). Following on from this, the TNFD intends for reporting entities to integrate TNFD-aligned reporting within mainstream corporate reporting, as opposed to the creation of a dedicated "TNFD report".
12. When compiling TNFD-aligned reporting material, financial institutions will be able to use data from both corporate disclosure and from third party data sources. Third party data sources could include traditional financial research, ratings and data service providers, remote sensed data, public databases, sources and references such as the UN SEEA framework, the data and metrics used for the UN CBD Post-2020 Global Biodiversity Framework, and those provided by other relevant stakeholders such as NGOs.⁷ As data from corporate disclosure and data from third party data sources will be collected and managed in different ways, the TNFD will need to provide guidance to financial institutions on how to use each for disclosures. This represents an extension of scope relative to the TCFD.

Use, Definition, Outputs and Role

2.1 Uses and users

13. For the financial sector to more robustly account for nature-related risks and opportunities, the TNFD framework must be immediately usable by both non-financial companies and financial institutions,⁸ and continuously improved over time. In order to ensure that disclosures provide “decision useful” information on nature-related risks, the TNFD should identify the key decisions which TNFD-aligned reporting is intended to inform. Below, we provide two examples of how TNFD-aligned reporting could be used.

14. To inform and complement financial statements and the determination of the valuation of companies, credit risk, market risk and business risk. An organisation’s impact or dependency on nature can indicate nature-related financial risks which, while not currently reflected in financial statements, can be relevant financial information for a range of stakeholders. In some cases, these risks may affect (long term) enterprise value⁹, issuers’ credit worthiness and the pricing of their securities, particularly if nature loss and ecosystem degradation continues at current rates. Potential (internal and external) users include:

- Non-financial companies seeking to internally manage financial risks associated with their impacts and dependencies on nature, through core enterprise risk management processes, in order to improve long term resilience and communicate this externally to investors.
- Financial institutions seeking to internally understand their exposure to financial risks through the impacts and dependencies on nature of their (potential) investments, insurance products and loans (and in both companies and projects) and communicate this externally to investors, as well as to determine the appropriate cost of capital for investees/borrowers.
- Research, rating and data providers, and standard setting bodies seeking to use disclosures to incorporate systematically the potential financial materiality of environmental factors in a systematic fashion.
- Financial supervisors and macroprudential authorities seeking to use disclosures to understand and analyse the financial system’s exposure to nature-related financial risks to support policy making.

15. To determine impacts and dependencies¹⁰ on nature. Some reported outputs of the TNFD framework will indicate an organisation's impact and/or dependency on nature, which are not (yet) used to determine enterprise value. Potential (internal and external) users of this reported output include:

- Non-financial companies seeking to internally understand their impacts and dependencies on nature in order to assess internal short, medium and long-term risks and opportunities, and inform external sustainability reporting and investor engagement.
- Financial institutions seeking to internally understand the environmental, social and governmental (ESG) impacts of their financing for external reporting, portfolio management, strategy development and to inform their investment process (whether informally or formally linked to ESG considerations).
- Financial institutions seeking to use disclosures to integrate ESG factors into their governance and stewardship (including shareholder voting, corporate engagement and public policy engagement).
- Public bodies seeking to use disclosures to understand an organisation or sector's impacts and dependencies on nature to support policy making and alignment with external commitments.
- Citizens seeking to use disclosures to understand the impacts of their savings and investments.
- Financial supervisors seeking to use disclosures to understand and analyse financial institutions' exposure to financial risks through impacts and dependencies on nature to support policy making.
- Macroprudential authorities seeking to use disclosures to understand the potential systemic risk posed by aggregate negative impacts and dependencies on nature at the financial system level to support policy making.

2.2 Definition of nature-related risks and opportunities

16. We recommend the term **"nature-related risks and opportunities"** to broadly refer to the risks and opportunities to an organisation posed by the linkages between its activities and nature. In addition to shorter-term financial risks, this includes longer term risks represented by its impacts and dependencies on nature. As a result, this term includes an organisation's impacts on nature, dependencies on nature, as well as the financial risks and opportunities resulting from these impacts and dependencies. Precise definitions of each of these components are provided below.

17. Impacts: We recommend the TNFD adopts the definition of impacts offered by the Science-Based Target Network (SBTN): *"positive or negative contributions of a company or other actor toward the state of nature, including pollution of air, water, soil; fragmentation or disruption*

of ecosystems¹¹ and habitats for [human and] non-human species; alteration of ecosystem regimes.”¹² As noted in the glossary, the definition of “nature” used throughout this document encompasses some (but not all aspects of) natural capital assets, in line with existing initiatives such as the Natural Capital Protocol and the ENCORE tool. For a more complete description of the definition of nature, please see the discussion under Annex 1.

- 18. Dependencies:** We recommend the TNFD adopts the definition of dependencies offered by the SBTN: *“aspects of nature’s contributions to people¹³ [ecosystem services] that a person or organisation relies on to function, including water flow and quality regulation; regulation of hazards like fires and floods; pollination; carbon sequestration.”¹⁴* Note that the impacts of one business or sector on nature can generate significant financial risk for other businesses or sectors through their dependencies on nature. These risks may impact virtually all market participants and sectors of society.
- 19. Nature-related financial risks and opportunities:** All financial risks and opportunities to the organisation as a result of impacts and/or dependencies on nature. This includes but is not limited to financial loss resulting from negative impacts on nature, through regulation, market access or otherwise, and the costs stemming from the loss of certain species, genetic variety and/or key ecosystem services on which the organisation depends. A full analysis of impacts and dependencies can also present opportunities, such as the potential financial benefits resulting from positive impacts on nature or the strengthening of nature on which the organisation depends. The TNFD should give early consideration to developing clear definitions of nature-related financial risks, which at a high level can be classified into two broad categories, which aligns with the approach taken by the TCFD:¹⁵
- **Nature-related physical risks and opportunities:** Physical risks resulting from nature loss can be categorised as event driven (acute), or longer-term shifts (chronic) in the way in which natural ecosystems function – or cease to function. Physical risks may have financial implications for organisations, such as direct damage to assets, the loss of (local and regional) ecosystem services crucial to production processes or employee well-being, and indirect impacts from supply chain disruption. These risks may also have financial and non-financial implications for other parties, such as the loss of global ecosystem services crucial to human well-being. Examples include local and regional financial losses in the agricultural sector from reduced pollination from insects, and global financial losses in the medicine and technology sectors from reduced genetic biodiversity inhibiting research and development. Physical opportunities may also have financial implications for organisations, such as increased resilience of business production processes or demand.
 - **Nature-related transition risks and opportunities:** Transitioning to a nature-positive economy may entail extensive policy, legal, technology, and market changes.¹⁶ Transition risks resulting from nature may occur when businesses suffer financially due to changes that penalize the negative impact they have on nature, including reputation, compliance, and liability or litigation risks. In some cases, this may result in an asset becoming unprofitable and “stranded”. Transition opportunities may occur when businesses benefit financially due to changes in market preferences/demands that reward the

positive impact they have on nature. Economy-wide impacts on nature, commitment frameworks such as the Science-based Target Network (SBTN), and international frameworks such as the CBD's Post-2020 Global Biodiversity Framework will all inform credible future nature-related goals. In turn, these framework's goals will define the changes that may need to be made and hence, the drivers of transition risk. In this way, impacts on nature can create material financial risks in the future even if they are not financially material today. Digitalization has also accelerated citizen engagement in financial decision-making by providing citizens both access to the impact of their investments as well as a platform to voice their demands. If this trend continues, citizen (and hence consumer and employee) responses to an organisation's impact on nature may become more pronounced and immediate, becoming an important driver of transition risk and opportunity.

