SUPPLEMENTAL GUIDANCE

Nature in Net-zero Transition Plans

WORKSTREAM CONSULTATION PAPER

OCTOBER 2024

GFANZ

Glasgow Financial Alliance for Net Zero

Acknowledgements

This consultation paper further describes the role that nature plays in net-zero implementation through net-zero transition plans that the Glasgow Financial Alliance for Net Zero (GFANZ) work articulated in 2022.

This consultation paper was developed with support from the Nature in Net-Zero Transition Planning Workstream of GFANZ (the "nature workstream"). Additionally, the consultation paper was informed by a technical review of other relevant frameworks developed by leading initiatives in use by market participants, and interviews with experts and practitioners. We would like to thank all those who provided input.

This does not imply that every finding included herein is endorsed by every party, sector-specific alliance, or sector-specific alliance participating firm, including the firms represented on the Principals Group, nor does it necessarily represent the full views of any individual workstream participant.

Members of the workstream include representatives from:

Aema Groupe
Aviva Plc (Workstream co-chair)
Bank of America
Barnett Waddingham
BBVA
CDP (Advisor)
Generation Investment Management (Workstream co-chair)
HSBC
Hymans Robertson
IIGCC (Advisor)
Impax Asset Management
Itaú
Lombard Odier Asset Management
Metrics Credit Partners
Mitsubishi UFJ Trust and Banking Corporation
Montanaro Asset Management
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Nordea
PRI (Advisor)
Produbanco
PwC
Responsible Alpha
Swedbank
The Dai-ichi Life Insurance Company, Limited
The Norinchukin Bank
UBS
UNEP FI (Advisor)
United Overseas Bank
World Resources Institute (Advisor)
WWF (Advisor)

GFANZ would like to thank all those who have contributed to our work and development of this consultation paper in support of the net-zero climate transition.

About GFANZ

The Glasgow Financial Alliance for Net Zero (GFANZ) is a global coalition of financial sector net-zero alliances working together to support the world's transition to net-zero emissions by 2050. Through the net-zero alliances, GFANZ has united over 700 institutions across the financial sector, including banks, asset owners, asset managers, financial service providers, and investment consultants, spanning 50 jurisdictions and representing 40% of global private financial assets. To help unlock transition investment in developing economies, GFANZ regional networks work to support capital mobilization, expand participation, and reflect the diverse needs of financial institutions around the world.

Important notice

This consultation paper aims to provide voluntary, supplemental guidance regarding the use of nature-related mitigation actions in net-zero transition plans and should be read in conjunction with the GFANZ Financial Institution Net-zero Transition Plans report (November 2022). For the avoidance of doubt, nothing express or implied in this consultation paper is intended to prescribe a specific course of action. This consultation paper does not create legal relations or legally enforceable obligations of any kind. Each GFANZ sector-specific alliance participant unilaterally determines whether, and the extent to which, it adopts any of the potential courses of action described in this consultation paper.

The information in this consultation paper does not purport to be comprehensive and does not render any form of legal, tax, investment, accounting, financial, or other advice. It has not been independently verified by any person. Nothing in this consultation paper constitutes an offer or a solicitation of an offer to buy or sell any securities or financial instruments and does not constitute investment advice or a recommendation by any person of an investment or divestment strategy or whether or not to "buy", "sell", or "hold" any security or other financial instrument.

This consultation paper is for informational purposes only and the information contained herein was prepared as of the date of publication.

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Members of the financial sector-specific net-zero alliances comprising GFANZ have individually made commitments consistent with the high standards of their respective alliances and are not automatically expected to refer to the information and considerations and adopt the principles and frameworks communicated within this consultation paper, although we expect all alliance participants to increase their ambition over time, so long as it is consistent with their fiduciary and contractual duties and applicable laws and regulations, including securities, banking, and antitrust laws.

How to read this paper

This paper was produced by the GFANZ workstream on Nature in Net-zero Transition Plans for consultation on the use of nature-related climate change mitigation actions in net-zero implementation and specifically in net-zero transition plans. It does not prescribe a specific course of action but supplements the guidance provided in the GFANZ Financial Institution Net-zero Transition Plans report (November 2022). It also provides considerations to help those financial institutions that are mobilizing capital and supporting initiatives to scale the four key transition financing strategies.

Sector-specific alliance member firms include many different types of financial institutions — banks, insurers, asset owners, asset managers, financial service providers, investment consultants, and venture capital investors. This consultation paper recognizes that financial institutions operate in different contractual and regulatory environments that may impact their individual approaches to the voluntary guidance outlined herein. The GFANZ Secretariat acknowledges that net-zero transition plans will vary by institution and jurisdiction and will depend on the individual characteristics of financial institutions, including size, business model, sector coverage, fiduciary duty toward their clients, and other factors. The consultation paper may inform financial institutions' independent finance decision-making process in accordance with their contractual duties and the regulatory environment in which they operate.

The GFANZ Secretariat encourages financial institutions to use the information in this paper and other GFANZ reports, where appropriate, alongside the guidance produced by their relevant net-zero alliance(s). Financial institutions should look to their net-zero alliance when considering how this information may support the implementation of their net-zero commitment, inform their institution-specific priorities and their net-zero transition plans, consistent with client mandates, where applicable.

Voluntary information: This consultation paper presents voluntary, non-binding supplemental information for financial institutions to consider when developing and implementing their own net-zero transition plans. Financial institutions are encouraged to use this information in conjunction with the voluntary recommendations and guidance in the GFANZ Financial Institution Net-zero Transition Plans report, but not superseding jurisdictional requirements on transition finance or related disclosure requirements, or contractual requirements, including mandates with clients. Some types of financial institutions may also have unique legal or regulatory constraints that may differ by jurisdiction and may impact the extent to which individual elements of this proposed guidance can be considered.