- 20.** Organisations should follow a scientifically anchored approach to identify which immediate risks as well as dependencies and impacts, with transitions risks in mind, are relevant to their business practices and/or financing activities. Examples include the initial guidance for businesses from SBTN on setting science-based targets for nature and IUCN's recently published guidelines for planning and monitoring corporate biodiversity performance.¹⁷ The guidance divides the five main pressures on nature loss identified by Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) into more specific drivers of nature loss.¹⁸ Organisations could use the SBTN sector-level materiality assessment to identify which of these drivers of nature loss are relevant to their business practices and/or financing activities, and hence which could indicate relevant impacts and dependencies. Organisations may find identifying and assessing financial opportunities useful for many of the purposes internal to the organisation outlined in Section 2.1 but should not be required to include opportunities within their reporting.
- 21. Nature-related systemic risks:** In addition to the financial risks to the organisation itself, impacts and dependencies across the economy can create nature-related systemic risks. Systemic risks can refer to (i) the risk that a critical natural system no longer functions properly; (ii) risks that arise at portfolio-level (rather than at organisation or transaction-level) of a financial institution; and (iii) a risk to system-wide financial stability. Reporting entities should be required to consider (i) and (ii) within their assessment of nature-related risks (as these are subsets of physical and transition risk). Reporting entities should not be required to assess and report on (iii) although the TNFD itself should consider risks to system-wide financial stability. Nature-related risks to system-wide financial stability are of particular importance for macroprudential authorities, typically economy-wide (often global), and lead to significant impacts across all industries simultaneously.¹⁹ The risk that a critical natural system no longer functions properly can refer to “tipping points”, after which ecosystems may collapse beyond the point of repair. See Annex 1 for a more detailed typology and discussion of systemic risks. The TNFD should explore the practicality of assessing and reporting on “tipping points” and associated systemic risks.

2.3 Outputs and role

The TNFD will produce the following outputs:

- 22. Series of definitions concerning nature-related risks and opportunities:** The TNFD will provide clear, precise and scientifically-anchored definitions of impacts, dependencies, and the financial risks and opportunities resulting from these impacts and dependencies, supported by consensus across engaged TNFD stakeholders, and for use by non-financial companies and financial institutions. The definitions provided in the previous section should be considered and adjusted by the Taskforce when launched. In doing so, the TNFD will focus on ensuring alignment of definitions between reporting frameworks and standards.
- 23. Stakeholder landscape:** The TNFD will produce a landscape assessment that demonstrates the position and role of the TNFD relative to other relevant stakeholders. This will include frameworks, standard setters, regulators and relevant initiatives in the nature-finance space such as those advancing target-setting.
- 24. User principles:** The TNFD will produce a set of principles to help users understand how to adapt the TNFD framework to the context of their organisation. Annex II lists relevant reporting principles that the TNFD may choose to draw from, recognising that these will need to be adjusted given the differences in scope of the TNFD relative to existing measurement and reporting frameworks. The Taskforce when launched should assess whether such principles should vary across industries or regions.
- 25. Classification system for nature-related risks and opportunities by industry:** Drawing from the existing evidence and frameworks (including but not limited to work by ENCORE, SASB, WEF and DNB²⁰), the TNFD will provide a typology of impacts on nature, dependencies on nature, and the financial risks and opportunities resulting from these impacts and dependencies, organised by industry.
- 26. Staged framework for disclosure:** The TNFD will define the metrics and information entities will be required to report within TNFD-aligned reporting²¹ The focus will be to identify a finite number of metrics that are meaningful to corporates, financial institutions and broader stakeholders. Requirements will be organised across three progressive stages of sophistication, allowing for flexibility in implementation. This draws from the iterative approaches described in the Natural Capital Protocol and BS 8632 Natural Capital Accounting for Organisations.²² Further detail about the staged framework is provided in Section 3.2.
- 27. Detailed implementation guidance:** The TNFD will produce more detailed technical guidance for reporting entities on how to fulfil the requirements of the framework for example, guidance on metrics, what types of data can be used, example responses, and how to prioritise. As discussed under Section 1.2, for financial institutions this guidance will cover any differences in how data from third party data sources should be used relative to data from corporate disclosure. The TNFD will also provide broader guidance on how to identify, assess and manage nature-related risks and opportunities, and will support other actors to develop frameworks and standards in these areas. In addition to guidance,

the TNFD will support and encourage other organisations to undertake capacity building for reporting entities to assist them in implementing TNFD-aligned reporting. The detailed implementation guidance will also discuss how organisations can use scenario analysis to estimate their nature-related financial risks and opportunities.²³ This will focus on scenarios that define both end-goals and sectoral pathways, to be further defined by the Taskforce.²⁴ As discussed in relation to transition risk above, economy-wide impacts on nature, commitment frameworks such as the SBTN and international frameworks such as the CBD's Post-2020 Global Biodiversity Framework all inform credible future nature-related goals. As a result, the TNFD must adopt and consider the outcomes of the CBD process (among others) as they emerge, and they must be considered in the construction of scenarios. This must also consider the way in which the climate and nature transitions will interact (please see the discussion of climate under Annex 1). The TNFD will support consensus-building between non-financial companies, financial institutions, policy makers and the scientific community on how scenarios should be used. The TNFD will engage third parties undertaking scenario development to ensure these align with TNFD guidance, but not develop scenarios itself.

Beyond the outputs discussed above, the TNFD will also have a role in engaging other actors to accelerate uptake and use of the TNFD framework. Two of the most critical stakeholder groups are listed below as an example, though there are many more:

- 28. Engage with standard-setting bodies:** Alongside promoting voluntary uptake, the TNFD will engage with relevant standard-setting bodies to ensure that, as standards are produced and embedded in mandatory reporting requirements, TNFD-aligned data requirements and reporting are incorporated. As discussed in Section 1.2, the TNFD will seek to input to standards and frameworks that currently exist and will not develop a standard itself.²⁵ Where possible, the TNFD will propose alignment of definitions, rather than the creation of new definitions and typologies, between TNFD and existing reporting frameworks and standards so as to reduce the overall reporting burden. Please see Annex 1 for a fuller discussion of engagement with standard-setting bodies and regulators.
- 29. Engage with data providers:** The TNFD recognises the need to engage with both the data and analytic communities in addition to reporting entities to support the implementation of its framework. The TNFD framework will generate increased demand for use, interpretation and improvement of existing data, as well as new data not currently readily available. The TNFD will engage data providers, platforms and downstream data service providers as well as non-financial corporates in a coordinated fashion to encourage the development of the data infrastructure required to meet its framework. This includes encouraging the development of new data, standardising data, and making data more accessible, which could include encouraging others to develop data platforms and guidance on how to collect and manage relevant data. This necessitates that the TNFD itself should have sufficient technical capacity and knowledge to understand the data requirements and broader data developments needed.

Prioritisation and Progress

3.1 Prioritisation

- 30.** Aligning reporting with the TNFD framework will be a substantial undertaking for reporting entities, many of whom will have limited resources to do so. As stated in Section 2.3, in addition to official guidance, the TNFD will also support the provision of capacity building to assist reporting entities to implement TNFD-aligned reporting. Even with this, in order to maximize the effectiveness of the TNFD framework in achieving the TNFD's goal it will be necessary for reporting entities to start by prioritising certain aspects of the framework. The approach will differ depending on whether the reporting entity is a non-financial company or a financial institution but for both, it is important and expected that reporting entities build their practice over time. In the paragraphs below, we recommend two steps outlining how reporting entities should prioritise disclosure. Please note these recommendations identify the most accessible starting points for reporting entities but do not define what is sufficient for TNFD-aligned reporting (please see further discussion under Section 3.2 and Annex 1). The Taskforce when launched should develop more detailed guidelines on Prioritisation.
- 31. Step 1: Reporting entities should first prioritise disclosure for industries with the most significant impacts and dependencies on nature:** This criterion is relevant to non-financial companies with operations across multiple industries and financial institutions providing finance to multiple industries. To identify which industries should be highest priority, the Taskforce when launched must assess the existing body of work that compares impacts and dependencies across industries and commission additional analysis if necessary. Analyses and frameworks that the TNFD should consider include but are not limited to UNEP-WCMC's "Beyond 'Business as Usual'" report (using the ENCORE tool),²⁶ the SBTN sector-level materiality assessment,²⁷ the SASB materiality map,²⁸ the Trucost and Natural Capital Coalition's Natural Capital Impact Ranking,²⁹ the Allianz Natural Capital Risk Analysis,³⁰ the WEF Nature Risk Rising report,³¹ the EU Business@Biodiversity program,³² the Align and Transparent initiatives,³³ the OECD Due Diligence Guidance for Responsible Business Conduct,³⁴ and the IPBES Methodological Assessment of the Impact and Dependence of Business on Biodiversity and Nature's Contributions to People.³⁵ Complementary to this, it is important to emphasise that impacts and dependencies on nature are locally specific, unlike those for climate, and therefore must be assessed at a granular geospatial scale. While the industries with the greatest impacts on nature are known, the specifics of where

and how those impacts happen is not always clear. Reporters should seek to acquire the most detailed geospatial footprint of their impacts and dependencies. The IUCN Threat Classification Scheme and Red Lists of Ecosystems and Species³⁶ identify the components of nature (species and ecosystems) at the highest risk of extinction or collapse, and the processes that are causing this risk. The Integrated Biodiversity Assessment Tool (IBAT) provides access to geospatial information on these important components including Key Biodiversity Areas.³⁷