Pan-sector approach: This proposed voluntary guidance presents a pan-sector approach to transition planning. The principles behind the guidance aim to apply to institutions across the financial sector and act as a reference for regulators and policymakers, but relevance of the information may vary for different types of institutions and stakeholders. The information does not go into significant depth for individual business areas, product lines, or asset classes. This consultation paper is principles-based so that it can be interpreted and applied at the discretion of individual financial institutions, considering their own processes and policies. Financial institutions are encouraged to consider this voluntary guidance alongside the guidance produced by sector-specific net-zero alliances, taxonomies, and other organizations, as appropriate.

Unique roles and application for different financial institutions: Due to the pan-sector nature of the proposed guidance in this consultation paper, it may not reflect the different roles of financial institutions within the industry. Each financial institution is encouraged to review the information based on considerations such as its business model, portfolio exposure, relationships with clients and portfolio companies, choice of transition financing strategies, and the contractual and regulatory environment within which it operates. The information herein should be considered by financial institutions as a resource that may be referenced as part of their net-zero transition planning efforts, not as a specific course of action. Other financial institutions may find this paper useful whether they have yet to publicly commit to net zero or whether they have net-zero targets beyond 2050. These institutions are encouraged to prioritize near-term action and ground their analysis in climate science and pathways aligned to 1.5 degrees C.

Focus on development and implementation: This consultation paper aims to provide an approach for developing and implementing nature-related climate change mitigation actions in net-zero transition plans, rather than specific guidance on disclosure. While GFANZ encourages transparent disclosure of transition plans, this paper does not provide detailed guidance on disclosure. Each financial institution should determine specific content, location, and frequency for disclosing relevant information, consistent with the guidance of its respective sector-specific alliances, business confidentiality, and jurisdictional requirements, if any.

Living document: The GFANZ Secretariat acknowledges that supporting pathways, data, tools, and methodologies may be nascent or exploratory and may not yet be available for all regions, sectors, and situations, and that policy, regulation, technology, and science are evolving, often at a rapid pace. As financial institutions develop and execute net-zero transition plans, it is expected that the necessary tools, methodologies, and datasets will further develop.

Nature in Net-zero Transition Plans — Report infographic

Sinks and sources

Tools to achieve net zero and transition financing opportunities: reduction of nature emissions and support of nature sinks.

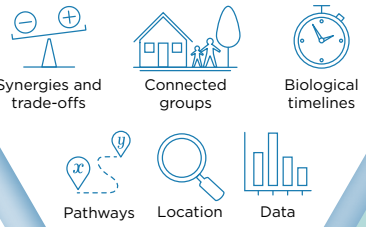
22%+ of global emissions from management of nature

37% of climate mitigation needs by 2030 can be provided by nature sinks

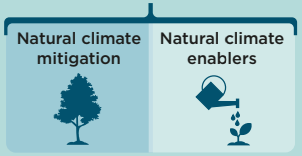
THERE IS NO NET-ZERO WITHOUT NATURE

Nature is different

Nature-related levers, distinct from energy-based mitigation, may have unique aspects in NZTPs.



Nature-related levers

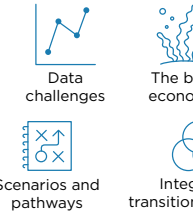


Nature-related levers: the umbrella term for both.

Natural climate mitigation: place-based activities that reduce or avoid GHGs and/or increase nature sinks

Natural climate enablers: non-place-based activities that support or input into natural climate migitation

Ongoing considerations



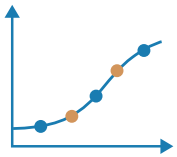
Work on these topics is rapidly progressing and will be relevant to NZTPs.

Synergies and trade-offs

Transition actions may lead to synergies and trade-offs across climate, nature, and social considerations.

Including **nature** in **net-zero transition plans** recognizes the link between climate and nature.

This strategically helps to identify cost-effective **climate change** solutions and supports **nature loss** mitigation.



The way forward: taking action

1. Reduce nature GHG emissions
2. Protect and increase nature GHG sinks
3. Embed climate-nature considerations into approach and planning

Executive summary

BACKGROUND

There is no net zero without nature. Human activity in ecosystems is a significant source of GHG emissions.* Activity in agriculture, forestry, and other land use (AFOLU) alone contributes about one quarter of the global emissions. In addition, natural ecosystems can absorb emissions with the estimated mitigation potential of about a third of the 2030 net-zero emissions reduction goals.[1]

GFANZ published a net-zero transition planning (NZTP) framework in 2022 containing voluntary recommendations and guidance for reducing GHG emissions associated with financial services in support of achieving net-zero targets.[2] This consultation paper, a supplement to the GFANZ Financial Institution Net-zero Transition Plans report, addresses the distinctive characteristics of nature as emissions sources and sinks, and offers additional voluntary guidance to financial institutions.

The proposed guidance in this consultation paper covers opportunities to reduce nature emissions or increase nature sinks (natural climate mitigation), as well as opportunities to support emissions reductions and sequestration through nature-related activities (natural climate enablers). Collectively, these nature-related levers expand the toolkit for financial institutions to achieve their net-zero commitments and may identify even more potential net-zero financing opportunities. This consultation paper also recognizes that actions to mitigate climate change may impact the state of nature and should be a factor in financing decisions, given the feedback loop between climate and nature. General impacts on nature from climate change are beyond the scope of the proposed guidance, but are discussed in this consultation paper as an area of Ongoing considerations, which may lead to integrated (nature, climate, and social) transition planning in the future.

CLIMATE, NATURE, AND NET ZERO

Nature-related levers have characteristics that differ from energy-based activities. These include different biological timelines, connected groups,† location-specific context, and availability and quality of data and pathways.

Nature-related levers can support net-zero commitments in two primary ways: by reducing GHG emissions from land, ocean, and freshwater sources, and by creating or increasing GHG sinks. Nature-related levers can also support one or more of the four key transition financing strategies (Climate Solutions, Aligned, Aligning, Managed Phaseout). Nature-related levers can be found and financed on a project basis to achieve

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* This paper contemplates emissions from human activity including, but not limited to, management and use of land, ocean, and freshwater; agriculture and forestry activities; other land use change, and other human impact to ecosystem and labels these "nature GHG emissions" or "nature emissions".

† For this paper, the term "connected groups" is used to refer collectively to any individual or group of peoples who are affected by the activities in question, or who may have pertinent information on the activities. These individuals or groups may include, depending on the unique locations, circumstances, and activities: local communities, small and individual stakeholders, value chain members, Indigenous Peoples, local and regional governing and supervisory bodies, academia and subject experts, marginalized individuals and communities, among others.

multiple objectives, including to generate high-integrity carbon credits, but may also be found within an organization's Scope 1, 2, or 3 emissions under a net-zero commitment.

Explicitly including nature within a net-zero transition plan recognizes the inextricable linkage between nature and climate, helps to address the feedback loop between climate and nature, supports the goals of the Paris Agreement and the Kunming-Montreal Global Biodiversity Framework (GBF), and emphasizes the strategic management of nature-related levers.

VOLUNTARY, SUPPLEMENTAL GUIDANCE SUMMARY

The GFANZ NZTP framework recognizes that different financial institutions will take different approaches to achieving net-zero targets. Where financial institutions have the opportunity to use nature-related levers, the voluntary, supplemental guidance in this consultation paper may help them incorporate such levers as part of a strategic, credible net-zero transition plan (see Figure 1 for a high-level summary of the voluntary, supplemental guidance).

THE WAY FORWARD: TAKING ACTION

As organizations develop and implement net-zero transition plans, explicitly integrating nature in support of net-zero implementation will be part of the solution to accelerate the net-zero transition, increase financing flows to the four key transition financing strategies, and support action on nature loss.[3] Therefore, financial institutions are encouraged to take action on three fronts:

Objective	Related Actions (not exhaustive)
1. Reduce nature GHG emissions as per 1.5 degree C-aligned pathways	• evaluate portfolio dependencies and impacts on nature • develop transition strategies in support of the net-zero transition, across Scope 1, 2 & 3 (likely applies to most portfolios, given nature GHG emissions are at least 22% of total emissions)
2. Protect and increase nature GHG sinks	• assess and encourage opportunities, across Scope 1, 2 & 3, to increase natural carbon sequestration • consider strategies to protect, conserve, restore and regenerate nature which result in carbon sequestration, including through natural climate solutions and high-integrity carbon projects
3. Embed climate-nature considerations into approach and planning	• acknowledge that transition actions may lead to synergies and trade-offs across climate, nature, and society • foster organizational awareness of multiple dimensions of impacts • consider integrated transition planning for climate and nature

While these actions can begin immediately, there are several areas relevant to financial institutions that GFANZ workstream participants recognized need further consideration and work. These include data challenges, nature and climate scenarios and pathways, oceans and marine systems, and the next frontier: integrated transition planning. Many organizations are working on methodologies and guidance for nature transition planning, including the TNFD which will be releasing a consultation at the same time as this paper. Integrated transition planning that includes nature, climate, and social considerations is an important area of further work.

NEXT STEPS: CONSULTATION

The rising recognition of nature-related issues suggests that financial institutions should build institutional capacity to understand these issues. This consultation paper aims to support financial institutions as they voluntarily integrate nature considerations in their net-zero strategy and plans.

As a first and important step, financial institutions and other interested parties are encouraged to respond to this consultation here to inform the publication of final supplemental guidance (expected Q1 of 2025) and start to work with these concepts to accelerate the net-zero transition and drive financial resources toward solutions.

Endnotes for Executive summary

1 AFOLU contributes 22% of anthropogenic global emissions from IPCC. AR6 Synthesis Report: Climate Change 2023, 2023, p.5, and emission sinks in natural ecosystems can sequester potentially 37% of the emissions decrease needed to meet 2030 net-zero goals from Griscom et al. Natural climate solutions, 2017.

2 GFANZ. Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations, and Guidance, 2022.

3 In this paper, the term “nature loss” can be read as “nature and biodiversity loss.” It describes the degradation of the natural world, including the loss of biodiversity.

Figure 1: Summary of GFANZ NZTP voluntary recommendations and proposed nature-related guidance

Foundations

Objectives and priorities

Define the organization's objectives to reach net zero including targets, financing strategies, and real-economy impacts.

Use of nature-related levers, where relevant to the individual financial institution, should be articulated in an institution's NZTP objectives and priorities, its corporate statement, and embedded in its application of the four key transition financing strategies.

Metrics and Targets

Metrics and targets

Use a suite of metrics and targets including on aligning financing for real-economy transition, NZTP execution, and GHG emissions.

Financial institutions should consider measuring and monitoring complementary nature-related metrics and targets alongside climate ones. This includes monitoring where nature-related credits are used. A number of tools and methodologies are noted.

Implementation Strategy

Products and services

Support clients' and portfolio companies' transition with existing and new products and services.

Existing and new products and services should be assessed as to whether and how they can support nature-related levers through the key aspects of product design.

Activities and decision-making

Enable net-zero objectives with evaluation and decision-making tools and processes.

Financial institutions should consider adjusting analysis and decision-making processes to account for the distinct characteristics of nature-related levers. This may be helped by a portfolio review for nature-related lever opportunities. The processes should include identification of synergies and trade-offs, and consider and document mitigation strategies.