- 32.** The TNFD should use industry categories that are consistent with the categories most widely used by financial institutions, financial regulators, indexing and rating companies and market analytics. In the first instance, the TNFD will consider global standards such as MSCI's Global Industry Classification Standard (GICS) and the International Standard Industrial Classification (ISIC). Where appropriate, it may also consider regional standards such as the Statistical Classification of Economic Activities in the European Community (NACE) and the North American Industry Classification System (NAICS).³⁸ The TNFD must assess which (set of) these classification systems it would be appropriate to use, and provide correspondence tables between different classifications. This should also consider the relative merits and drawbacks of market-based classification schemes relative to production-based classification schemes.
- 33. Step 2: Within priority industries, reporting entities should prioritise disclosure for the most significant types of nature-related risks and those for which data of a sufficient quality are readily available:** This criterion is relevant to all non-financial companies and financial institutions. In line with the inclusion of impacts as a leading indicator of long-term financial transition risk, it refers to risks that are both most significant from the perspective of the organisation and from the perspective of nature, which are likely to have geographical implications. The Taskforce when launched must assess the existing body of work that compares different types of impacts, dependencies and risks and commission additional analyses if necessary, in order to provide guidance on how to identify which types should be highest priority. The frameworks mentioned above will also be helpful for this. This should also consider and prioritise types of nature impacts that are associated with "tipping points" after which ecosystems may collapse beyond the point of repair, drawing from the scientific evidence.
- 34.** To inform guidance on how to prioritise based on data availability, the TNFD should commission a rapid assessment of the availability of data for different aspects of nature and in different geographies, looking beyond data provided through existing corporate disclosure frameworks to consider third party data sources. Consideration should be given to the following dimensions of data quality: relevance, resolution (including whether the data is spatially explicit), temporality, frequency of update, geographic coverage, accessibility, comparability, thematic coverage and authoritativeness including traceability (see Annex II for a more complete discussion of data quality). In the case that data are not available for a particular component of nature suspected to be of significant importance by reporting entities based on TNFD guidance, the TNFD should encourage and support non-financial companies, financial institutions and data providers to fill the gap, including helping to

develop estimation methods where direct collection of data is not feasible.

- 35. Financial institutions should start with specific debt and equity investments:** This includes listed debt instruments, listed equities, unlisted project finance and project-related corporate loans. The framework will align with existing work on impacts on nature by the Equator Principles and IFC Performance Standard 6.³⁹ Please note this recommendation allows reporting entities to start from where assessments are likely to be easiest to undertake but does not imply that the debt and equity instruments are sufficient for TNFD-aligned reporting. Please see Section 3.2 and Annex I for further discussion of this.
- 36. Implications for the technical scope of the TNFD:** While each of the above criteria for Prioritisation are recommendations for reporting entities regarding how to progressively implement the TNFD framework, they also have implications for the way in which the TNFD approaches its own work program. In developing the TNFD framework, the TNFD itself should follow the same guidelines for prioritisation. This will ensure the highest chance of achieving its goal given its own limited resources and timeframe.

3.2 Staged framework

- 37.** In addition to the prioritisation guidance above, the TNFD will set out a flexible, staged approach for reporting entities to progressively align with the framework. The staged approach will lay out three stages of requirements which increase in sophistication. The stages balance the practicality of specific requirements given where current reporting practices are against the importance of those requirements to ensure a robust assessment of nature-related risk. In this way, lower stages are relatively less challenging to implement while ensuring the framework is effective in assessing risks and opportunities. This will enable all users to get started and attain a basic level of nature-related risk reporting, and to evolve over time as data, tools and capabilities develop, and standards emerge. This is a deviation in approach relative to the TCFD reflecting the greater level of complexity associated with nature-related risks.
- 38.** The three stages of requirements are defined below:
- The first stage – **“basic”** – defines a core assessment of nature-related risks, impacts and dependencies (as defined in Section 2.2 and geospatially explicit wherever possible) that should be considered robust but with significant room for improvement in terms of coverage and accuracy.
 - The second stage – **“intermediary”** – defines a midway path, providing a more complete assessment of nature-related risks though with limiting simplifications.
 - The third stage – **“comprehensive”** – defines full alignment with the TNFD framework and a complete assessment of nature-related risks. This stage provides the best chance of the TNFD achieving its goal.
- 39.** The stages provide a flexible approach for reporting entities to progressively align with the TNFD framework, self-selecting a starting stage in accordance with their exposure to nature-

related risks and opportunities (both dependencies and impacts) and their ability to evaluate and disclose against the TNFD framework. In this way, the framework allows for flexibility in implementation given the wide range of organisational size, capacity, data quality and so on across reporting entities. Organisations do not need to adhere to one stage across all of their operations and/or investments. For example, an organisation may choose to align with the comprehensive stage for some industries but with the basic stage for others. This allows for prioritisation, as laid out in Section 3.1. Annex 1 makes a series of illustrative recommendations for how requirements could evolve across the three stages as they relate to a range of different domains including sectors, types of risks and types of finance. Given this diversity, the Taskforce will need to carefully consider how to maintain comparability of TNFD-aligned reporting across different stages.

- 40.** 40. The stages represent increasingly sophisticated reporting approaches, but not necessarily improved performance. That is, the higher stages imply greater transparency concerning exposure to and management of nature-related risks, but do not necessarily imply lower exposure to or more effective management of these risks. Different elements under each of the three stages will have different uses and will be relevant to different reporting entities and end-users (see Section 2.1 for more detail).
- 41.** 41. The staged framework implies a progression over time. The TNFD will devise an incentive mechanism to encourage reporting entities to advance to higher stages across more of their reporting over time. The Taskforce when launched will assess what type of incentive mechanism is appropriate. Possibilities include official recognition of reporting entities' stages across their portfolio and peer group comparison tools. The Taskforce will need to consider whether and how reporting entities should make commitments to improve reporting over time and the appropriate timelines to do so given the wide diversity of reporting entities. There is an ambition to reach the "comprehensive" stage across all reporting as this enhanced transparency improves the likelihood of achieving the goal of the TNFD.

3.3 Detailed scope considerations

- 42.** 42. In delivering the scope laid out above, the TNFD will face a number of more granular questions of what does and does not fall within its remit including different types of nature-related risks and opportunities, aspects of nature, and financial flows. Annex 1 summarises these aspects, offering recommendations and presenting options where further discussion is needed.



Annex I: Detailed Scope Considerations

43. The following sections explore more detailed scope considerations across five domains:

- **Nature-related risks and opportunities** – what types of impacts, dependencies, financial risks and opportunities are in scope?
- **Nature** – what aspects of nature are in scope?
- **Climate** – what considerations of climate-related risks and opportunities are in scope?
- **Finance** – what financial flows are in scope?
- **Metrics and data** – what considerations of metrics and data are in scope?

44. Each section is structured as follows:

- **Definition** – a definition of the domain itself.
- **What is recommended to be included in the technical scope of the TNFD?**
- **What additional scope choices must the TNFD make when launched?**
- **Summary of recommended scope and choices for TNFD**
- **Illustration of how requirements for reporting entities could be staged** – an illustrative example of how the requirements of reporting entities relevant to the domain could map against the three stages outlined in Section 3.2. Note that this does not attempt to outline all requirements relevant to this domain and is not a deterministic view on what each stage should entail. The examples simply aim to illustrate how the scope of requirements could differ across the three stages, drawing from the discussion of prioritisation under Section 3.1.

Nature-related risks and opportunities

Definition

45. As defined in Section 2.2, nature-related risks and opportunities refer collectively to positive or negative impacts on nature, dependencies on nature, and financial risks and opportunities resulting from these impacts and dependencies. The “nature-related risks and opportunities”

domain considers which types of impacts, dependencies, financial risks and opportunities are in scope.

What is recommended to be included in the technical scope of the TNFD?

46. Impacts: All relevant impacts are in scope, following the definition in Section 2.2. The TNFD should identify a scientifically anchored approach for organisations to follow in order to identify these. Impacts can be further categorised as follows:

- **Direct impacts:** The direct impacts on nature of the organisation's own operations and not including the impact of its wider value chain.
- **Upstream impacts:** The impacts on nature of the operations of the organisation's upstream value chain. The Taskforce when launched will determine specific boundaries in terms of upstream supplier tiers, however, in most cases as many tiers as possible should be included in scope.
- **Downstream impacts:** The impact on nature of the operations of the organisation's downstream value chain plus use and end of life treatment of sold products.⁴⁰ This reflects the impacts on nature of the entire life cycle of the goods and services produced by the businesses (or funded by the financial institution in question).