Policies and conditions

Establish policies and conditions for priority and/or high-emitting, harmful to the climate sectors and activities.

Financial institutions should consider setting their own policies, using the six elements of a net-zero policy, where there are opportunities to implement nature-related levers.

Engagement Strategy

Clients and portfolio companies

Provide feedback and support to clients and portfolio companies to encourage transition strategies.

Engagement should be augmented to include two-way flow of information, advising and supporting clients, portfolio companies, the value chain and connected groups about nature-related levers, contribution to transition plans, and synergies and trade-offs.

Industry

Engage with peers to exchange expertise on common challenges and represent the financial sector's views.

Engagement with relevant groups may include industry peers, industry-related bodies, academia, nongovernmental organizations, and local groups and may be on an individual, landscape, or jurisdictional basis in order to collaborate, gather, or develop pertinent data, tools, or methodologies.

Government and public sector

Lobbying and public sector engagement to support an orderly* transition net zero.

Engagement should consider regional and local governments, including governing structures of IP&LC, and proactively include nature-related topics in support of net-zero commitments.

Governance

Roles, responsibilities, and remuneration

Define roles and responsibilities for strategic body, senior management, and throughout the institution with remuneration incentives.

Roles and responsibilities for nature-related levers should be clearly defined. Structuring includes considering interim milestones to support biological timelines, and how to support identification of synergies and trade-offs.

Skills and culture

Provide training and development and a change management program to support staff executing the NZTP.

Financial institution teams should have access to ongoing, relevant, nature-related training and experts, including interdisciplinary knowledge, that should be reviewed regularly and as key developments occur.

Text in grey is a summary of the voluntary recommendations in the 2022 GFANZ Net-zero Transition Plans (NZTP) report. Please refer to the report for exact wording.

* GFANZ uses the term "orderly transition" to refer to a net-zero transition in which both private sector action and public policy changes are early and ambitious, thereby limiting economic disruption related to the transition (e.g., mismatch between renewable energy supply and energy demand). This explanation applies to all mentions of the term "orderly transition" in this document.

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APPENDICES

PART A:
Context

Introduction

Human activity in ecosystems is a significant source of GHG emissions.§ Activity in agriculture, forestry, and other land use (AFOLU) alone contributes 22% of global emissions.[4] The IPCC warns that without deep and rapid GHG emissions reductions by 2030 across all sectors, it will be impossible to limit global warming to 1.5 degrees C.[5] In addition, ecosystems can absorb emissions with the estimated mitigation potential of 37% of the 2030 net-zero emissions reduction goals.[6] Essentially, there is no net zero without nature.[7]

Governments and real-economy companies around the world have committed to achieving net zero.[8] In 2022, GFANZ published voluntary recommendations and guidance on developing net-zero transition plans (NZTPs). The GFANZ Financial Institution Net-zero Transition Plans report noted that net-zero strategies intersect with nature and biodiversity,¶ and at the time, this topic was an area of active and ongoing work by various initiatives.[9]

Since that time, the first Global Stocktake — an assessment of climate action under the Paris Agreement — was completed, found that global GHG emission trajectories are not in line with the Agreement's temperature goal, and committed to accelerating action in this decade.[10] Also, the Network for Greening the Financial System (NGFS) acknowledged that nature-related risks could have significant systemic, macroeconomic implications, and that failure to account for, mitigate, and adapt to these implications is a source of risks for individual financial institutions as well as for financial stability.[11] Recognizing the urgent need to act on ecosystem degradation and species loss, 196 countries agreed to mobilize resources to halt and reverse biodiversity loss in the Kunming-Montreal Global Biodiversity Framework (GBF). Three of the 23 GBF targets specifically aim to align private financial flows with the four goals of the GBF (see Appendix D).

This consultation paper, a supplement to the the GFANZ Financial Institution Net-zero Transition Plans report, addresses the distinctive characteristics associated with nature sources and sinks and how these might be included in an NZTP. It provides supplemental, voluntary guidance that aims to be practical in integrating opportunities to reduce nature emissions or increase nature sinks ("natural climate mitigation"), as well as opportunities to support emissions reductions and sequestration through nature-related activities ("natural climate enablers") — collectively referred to as "nature-related levers" in this consultation paper (Figure 2).** By identifying both types of nature-related levers, this consultation paper highlights additional tools for financial institutions to achieve their net-zero commitments and more potential opportunities to finance the transition.

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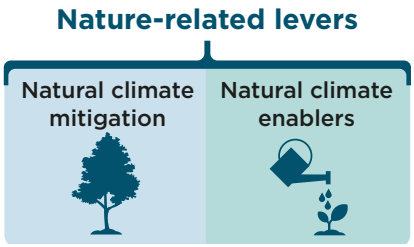
§ This paper contemplates emissions from human activity including, but not limited to, management and use of land, ocean, and freshwater; agriculture and forestry activities; other land use change; and other human impact to ecosystem and labels these "nature GHG emissions" or "nature emissions".

¶ "Nature" is a broad term and there is no standard definition. This paper considers actions based on all life on earth, its diversity and abundance, including biotic and abiotic components and their interactions with one another. Biodiversity refers to the variability among living organisms. It is an essential and integral characteristic of nature that enables ecosystems to be productive, resilient and able to adapt. (Dasgupta. The Economics of Biodiversity: The Dasgupta Review, 2021.)

** For this consultation paper, the term "natural" in "natural climate mitigation" and "natural climate enablers" refers to technologies, services, tools, social and behavioral changes, activities, etc. that may be focussed on nature, e.g., land management, derived from nature with or without technical processes, e.g., production of biochar, or impacting nature, e.g., shift to plant-based diets.