47. Dependencies: All relevant dependencies are in scope, following the definition in Section 2.2 and including both direct dependencies and dependencies within the wider value chain (as defined for impacts above). This includes dependencies on both consumptive ecosystem services, the supply of which declines as it is used such as the use of trees for timber, and non-consumptive ecosystem services, the supply of which is unaffected by its use such as the use of trees for carbon sequestration. Note that even when ecosystem services are non-consumptive, their supply can be severely compromised by the impacts described above. The TNFD should identify a scientifically anchored approach for organisations to follow in order to identify these.

48. Nature-related financial risks and opportunities: All relevant financial risks and opportunities are in scope for the TNFD framework, following the definition in Section 2.2, although reporting entities are not expected to include information on opportunities within their disclosures. While the literature on nature-related financial risks and opportunities is still emerging, frameworks offered tend to identify two core channels of transmission – physical risk and opportunity and transition risk and opportunity (the latter of which includes liability and litigation risk) – as discussed in Section 2.2.^{41 42 43 44} Parallels can be drawn to the categorization of climate-related risks by the TCFD (see Box 2 on the next page).

49. Nature-related systemic risk: Systemic risks are in the scope of the TNFD, following the definition in Section 2.2. Reporting entities will not be required to assess, manage or report

The TCFD framework for climate-related risk

The TCFD identifies two types of climate-related risks:

- **Climate-related physical risk:** Physical risks resulting from climate change can be event driven (acute) or longer-term shifts (chronic) in climate patterns. Physical risks may have financial implications for organisations, such as direct damage to assets and indirect impacts from supply chain disruption.
- **Climate-related transition risk:** Transitioning to a lower-carbon economy may entail extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements related to climate change. Depending on the nature, speed, and focus of these changes, transition risks may pose varying levels of financial and reputational risk to organisations.

on system-wide risks to financial stability, but they will be required to assess, manage and report on the risk that a critical natural system no longer functions properly and risks that arise at portfolio-level (rather than at organisation or transaction-level) of a financial institution. The TNFD itself will assess system-wide risks to financial stability, particularly within its engagement with macroprudential authorities (see discussion below under scope choices for more detail). A robust scientific understanding of risks to financial stability is required to map and project both their incidence and impact.⁴⁵ Systemic risks can materialize in several ways as explained below.

50. Physical risks can materialize into systemic risks in the following ways:

- If nature loss (such as reduction in species, variety of species or genetic variety) means nature is no longer able to provide a critical ecosystem service, this can in turn mean nature is unable to deliver many other ecosystem services. This leads to systemic “non-provision” of ecosystem services which in turn leads to systemic disruption of nature. This can ultimately lead to systemic financial risks (simultaneous large losses in several sectors). Examples of systemic physical risks include permafrost melting, critical lakes becoming turbid and dominated by algal blooms, coral reefs becoming bleached, fisheries collapsing owing to overexploitation, tropical forests shifting to savannah-type ecosystems under high fire intensity, and zoonotic disease outbreak.
- If a driver of nature loss leads to a significant reduction in provision of many ecosystem services simultaneously, this can also lead to systemic “non-provision” of nature. This can then lead to systemic financial risks.
- If one ecosystem service is no longer delivered and this results in substantive economic disruption across a wide range of industries and/or geographies, this can lead to systemic financial risks.

51. Transition risks can materialize into systemic risks in the following ways:

- A policy, legal, technological or social response⁴⁶ to nature loss that impacts many sectors in a similar negative way can have a large cumulative negative impact and lead to systemic financial risks.
- Several simultaneous policy, legal, technological or social responses can generate significant impacts across many sectors and lead to systemic financial risks.

52. Time horizon to 2030 and 2050: Across all the above types of risks and opportunities, the TNFD will consider two time horizons, out to 2030 and 2050. These align with the CBD Global Biodiversity Framework with goals and targets to 2030 (as well as the UN Sustainable Development Goals) and the long-term 2050 vision for biodiversity to be “*valued, conserved, restored and wisely used maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.*”⁴⁷ The TNFD will need to consider the mechanism through which these time horizons are adjusted in the future.

What additional scope choices must the TNFD make when launched?

53. Engagement with macroprudential authorities:⁴⁸ In its consideration of systemic risks, the TNFD must consider how individual financial institution-level impacts, dependencies and financial risks aggregate across financial institutions at the geographic and sector level and lead to risks to financial stability. Information should be compiled in a manner deemed useful for macroprudential authorities, cognizant of the degree and nature of the correlation between different financial institution-level risks. There remain options concerning the degree to which the TNFD engages and works with macroprudential authorities to (i) steer the development of its framework to ensure it is usefulness, and (ii) support system-wide stress tests of nature-related risks. The latter could range from simply handing over relevant data to working closely on joint analysis.

54. Scenario development: The TNFD will advise third parties on scenario development (considering nature and climate jointly – please see discussion of climate in Annex 1) but an option remains concerning the degree to which the TNFD acts as a convener to build consensus between non-financial companies, financial institutions, policy makers and the scientific community to support the effective use of scenarios in nature-related risk and opportunity measurement. This could also be leveraged to drive convergence around a relatively small and hence tractable set of scenarios. Any efforts will build from the existing literature and work in this area including but not limited to Leclère et al (2020) and ongoing work by IPBES.⁴⁹

Summary of recommended scope and choices for TNFD

Recommended scope

- All impacts
- All dependencies
- All financial risks and opportunities (physical and transition) associated with those impacts and dependencies
- Consideration of systemic risk (centrally by TNFD and not required from reporting entities)

Additional choices

- The degree to which the TNFD engages with macroprudential authorities
- The degree to which the TNFD convenes scenario development

Illustration of how requirements for reporting entities could be staged

55. The staging here recognises that reporting on dependencies, upstream impacts and downstream impacts will be challenging for reporting entities relative to current practice. It balances this with the consideration that the inclusion of dependencies is essential for a reasonable coverage of nature-related financial risks, and that the most significant impacts on nature tend to occur upstream in the value chain. As a result, it requests dependencies and impacts across the full value chain only for priority types of nature-related risk in priority industries at the basic level, extending to cover other upstream impacts in other industries at intermediary level, and finally all dependencies and impacts in all industries at comprehensive.

Basic

- Dependencies and full value chain impacts (direct + upstream + downstream) for priority types of risk in priority industries (see Section 3.1)
- All financial risks (physical and transition) associated with those impacts and dependencies

Intermediary

- Dependencies and full value chain impacts (direct + upstream + downstream) for priority types of risk in priority industries (see Section 3.1)
- Dependencies + direct impacts + upstream impacts for all other industries

- All financial risks (physical and transition) associated with those impacts and dependencies

Comprehensive

- Dependencies and full value chain impacts (direct + upstream + downstream) for all types of risk in all industries
- All financial risks (physical and transition) associated with those impacts and dependencies

Nature

Definition

56. There are many existing and different definitions of nature in the literature. The “nature” domain considers which elements of nature are included in scope and with which existing definitions, if any, it would like to align.

What is recommended to be included in the technical scope of the TNFD?

57. Living (biotic) nature: Living aspects of nature or biotic factors are in scope, covering habitats, species and genetic resources, from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems. This scope aligns closely with the definition of biodiversity used by CBD which includes diversity within species, between species and of ecosystems.⁵⁰ In reference to the SBTN framework⁵¹, this refers to a (living) subset of the three realms (land, freshwater and ocean) and considers changes in all three states of nature (species, ecosystems and nature’s contribution to people⁵²).

58. Water, soil and air: Consideration of an organisation’s impacts on water, soil and air are in scope.

59. Mineral depletion as it relates to other aspects of nature: An examination of the impact of a reduced supply of quality minerals (including oil and gas) on the health and vitality of living nature, water, soil and air is in scope. This should consider the ability of other aspects of nature to maintain sufficient high-quality provision of ecosystems services necessary to support businesses and society, but should not consider the depletion of minerals either in a general sense or from the perspective of their market value. This broadest scope is generally considered to align with the definition of Natural Capital under the Natural Capital Protocol, however it does not seek to duplicate the work of mineral reserve accounting standards and mandatory disclosure norms for listed extraction companies. This definition aligns with and provides greater specificity relative to the CBD definition of “biodiversity” discussed above.

Summary of recommended scope and choices for TNFD

Recommended scope

- Living (biotic) nature
- Water, soil and air
- Mineral depletion as it relates to other aspects of nature

Additional choices

- N/A

Illustration of how requirements for reporting entities could be staged

60. The staging here reflects the consideration that nature-related risks associated with living nature, water, soil and air are of higher importance than risks associated with mineral depletion. As a result, the stages prioritise coverage of reporting on living nature, water, soil and air in lower stages.

Basic

- Priority types of nature-related risk in priority industries associated with living nature, water, soil and air

Intermediary

- Priority types of nature-related risk in priority industries associated with living nature, water, soil, air and mineral depletion (as it relates to other aspects of nature)

Comprehensive

- All nature-related risks in all industries associated with living nature, water, soil, air and mineral depletion (as it relates to other aspects of nature)

Climate

Definition

61. Climate change is a key driver of nature loss both directly and indirectly through exacerbating the other key drivers: pollution, land use conversion, invasive species and resource exploitation.⁵³ Some climate change mitigation interventions such as bioenergy crops, large-scale infrastructure and extraction of minerals necessary for the low-carbon transition can

also lead to significant negative impacts on nature. Conversely, nature loss is a key driver of climate change as biodiverse ecosystems sequester more carbon than less diverse systems.

- 62.** Synergies between nature and climate arise when interventions address both the nature and climate crises. Nature-positive interventions can have a positive impact on climate change mitigation, primarily through (i) avoidance of GHG emissions arising from land use conversion,⁵⁴ (ii) carbon capture provided by oceans, mangroves, forests, etc.⁵⁵ and (iii) climate regulation services provided by forests.⁵⁶ Nature-based solutions to climate change – including sustainable forestry, agriculture and fisheries – are expected to deliver 37% of the cost-effective mitigation required to meet the Paris climate agreements.⁵⁷ This demonstrates the significant opportunity to leverage synergies between climate change mitigation and nature protection and restoration. Nature-positive interventions also have a significant positive impact on climate change adaptation by strengthening the resilience of economies through their dependencies on nature.⁵⁸
- 63.** Given these important interlinkages, the “climate” domain considers how the TNFD should consider climate-related risks and opportunities, and its interaction with nature-related risks and opportunities, and its links to the work of the TCFD.

What is recommended to be included in the technical scope of the TNFD?

- 64. Consideration of how reporting entities should tackle interactions between climate and nature:** The TNFD should ensure its approach and framework adequately accounts for the impacts of climate change on nature as well as the impacts of nature loss on climate change in order to meet its goal (see Section 1.2). This will require an explicit consideration of the interaction between nature and climate-related risks and opportunities and an understanding of the degree to which current climate and land use risk management and strategy approaches address the nature crisis. This also implies the joint consideration of future nature and climate policy pathways when considering scenarios. This will have important implications for both nature and climate-related transition risks and opportunities. The TNFD should also ensure its approach and framework adequately accounts for the synergies between solutions to the nature and climate crises. In particular, it should adequately capture the joint benefits of nature-based solutions (that meet nature-positive standards such as the IUCN Global NBS Standard⁵⁹) to climate change. Work in this area should draw from existing efforts to identify and standardise these synergies such as under the biodiversity track of the EU Sustainable Finance Platform (including the EU Taxonomy), the Green Belt and Road Initiative (BRI) Development Guidance, and the IUCN Global Nature-based Solution Standard. The TNFD will continue discussions with the TCFD in order to identify how best to operationalise these interactions.

Summary of recommended scope and choices for TNFD

Recommended scope

- Consideration of how reporting entities should tackle interactions between climate and nature
- Consideration of how the TNFD process and TNFD-aligned reporting will interact with the TCFD

Additional choices

- N/A

Illustration of how requirements for reporting entities could be staged

65. The staging here recognises that accounting for the impacts of climate change on nature loss and the impacts of nature loss on climate change represent an additional layer of complexity within reporting. As a result, the basic stage focuses on providing transparency on the degree to which current climate related risk management and strategy approaches address nature-related risks. The intermediary and comprehensive stages provide progressive levels of sophistication both in the consideration of the interaction between climate change and nature loss, and the use of joint climate-nature pathways in determining transition risks. Further detail is provided below.

Basic

- Simple adjustments for nature-based solutions and natural carbon sinks

Intermediary

- Simple adjustments for interactions and transition pathways

Comprehensive

- Comprehensive adjustments for interactions and joint scenario analysis

66. Simple adjustments for nature-based solutions and natural carbon sinks: Following TNFD guidance, simple adjustments are made within reporting to account for the dual climate and nature benefits of nature-based solutions, as well as the dual climate and nature risks posed by the degradation of natural carbon sinks. The TNFD will provide guidance on how organisations should do this. Reporting includes how the organisation is responding to climate-nature interactions.

67. Simple adjustments for interactions and transition pathways: Following TNFD guidance,

simple adjustments are made within reporting for both (i) the impact of climate change on nature loss and (ii) the impact of nature loss on climate change. This should focus on areas expected to lead to the largest changes in aggregate risk or benefits relative to not considering the interaction between climate and nature impacts. The TNFD will help identify which interactions are deemed significant. This will include a generic estimate of the impact of GHG emissions on nature as well as the dual benefits of nature-positive nature-based solutions. Simple adjustments should be made to climate scenarios (if applicable) to approximate future climate transition pathways that are nature-positive. Reporting includes how the organisation is responding to climate-nature interactions.

- 68.** Comprehensive adjustments for interactions and joint scenario analysis: Following TNFD guidance, adjustments are made across all reporting for both (i) the impact of climate change on nature loss and (ii) the impact of nature loss on climate change. In their scenario analysis and assessment of transition risk, reporting entities use jointly determined climate and nature scenarios which explicitly define a 1.5-degree transition pathway that is nature-positive. This does not imply the use of integrated climate and nature modelling frameworks is necessary. It does imply that the future policy and sectoral pathways considered account for changes needed to address both the climate and nature crises. Reporting includes how the organisation is responding to climate-nature interactions.

Finance

Definition

- 69.** The TNFD must decide which types of finance will be in scope including different asset classes, types of financial institutions, and private and public financial flows. While the TCFD explicitly focused only on private finance, and within this, disclosures from publicly listed companies, over time it has organically expanded. In certain geographies, variants of the framework now address disclosures from development banks, multilateral agencies, and state-owned enterprises. The “finance” domain considers which flows of finance are in scope.

What is recommended to be included in the technical scope of the TNFD?

- 70. All aspects of private finance:** All forms of financial flows from private financial institutions are in scope. This includes all types of financial institutions such as banks, insurers and reinsurers, asset managers and asset owners. It includes all asset classes. It includes all recipients of financial flows including publicly listed companies, non-listed companies, and small-to-medium enterprises (SMEs). It includes private market investments into real estate and infrastructure which are not listed on stock exchanges or classified as project finance. It includes insurers’ underwriting portfolios. It does not include private consumption or any financial flows from households or public entities. As discussed in Section 3.1, it is recommended that financial institutions start by examining listed debt instruments, listed equities, unlisted project finance and project-related corporate loans.
- 71. Public finance insofar as it impacts flows of private finance:** There are several forms of public finance that are directly linked with private finance and hence, it is difficult to consider

all aspects of private finance without considering these forms of public finance. The two clearest examples are blended finance and development finance, though there are others. Approaches to estimate the impact on nature (see Section 2.2) of blended and development finance will be relevant to broader forms of public finance such as general government budget operations.

- Blended finance refers to financial instruments that combine private finance with (typically concessional) public finance. This is considered a vital source of funding for projects and activities that generate nature-positive impacts.
- Development finance refers to the portfolios of development finance institutions, also viewed as important sources of nature-related finance.

72. State-owned enterprises: Financial flows from and to state-owned enterprises are also in scope. Consideration should be given to the specificities of these flows, though it is anticipated that these should broadly follow the same framework outlined as for private financial flows.

What additional scope choices must the TNFD make when launched?

73. Sovereign finance: The TNFD has a choice as to whether it considers the financial operations of sovereign governments, municipal and supranational issuers within its scope. This includes taxes, subsidies and other financial instruments. In the context of the TNFD, the risks and opportunities associated with general government spending and sovereign bonds is also relevant. The experience of sovereign finance in measuring the impacts of such financial flows on nature (see Section 2.2) in terms of frameworks, standards, tools and metrics, may be useful for the analysis of private finance. Equally, the experience of development finance in measuring progress against nature-relevant sustainable development goals (SDGs) may also be useful for analysis of private finance.