Figure 2: Nature-related levers, natural climate mitigation, and natural climate enablers



Natural climate mitigation: a subset of natural climate solutions, which are place-based activities and include the protection, conservation, restoration, and improved use and management of ecosystems that focus on climate mitigation services, i.e., reducing or avoiding GHG emissions and/or increasing carbon storage.

Natural climate enablers: non-place-based activities, such as production of inputs to natural climate mitigation or low-carbon demand-side alternatives, that indirectly affect the management of ecosystems, biomes, natural commodities, and ecosystem services in support of reduction of nature GHG emissions or increasing nature GHG sinks.

This consultation paper recognizes that actions to mitigate climate change may impact the state of nature and should be a factor in financing decisions, given the feedback loop between climate and nature. General impacts on nature from climate change are beyond the scope of the proposed guidance, but are discussed in the section about Ongoing considerations, as work that may lead to integrated (nature, climate, and social) transition planning in the future.

Explicitly including nature in net-zero transition plans supports finding cost-effective and efficient solutions to climate change and recognizes the inextricable linkage between climate and nature. It helps in identifying synergies and trade-offs, supports actions to mitigate nature loss,[††] and improves resiliency.

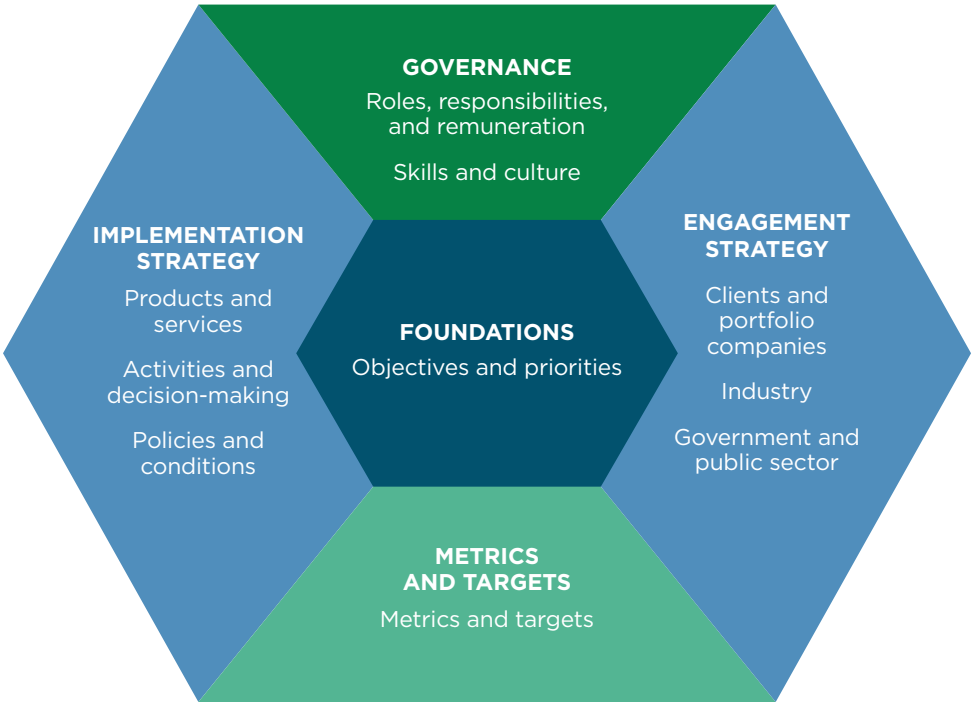
NET-ZERO TRANSITION PLANS AND TRANSITION FINANCE

To support transition planning that is comprehensive, comparable, and scales transition finance, the GFANZ NZTP framework introduced five themes, comprising ten components, of credible net-zero transition plans.[12] The GFANZ NZTP report also introduced four key transition financing strategies that support an orderly and inclusive transition:[‡‡] Climate Solutions, Aligned, Aligning, and Managed Phaseout (see Figure 3). The report recognized that nature was an area of ongoing work at the time of publication (November 2022).

[††] In this paper, the term "nature loss" can be read as "nature and biodiversity loss." It describes the degradation of the natural world, including the loss of biodiversity.

[‡‡] GFANZ uses the term "orderly transition" to refer to a net-zero transition in which both private sector action and public policy changes are early and ambitious, thereby limiting economic disruption related to the transition (e.g., mismatch between renewable energy supply and energy demand). For reference, the Network for Greening the Financial System (NGFS), which develops climate scenarios used by regulators and others, defines "orderly scenarios" as those with "early, ambitious action to a net-zero GHG emissions economy," as opposed to disorderly scenarios (with "action that is late, disruptive, sudden and / or unanticipated"). In an orderly transition, both physical climate risks and transition risks are minimized relative to disorderly transitions or scenarios where planned emissions reductions are not achieved. This explanation applies to all mentions of the term "orderly transition" in this document.

Figure 3: GFANZ financial institution net-zero transition plan framework



Four key financing strategies to reduce real-economy emissions

1 Climate solutions

Technologies, services, and tools that mitigate, eliminate or remove GHG emissions

To expand economy-wide emissions reductions through the deployment of climate solutions

2 Aligned

Entities that are already aligned to a 1.5 degrees C pathway

To support climate leaders and signal that the finance sector is seeking transition alignment behavior

3 Aligning

Entities committed to aligning to a 1.5 degrees C pathway

To encourage and support the implementation of net-zero transition plans

4 Managed phaseout

High-emitting physical assets that can be phased out before end-of-life

To accelerate emissions reductions in support of an orderly and just transition

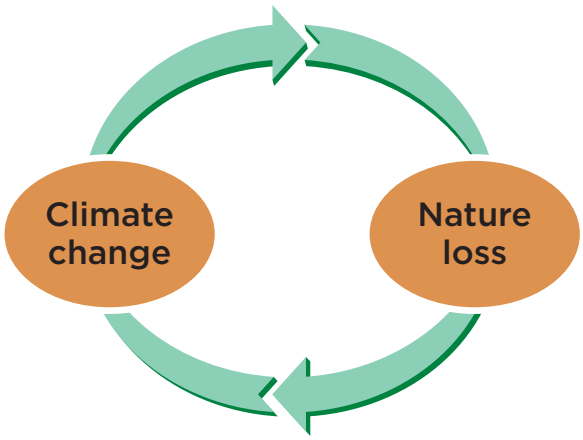
Momentum behind net-zero transition planning is increasing. Since 2022, the Transition Plan Taskforce (TPT) published its final guidance on a Disclosure Framework for Transition Plans,[13] building on the core elements of the GFANZ NZTP framework. The IFRS will assume responsibility for these materials.[14] The U.S. Department of the Treasury released its Principles for Net-Zero Financing & Investment,[15] which are aligned with the GFANZ four key transition financing strategies. GFANZ also produced a technical note on Scaling Transition Finance and Real-economy Decarbonization, a supplement to the GFANZ NZTP report.

The intersection of climate and nature

Climate change and nature loss are often described as inextricably linked.[16] Climate change is one of the five direct drivers of nature loss.[17] The degradation of healthy and intact ecosystems, accelerated by worsening physical climate impacts, increases GHG emissions and decreases the ecosystem's ability to mitigate climate change.[18] This mutually reinforcing relationship (Figure 4) was recognized in the COP28 Joint Statement on Climate, Nature and People.[19] Conservation, restoration, and improved management of land, freshwater, ocean, and atmosphere can support net-zero implementation by avoiding or reducing GHG emissions from nature and preserving or improving carbon storage in nature.[20] Pathways to reach net-zero emissions by 2050 or sooner include contributions from nature in the modeling,[21] as both GHG emissions and emissions reductions from nature have significant impacts on net-zero planning.[22]

Figure 4: The relationship between climate and nature

The relationship between climate change and nature loss is bi-directional, as shown in the diagram. This paper considers nature-related levers as a part of the solution to achieving net zero, but does not interpret this approach to mean that nature is "part of" or "under" a climate paradigm. Rather, this paper discusses how climate and nature may be considered together or alongside each other. Please see Ongoing considerations.



NATURE'S CONTRIBUTION TO THE GLOBAL TRANSITION

There are two distinct ways in which nature plays a role in climate change mitigation:

1. As a source — Anthropogenic GHG emissions from degradation of ecosystems.[23] These GHG emissions can be reduced or eliminated, for example through process changes, such as regenerative agriculture practices/technologies that reduce emissions from soil or fertilizer practices, or eliminating deforestation and associated emissions in the supply chain.
2. As a sink — GHG emissions removals where nature acts as a sink.[24] Some analyses suggest that cost-effective and responsibly deployed natural climate mitigation could substantially reduce peak temperatures, especially if started immediately and allowed to mature.[25] For example, healthy soils and ecosystems are able to sequester more emissions than degraded ones.

See Figure 5 for further discussion on sources, sinks, scopes, and credits.

The Intergovernmental Panel on Climate Change Synthesis Report for the Sixth Assessment Report (IPCC AR6) identified that many agriculture, forestry and land-use options (that is, conservation, improved management, and restoration of terrestrial, freshwater, and ocean ecosystems, and demand-side measures) provide climate adaptation and mitigation benefits that could be upscaled in the near term across most regions. Further, AR6 noted that minimizing trade-offs requires an integrated approach including with other objectives such as social issues (e.g., food security).[26]

The IPCC's working group III noted that demand-side mitigation potential in food systems were comparable to supply-side options, pointing to mitigation actions with consumers that are beyond, but related to, food producers.[27] Examples include: a project or entity producing biochar for use on multiple farmlands; a project or entity producing alternative proteins to support a societal shift away from high-emitting cattle farming; a project or entity pioneering approaches for avoiding food waste to reduce the need for agricultural expansion.