Summary of recommended scope and choices for TNFD

Recommended scope

- All aspects of private finance
- Public finance insofar as it impacts flows of private finance
- State-owned enterprises

Additional choices

- Whether or not the TNFD develops reporting metrics and guidance for sovereign finance N/A

Illustration of how requirements for reporting entities could be staged

74. There are only two stages for types of financial flows. This reflects the consideration that all aspects of private finance, blended finance and development finance are essential to developing a reasonable assessment of nature-related risks across an investment portfolio, and hence must be considered at the basic stage. The transition from the basic to intermediary stage expands consideration from priority types of nature-related risk and industries to all types of nature-related risk and industries. Note the discussion of asset classes under Section 3.1 recommends specific debt and equity instruments only as a starting point and below a wider set of financial flows is suggested for the full basic stage.

Basic

- All aspects of private finance, including project finance and SMEs, associated with priority types of nature-related risk in priority industries
- Public finance insofar as it impacts flows of private finance, associated with priority types of nature-related risk in priority industries

Intermediary

- All aspects of private finance, including project finance and SMEs, associated with all types of nature-related risk in all industries
- Public finance insofar as it impacts flows of private finance, associated with all types of nature-related risk in all industries

Comprehensive

- N/A

Metrics and data

Definition

75. While considerable nature-relevant data exists, current use by non-financial companies and financial institutions is typically piecemeal, disparate and inconsistent, as that data is not integrated into metrics and measures appropriate for these actors. The level of corporate nature-related data collection and disclosure is therefore low. Moreover, there is no comprehensive platform that standardises and aggregates data and metrics in a way that is relevant for financial institutions and streamlines access. As a result, there is not necessarily a shortfall in nature-relevant data when compared to climate-relevant data, but rather, greater challenges in accessing decision-relevant data. The “metrics and data” domain considers which metrics and data are in scope, requirements for spatial resolution, and the extent to which the TNFD articulates data quality requirements to calculate the metrics required by its framework.

What is recommended to be included in the technical scope of the TNFD?

- 76. Corporate disclosure:** For financial institutions, data and information disclosed directly by non-financial companies can be used to report against the TNFD framework. For non-financial companies, most data and information will need to be collected.
- 77. Third-party data sources:** For financial institutions, data and information from sources other than corporate disclosure can also be used to report against the TNFD framework.
- 78. Required information organised in data stacks:** The data and information that reporting entities will be required to report will be organised in “data stacks”. The first component of each stack will comprise data on physical impacts (e.g. emissions, water pollution etc.) and physical dependencies (e.g. water use, abstraction rates etc.). Subsequent components of the stack will provide the contextual information used to estimate the implications of this impact or dependency, such as asset or project geolocation, the current and future state of natural resources, industrial processes, and the organisation management response (e.g. the availability of water and water recharge rates etc.). The TNFD will define a generic metric stack with generic contextual components, as well as a set of more specific stacks for high priority sectors and/or pressures on nature loss. This will draw from an assessment of what data is most useful for decision making within financial institutions. As discussed throughout the document, this will draw heavily from existing initiatives, frameworks and metrics in the space including but not limited to the impact and dependency pathway examples under the Natural Capital Protocol and the Value Balancing Alliance. To be robust, this data must be spatially explicit and reporting entities must mobilise spatially explicit data as soon as possible.
- 79. Data relevant to state, pressure and response within data stacks:** Metrics and data relevant to the state of nature, pressure on nature, and response to nature are in scope. Please see the earlier section on types of nature-related risks for a discussion on scope across the value chain. The Taskforce when launched will itself define the specific metrics required and coverage. As it does so, the state-pressure-response progression may be helpful:
- **State of nature:** Data relevant to the state of nature include species and habitats, the availability and quality of natural capital assets, ecosystem distribution and threat status, site importance and protection status, and conservation priority. Note these types of data would form (at least some of) the contextual components of the data stack discussed above. Risk determined by the status of nature alone will treat all investments in the same way, regardless of pressure (determined by industrial process) and response (the organisation management efforts), which could potentially result in a mismatch (under or overestimation) of actual impact and dependency.
 - **Pressure on nature:** Data relevant to pressures on nature include the industrial process or corporate activity in question and the relevant impacts or dependencies this process has on nature.

- **Response to nature:** Data relevant to the response to nature include reporting on mitigation measures and biodiversity performance in response to the identified state and pressures on nature. Note these types of data would form (at least some of) the contextual components of the data stack discussed above. Data on organisations' responses (behavior to mitigate negative impact) will enable differentiation on mitigating measures, as well as negative and positive impacts and dependencies, and location indicators.

80. Geospatial standardisation: Given the importance of spatially explicit data for TNFD-aligned reporting and the challenges around spatially explicit data in the climate space, the TNFD should aim to draw from existing frameworks and guidance to standardise units for geolocation (longitude and latitude) and define a framework for different scales of spatial resolution. This will help ensure easy management and verification of data as well as comparability of reporting.

81. Data quality and auditing: Consideration of data quality is in scope. This includes guidance to reporting entities on how to evaluate, the acceptability of, and a strategy to improve access to, the following dimensions of data quality: relevance, resolution, temporality, frequency of update, geographic coverage, accessibility, comparability, thematic coverage and authoritativeness. This is particularly important given the low number of peer-reviewed datasets available and relevant to nature-related risks and opportunities. Improving the availability of spatially explicit data should be a priority to ensure TNFD-aligned reporting is robust. Please see Annex II for a more complete discussion of data quality. The TNFD when launched will define what audit requirements if any will be associated with TNFD-aligned reporting and over what timeline, drawing from the experiences of the TCFD.

What additional scope choices must the TNFD make when launched?

82. Articulate the requirements of a digital ecosystem of nature-relevant data: Building from the discussion of engagement with data platforms under Section 2.3, there are options concerning the degree to which the TNFD actively supports the development of a digital ecosystem of nature-relevant data and access to relevant metrics. The TNFD recognises the need to connect, interpret and provide access to nature-relevant data and metrics in a format that is usable for financial institutions. The TNFD can articulate the required decision-relevant data and metrics and the required decision-grade data characteristics (see Annex II for an explanation of these terms), which need to be connected and accessible. Its outputs should deliberately align with an efficient, transparent and sustainable monitoring and reporting system on nature. Options for supporting the development of the wider ecosystem may include engaging actors in the data community, supporting data-focused partnerships, providing a platform for collaboration, and explicitly giving a mandate to a (set of) organisation(s). Any action from the TNFD will build on and support others already working in the nature-related data space.

Summary of recommended scope and choices for TNFD

Recommended scope

- Allow financial institutions to use both data from corporate disclosure as well as third party data sources
- Organize the information required from reporting entities in “data stacks” including data on the state of nature, the pressure on nature, and the response to nature
- Offer guidance to standardise geospatial data
- Consider the quality of the data used for TNFD-aligned reporting

Additional choices

- The degree to which the TNFD actively supports the development of a digital ecosystem of nature-relevant data

Illustration of how requirements for reporting entities could be staged

83. The staging here reflects the fact that the main differentiating factor in the level of nature-related risk that non-financial companies face will be determined by their management response to nature. Hence, consideration of data on state of nature, pressure to nature, and response to nature is essential at the basic stage. In addition, it is essential that reporting entities provide at least an initial assessment of the quality of the data they use to support their report. The intermediary stage expands coverage from priority types of nature-related risk and industries to all types of nature-related risk and industries. The comprehensive stage requires reporting entities to consider how they improve their access to quality data in the future.

Basic

- Data on state of nature, pressure to nature, and response to nature, for priority types of nature-related risk in priority industries
- An assessment of data quality

Intermediary

- Data on state of nature, pressure to nature, and response to nature, for all types of nature-related risk in all industries
- An assessment of data quality

Comprehensive

- Data on state of nature, pressure to nature, and response to nature, for all types of nature-related risk in all industries
- An assessment of data quality and strategy to improve access to quality data



Annex II: Characteristics of Decision-Grade Data?