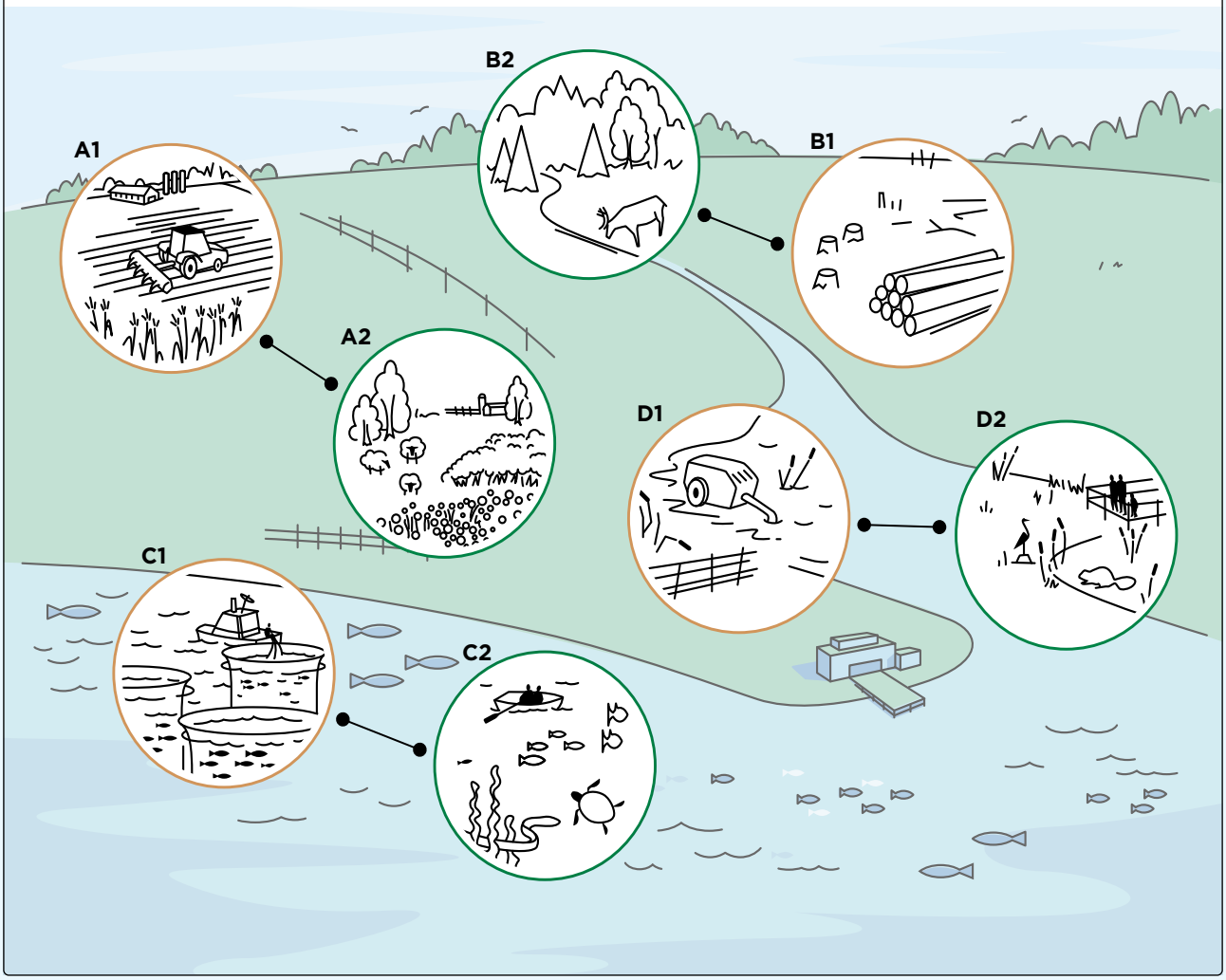
Emissions reductions such as those above, within a reporting boundary, may be captured under Scope 1, 2, or 3 of an emissions footprint and could be directly covered by the net-zero commitment.[28] At time of writing, quantification methodologies for land sector emissions and removals are being developed with release expected in early 2025.[29] Nature-based sinks can be created or enhanced through protection, conservation, restoration, and improved use and management of ecosystems.

Figure 5: Identifying nature sinks and sources

The figure below shows examples of how management of ecosystems can result in GHG emissions or GHG removals. While these examples are at a real-economy level, they serve to demonstrate where financial institutions may find nature-related lever opportunities within a client or company portfolio, manager, line of business, etc.

Circles A1 and B1 show activities in an ecosystem with associated emissions: A1 — GHGs are released from excess fertilization and soil tillage in intensive farming methods; B1 — GHGs are counted as emitted when vegetation (a forest) is removed. If these practices were modified or avoided through alternatives, not only would nature emissions be reduced, the ecosystem would also continue to act as a GHG sink. A2 shows an approach to farming which decreases use of fertilizers, pesticides, and machinery, resulting in better soil health. B2 shows avoided deforestation or selective logging practices resulting in a healthier and more diverse forest ecosystem. If the farm or forestry company has made a net-zero commitment, these emissions would be their scope 1. They may be scope 3 as part of a value chain. However, if these examples are independent projects, they may be expressed as credits under appropriate trading schemes.

Circles C1 and D1 show ecosystems that may be polluted (from intensive fish farming in C1) or depleted (from water withdrawals in D1), resulting in a reduced ability to remove GHGs. If such operations were modified (C2 showing selective fishing and tourism-based economy and D2 showing land use change that avoids water withdrawals) resulting in healthier ecosystems, this action may create GHG sinks. The sinks may be within a corporate footprint boundary where methodologies and target criteria are still to be determined at time of writing or they may be eligible as carbon credits.



BOX 1. SYNERGIES AND TRADE-OFFS AT THE INTERSECT OF NET ZERO AND NATURE[30]

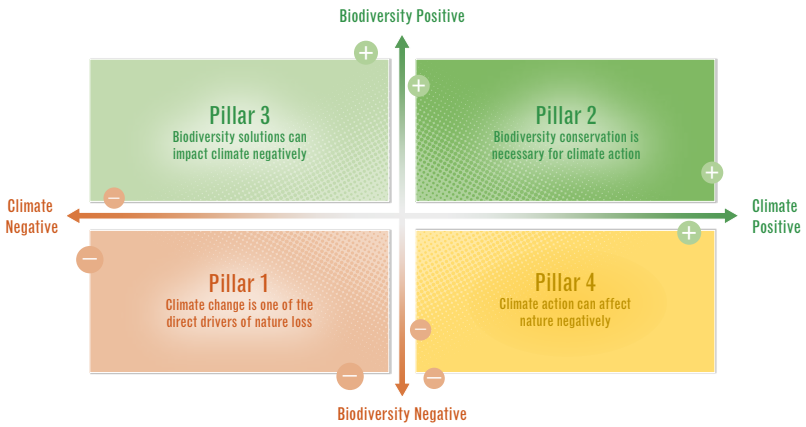
The co-sponsored workshop by IPBES and IPCC on biodiversity and climate change highlighted the linkage between the issues. To support the goals of the Paris Agreement and the GBF, the synergistic "win-win" solutions need to be identified, and the one-sided trade-offs recognized as not accounting for the linkage between underlying climate and nature loss drivers.[31] For example, participants in the joint IPBES and IPCC workshop in December 2020 concluded that several land- and ocean-based practices would support climate change mitigation, including restoration of ecosystems (forests, grasslands, wetlands, peatlands, kelp forests, deep water, etc.), sustainable agriculture and forestry practices, green infrastructure in cities, and more.[32]