- 84.** In thinking about the characteristics of decision-grade data, reference must be made back to the decision in question, but there are likely to be general characteristics which are common across all types of decision. When considering data quality, the TNFD might consider issues of:
- 85. Relevance:** Formal recognition as appropriate to the decision context – for example, as part of the monitoring frameworks of multilateral environmental agreements or national policies – including the mechanism of recognition and the role of third parties in formal recognition of specific datasets.
- 86. Resolution (spatial and non-spatial) and scalability:** Fit for use at the right scale for the decision. A balance may be struck between the resolution and the complexity of processing the data. For example, sourcing may not be better informed by <1km resolution geospatial data, where sub-regional data may be easier and more straightforward to process.
- 87. Temporality:** Time series data can support trend analyses or real-time decision-making but must reflect the appropriate time scales for the indicator of interest (including forward-looking analysis where relevant), but also the feasibility of collecting data using current or emerging technologies and collection techniques (e.g. species abundance).
- 88. Frequency of update:** Regularly updated or updated at appropriate timescales for the subject matter.
- 89. Geographic coverage:** including globally consistent and comprehensive. Data should be collected in a fashion and using metrics that permit aggregation and dis-aggregation to allow for attribution across portfolios, corporate footprints etc.
- 90. Accessibility:** Decision-grade data must be easily accessible online in different formats (e.g. direct downloads, web services, APIs), including considerations of costs where not open and freely accessible, as well as available in multiple languages.
- 91. Comparability:** Decision-grade data must facilitate comparison through interoperable formats and consistent methods that enable integration of financial, socio-economic and ecological data across sectors to inform outcomes. Data should be comparable across and within industries.
- 92. Thematic coverage:** Addressing specific components of nature (encompassing species, ecosystems and contributions to people), pressures on nature (point and non-point source,

direct and indirect) and responses (private, government, societal).

93. Authoritativeness including traceability: If data have been through a peer-review process, whether published in the scientific literature, reviewed by peers, or a mandated process (e.g. CBD), and are recognised as accurate and authoritative. In order to assess authoritativeness, the data must also be traceable. Data is traceable if the original data source is clear as well as the “data trail” which lays out how the data has been translated by different users to arrive in its final format.⁶⁰ Ideally, TNFD-aligned reporting would be audited by a third party to verify its authoritativeness. The Taskforce when launched will explore this in further detail and assess whether and how it should be done.



Annex III: Relevant Reporting Principles

94. The TCFD published the following principles for effective disclosure as general guidance:⁶¹

- Disclosure should represent relevant information.
- Disclosure should be specific and complete.
- Disclosure should be clear, balanced, and understandable.
- Disclosure should be consistent over time.
- Disclosure should be comparable among companies within a sector, industry, or portfolio.
- Disclosure should be reliable, verifiable, and objective.
- Disclosure should be provided on a timely basis.

95. The Aligning Biodiversity Measures for Business initiative led by UNEP-WCMC is a collaboration of over 20 organisations with expertise in corporate biodiversity measurement approaches. It aims to form a common view among key stakeholders on the measurement and disclosure of corporate biodiversity impacts and dependencies for business decision-making and government policy. It published the following common ground principles for biodiversity measurement approaches:⁶²

- **Relevant:** Approaches, metrics and data should be appropriate for the type of application they aim to support, and relevant to the businesses' scope and boundaries.
- **Transparent:** Approaches and methodologies should be transparent on limitations and how the approach works; transparent on scope, boundaries and baselines; disclosing any relevant assumptions, limitations, uncertainties and references to data collection methodologies.
- **Consistent:** Approaches and data should be consistent in outcomes; applying similar scope, boundaries and baselines definitions to similar business applications; selecting metrics that allow for meaningful comparisons over time and between products/sites etc.
- **Rigorous:** Approaches should achieve suitable accuracy to enable users to make decisions with reasonable assurance on the quality of information; based on the best

available data selected against established criteria; using metrics that are technically robust or clearly state the levels of accuracy they confer.

- **Complete:** Approaches should be designed to address all issues, impacts and performance relevant to the business application; based on broadly accepted metrics for which key gaps and uncertainties and their implications for decision making are clear

96. Other relevant reporting principles should also be considered by the Taskforce including but not limited to those from the Climate Disclosure Standards Board (CDSB), BS 8632 Natural Capital Accounting for Organisations, and the Natural Capital Protocol.⁶³



Annex IV: Glossary of definitions

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.⁶⁴

Ecosystem: A dynamic complex of plant, animal and microorganism communities and the non-living environment, interacting as a functional unit.⁶⁵

Ecosystem service: The benefits people obtain from ecosystems.⁶⁶

Enterprise value: Market capitalization plus net debt, where market capitalization is determined by the market via the company's share price, which is in turn informed by its financial and/or operational performance. Enterprise value is therefore influenced by factors such as revenue, costs, assets, liabilities, cost of capital, and risk profile.⁶⁷

Financial institutions: A broad term which encompasses banks, insurers and other financial services (including asset managers).

Governance (four pillar approach): The organisation's governance around impacts, dependencies, risks and opportunities.

Metrics and targets (four pillar approach): The metrics and targets used to assess and manage relevant impacts and dependencies on nature and associated risks and opportunities.

Organisations: Throughout this document, the term "organisation" is used to capture non-financial companies and financial institutions.

Nature: The global natural ecosystem in its entirety. This encompasses both the stock of natural capital assets as well as the way in which they interact with each other. In this sense, biodiversity is a characteristic of nature, insofar as it refers to the presence of diversity across the natural ecosystem.⁶⁸

Nature-related risks and opportunities: Within this document, the term "nature-related risks

and opportunities” is used to broadly refer to the risks and opportunities to an organisation posed by the linkages between its activities and nature. In addition to shorter-term financial risks, this includes longer term risks represented by its impact and dependencies on nature. As a result, this term includes an organisation’s impacts on nature, dependencies on nature, as well as the financial risks and opportunities resulting from these impacts and dependencies.

Nature-related systemic risk: Systemic risks can refer to (i) the risk that a critical natural system breaks down and no longer functions properly, or (ii) a risk to system-wide financial stability; or (iii) risks that arise at portfolio-level (rather than at organisation or transaction-level) of a financial institution. In many cases, (i) can lead to (ii) as systemic risks are typically economy-wide (often global) and lead to significant impacts across all industries simultaneously.

Natural capital: Natural capital is all renewable and non-renewable environmental resources and processes that provide goods or services that support the past, current or future prosperity of an organisation. It includes air, water, land, minerals and forests, biodiversity and ecosystem health.⁶⁹

Reporting entities: Organisations (non-financial companies or financial institutions) that publish reporting that states it is aligned with the TNFD.

Risk management (four pillar approach): The processes used by the organisation to identify, assess and manage its impacts and dependencies on nature and associated risks and opportunities.

Strategy (four pillar approach): The actual and potential effect of the organisation’s impacts and dependencies on nature and associated risks and opportunities on its business, strategy, and financial planning.

Tipping points: “Tipping points mark the shift between contrasting system states that occur when external conditions reach thresholds that trigger an accelerating transition to a contrasting new state... For example, clear lakes become turbid and dominated by algal blooms, coral reefs are overgrown by macroalgae, fisheries collapse owing to overexploitation, and tropical forests shift to savannah-type ecosystems under high fire intensity.”⁷⁰



About This Document

This document has been prepared by an Informal Technical Expert Group (ITEG) in support of the Informal Working Group (IWG) for TNFD. It was developed over nine months through a process of deep-dive discussions and consultations with IWG members and other stakeholders, and sets out the recommendations for what should be included in the technical scope of the TNFD. The content was also drawn from technical contributions by knowledge partners, literature reviews, and the expertise of ITEG members, though it does not necessarily represent in entirety or in part the comprehensive views of any individual or institution consulted.

The main body of the report includes the most pertinent dimensions of scope for the TNFD to consider, while the Annexes provide more granular detail.

Comments and suggestions can be sent to the ITEG Co-Chairs via Eliza Ader (e.ader@globalcanopy.org).

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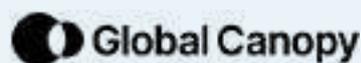
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Catalyzed by the founding partners:



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Note:

The views expressed in the Proposed Technical Scope Recommendations for the TNFD paper are of the members of the Informal Technical Expert Group for the Taskforce on Nature-related Financial Disclosures (ITEG TNFD) and the Informal Working Group for the Taskforce on Nature-related Financial Disclosures (IWG TNFD), supported by the Partner Group. The use of logos and/or the feedback provided by these organisations does not represent an endorsement or investment recommendation and does not reflect any policies or positions of the organisations.

End notes

1. Please see the glossary for a definition of “nature” used throughout this report.
2. “Organizations” encompasses both non-financial companies and financial institutions.
3. The term “financial risks and opportunities” refers to both risks and opportunities that are financially material in the short term, as well as those that may be translate to material long term transition risks.
4. There has been much discussion of how to incorporate an organization’s impact on the environment in debate around environmental risks and opportunities including financial institutions such as DWS; standard-setting bodies such as SASB; intergovernmental organizations such as the OECD and European Commission; and central banks and financial supervisors including the Network for Greening the Financial System (NGFS)
5. CBD: BIODIVERSITY AND THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT and 2050 Vision
6. GRI: Global Reporting Initiative; SASB: Sustainability Accounting Standards Board; CDSB: Climate Disclosure Standards Board; IFRS: International Financial Reporting Standards.
7. Examples of data service providers include S&P Global and Bloomberg. Examples of public accounts include publicly held company records, land registries and other datasets.
8. “Financial institutions” is used broadly and encompasses banks, insurers and other financial services (including asset managers).
9. “Market capitalisation plus net debt, where market capitalisation is determined by the market via the company’s share price, which is in turn informed by its financial and/or operational performance. Enterprise value is therefore influenced by factors such as revenue, costs, assets, liabilities, cost of capital, and risk profile.” CDP, CDSB, GRI, IIRC, and SASB (2020): Reporting on enterprise value
10. Please see Section 2.2 for a definition of impacts and dependencies on nature.
11. The term “ecosystem” refers to a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit. CBD (2020): Use of Terms.
12. SCIENCE-BASED TARGETS for NATURE (2020): Initial Guidance for Business
13. IPBES defines “nature’s contribution to people” (NCP) as “all the contributions, both positive and negative, of living nature (i.e. diversity of organisms, ecosystems, and their associated ecological and evolutionary processes) to the quality of life for people. Beneficial contributions from nature include such things as food provision, water purification, flood control, and artistic inspiration, whereas detrimental contributions include disease transmission and predation that damages people or their assets. Many NCP may be perceived as benefits or detriments depending on the cultural, temporal or spatial context.”
14. SCIENCE-BASED TARGETS for NATURE (2020): Initial Guidance for Business
15. TCFD (2017): Recommendations of the Task Force on Climate-related Financial Disclosures
16. The normative framing of the TNFD’s work, including but not limited to the definition of “nature-positive”, will be informed by inter-governmental and international agreements.
17. SCIENCE-BASED TARGETS for NATURE (2020): Initial Guidance for Business; IUCN (2021): Guidelines for planning and monitoring corporate biodiversity performance
18. The five IPBES pressures on nature loss are (i) land/sea/water use change; (ii) resource exploitation; (iii) climate change; (iv) pollution; and (v) invasives and other.

19. Please see the discussion of systemic risk in Annex I for a description of how these risks can materialize.
20. <https://encore.naturalcapital.finance/en>; <https://www.sasb.org/standards-overview/materiality-map/>; WEF (2020): Nature Risk Rising; DNB (2020): Indebted to nature, Exploring biodiversity risks for the Dutch financial sector.
21. While the specific requirements of the TNFD framework will be determined by the Taskforce after its launch, examples of such requirements could include answers to the following questions: (i) How is nature dealt with at Board level? (ii) What governance or process is in place to manage nature-related impacts, dependencies, risks and opportunities? (iii) What policies exist to manage nature-related impacts, dependencies, risks and opportunities? (iv) What strategic or operational plan exists to manage nature-related impacts, dependencies, risks and opportunities?
22. <https://www.bsigroup.com/en-GB/our-services/events/webinars/2020/bs-8632/> ; <https://capitalscoalition.org/capitals-approach/natural-capital-protocol/>
23. Broader guidance on how to manage nature-related financial risks and opportunities is likely to offer practical actions that non-financial companies and financial institutions can take to reduce their risks and leverage opportunities.
24. An end-goal sets a destination point for the scenario, typically defined by a small set of metrics. A sectoral pathway describes the transformation over time of a given sector, usually linked to changes in production processes and technology adoption. In the context of nature-related scenarios, the latter will consider transformation across the full value chain.
25. It will also draw from the wider ecosystem of relevant frameworks and standards including but not limited to ISO standards, The Natural Capital Protocol, The Economics of Ecosystems and Biodiversity (TEEB), the British Standards Institute, and the Global Footprint Network.
26. UN Environment Programme, UNEP Finance Initiative and Global Canopy (2020): Beyond 'Business as Usual': Biodiversity targets and finance. Managing biodiversity risks across business sectors.
27. SCIENCE-BASED TARGETS for NATURE (2020): Initial Guidance for Business
28. <https://www.sasb.org/standards-overview/materiality-map/>
29. Trucost (2013): NATURAL CAPITAL AT RISK: THE TOP 100 EXTERNALITIES OF BUSINESS
30. Allianz (2018): MEASURING AND MANAGING ENVIRONMENTAL EXPOSURE - A BUSINESS SECTOR ANALYSIS OF NATURAL CAPITAL RISK
31. WEF (2020): Nature Risk Rising
32. EU Business @ Biodiversity Platform (2021): ASSESSMENT OF BIODIVERSITY MEASUREMENT APPROACHES FOR BUSINESSES AND FINANCIAL INSTITUTIONS
33. https://ec.europa.eu/environment/biodiversity/business/align/index_en.htm; <https://capitalscoalition.org/project/transparent/>
34. OECD (2018): OECD DUE DILIGENCE GUIDANCE FOR RESPONSIBLE BUSINESS CONDUCT
35. <https://ipbes.net/business-impact>
36. This is a product of (i) their current health or abundance and (ii) the impacts to which they are likely to be subject. IUCN (2020): Threats Classification Scheme (Version 3.2)
37. <http://www.keybiodiversityareas.org/>
38. <https://www.msci.com/gics>; https://unstats.un.org/unsd/publication/seriesm/seriesm_4rev4e.pdf; https://ec.europa.eu/competition/mergers/cases/index/nace_all.html; <https://www.census.gov/eos/www/naics/>
39. <https://equator-principles.com/>
40. https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/performance-standards/ps6
41. Impacts from use and end of life treatment may be best estimated through a simple adjustment factor rather than a granular bottom-up analysis.

42. World Economic Forum (2020): Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy
43. DNB (2020): Indebted to nature, Exploring biodiversity risks for the Dutch financial sector
44. Global Canopy and Vivid Economics (2020): The Case for a Task Force on Nature-related Financial Disclosures
45. WWF Switzerland/PWC Switzerland (2020): Nature is too big to fail Biodiversity: the next frontier in financial risk management
46. It is not the responsibility of companies to manage risks to system-wide financial stability, but its evaluation will be relevant to regulators. This will, in turn, inform the regulatory and policy response to nature loss and hence, guidance for companies in how to identify longer term transition risk.
47. A social response here refers to a change in social norms as a result of greater (awareness of) nature loss.
48. CBD: BIODIVERSITY AND THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT and 2050 Vision
49. Macroprudential authorities can be central banks or separate monetary or fiscal authorities, depending on the jurisdiction in question. Examples include the European Systemic Risk Board and the Monetary Authority of Singapore. Macroprudential supervisory authority can also be split among several different institutions.
50. Leclère et al (2020): Bending the curve of terrestrial biodiversity needs an integrated strategy
51. CBD (2020): Article 2. Use of Terms
52. SCIENCE-BASED TARGETS for NATURE (2020): Initial Guidance for Business
53. <https://ipbes.net/glossary/natures-contributions-people>
54. See, for example, the WWF (2020): Living Planet Report 2020Living Planet Report 2020
55. See IPCC special report on Climate Change and Land Use
56. See, for example, the paper "Global trends in carbon sinks and their relationships with CO2 and temperature"
57. See, for example: "Forests, atmospheric water and an uncertain future: the new biology of the global water cycle"
58. Bronson et al (2017): Natural Climate Solutions
59. See Table 1, pg. 6 of The Global Commission on Adaptation (2019): THE ROLE OF THE NATURAL ENVIRONMENT IN ADAPTATION
60. <https://www.iucn.org/theme/nature-based-solutions/resources/iucn-global-standard-nbs>
61. <https://docs.wbcsd.org/2019/06/WBCSD-Internal-Control-Guidance.pdf>
62. TCFD (2017): Recommendations of the Task Force on Climate-related Financial Disclosures
63. ABMB (2019): Technical Workshop on Aligning Biodiversity Measurement Approaches for Business
64. <https://www.cdsb.net/what-we-do/reporting-guidance>; <https://standardsdevelopment.bsigroup.com/projects/9020-04869#/section>; https://capitalscoalition.org/capitals-approach/natural-capital-protocol/?fwp_filter_tabs=training_material
65. CBD (2020): Use of Terms.
66. CBD (2020): Use of Terms.
67. Millennium Ecosystem Assessment (2005)
68. CDP, CDSB, GRI, IIRC, and SASB (2020): Reporting on enterprise value
69. Global Canopy and Vivid Economics (2020): The Case for a Task Force on Nature-related Financial Disclosures
70. IIRC (2013): The International Integrated Reporting Framework
71. Dakos et al (2019): Ecosystem tipping points in an evolving world