However, any action to address one crisis may have unintended negative consequences to the other,[33] particularly as nature-related levers could compete with other important land uses (food security, nature conservation).[34] For example, planting crops for bioenergy to replace fossil fuels supports GHG emissions reduction, but may increase biodiversity loss if, for example, a healthy natural ecosystem is converted for the crops.[35] Conversely, establishing protected areas may deny land use for activities such as distributed power grids or food crops. Another example is that large-scale tree plantations intended to sequester carbon, if implemented as a monoculture, may harm water balance and biodiversity.[36] In these cases, trade-offs may be inevitable and identifying, assessing, and managing impacts to ecosystems across a portfolio of companies and/or clients or from an individual climate transition finance decision is an important component of the net-zero implementation and could be managed within financial institution NZTPs.

The Finance for Biodiversity Foundation (FfBF) characterizes the interaction between climate and nature in four pillars (Figure 6) showing that climate and nature can positively or negatively affect each other. However, the complexity of the relationship between climate and nature might mean that a decision could have a positive impact on one aspect of nature and a negative impact on another. The framework suggested in the figure may be a starting point for an analysis.

Figure 6: A possible framework for the climate-nature nexus

Adapted from FfBF. Unlocking the biodiversity-climate nexus, October 2023.



Explicitly including nature in the GFANZ NZTP framework helps to address the feedback loop between climate and nature, which can support consistency with the GBF. Identifying and assessing impacts to nature may require understanding the local context and broader implications for the economic net-zero transition, as well as ecosystem loss.

NATURE IN NET-ZERO IMPLEMENTATION

Given the inextricable linkage between climate change and nature loss, integrated planning has been suggested as a path forward and some initial steps have been taken in this direction.[37] At the time of writing, there is limited financial sector-wide guidance on incorporating nature-related levers into financial institution net-zero transition plans (see following section). Reasons for explicitly including nature in net-zero transition plans include:[38]

1. No net zero without nature: Emissions from current nature management practices mean that global net zero will only be achieved with the use of nature-related levers.
2. Cost-effectiveness: Many nature-related levers are among the most scalable and cost-effective means to reduce GHG emissions.
3. Improving resilience: Healthier ecosystems mitigate climate change damage to business and society.
4. Increasing efficiency and effectiveness in strategic management: Planning and reporting on climate and nature together allows an institution to consolidate its resources and stay ahead of the curve where sustainability and climate disclosure frameworks, including the IFRS-ISSB,[39] as well as international climate and nature negotiations are recognizing the need to manage the issues together.
5. Avoiding harm to nature: Managing climate-nature intersections early in decision-making allows identification of opportunities to protect and avoid negative impacts on nature, which can support long-term nature-related climate benefits and consistency with the GBF.

The distinctive characteristics of nature (Box 2) may raise unique issues to consider in net-zero transition planning.

BOX 2. CHARACTERISTICS OF NATURE-RELATED LEVERS

Nature-related levers play a key role in the net-zero transition, but they often have characteristics that are not commonly found in energy-based levers. These include:

- Issues collecting, using, and comparing local data for financial decision-making
- Timelines reliant on biological processes (e.g., flora growth cycles) and differing from financial and economic timings (biological timelines)[40]
- Connected groups[§§] that are smaller (possibly individuals), resource constrained, marginalized, and/or dispersed
- Connected groups with rights other than financial equity-based
- Potential for climate-nature impact synergies and trade-offs
- Complexities of location-specificity, including ecosystem or biome interconnections
- Lack of established decarbonization pathways for financial decision-making that include science-based, detailed nature assumptions and modeling

§§ For this paper, the term "connected groups" is used to refer collectively to any individual or group of peoples who are affected by the activities in question, or who may have pertinent information on the activities. These individuals or groups may include, depending on the unique locations, circumstances, and activities: local communities, small and individual stakeholders, value chain members, Indigenous Peoples, local and regional governing and supervisory bodies, academia and subject experts, marginalized individuals and communities, among others.

Landscape review

Many organizations and initiatives are working on nature-related topics, including science and technical research, terminology, nature as a systemic economic risk, and frameworks for accounting and target-setting.[41] Standard-setters are incorporating, or beginning to consider, nature-related reporting requirements.[42]

This paper is built on the important scientific knowledge of nature and biodiversity by leading groups such as the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the International Union for Conservation of Nature (IUCN).

Work to develop industry-related guidance on nature has also provided key inputs to this paper. In the past two years, groups have made progress in the identification, assessment, and disclosure of nature-related dependencies, impacts, risks, and opportunities, notably reflected in the Taskforce on Nature-related Financial Disclosures (TNFD) recommendations for business and finance (Box 3). The TNFD has developed a set of recommended disclosures and guidance that encourage and enable business and finance to assess, report, and act on their nature-related dependencies, impacts, risks, and opportunities. This information will be needed as a key input to understanding nature-related levers. Where relevant, this paper uses the concepts established by the TNFD and references them accordingly.

Concurrently, Finance for Biodiversity Foundation (FfBF), Partnership for Biodiversity Accounting Financials (PBAF), Principles for Responsible Banking, the TNFD, the Science Based Targets Network (SBTN), UN Environment Programme — Finance Initiative (UNEP-FI), and WWF are developing nature-related metrics, accounting and target-setting methodologies, and transition plan guidance. We acknowledge the ongoing work by these and other groups, and readers of this paper may wish to stay informed of their progress.

RELATIONSHIP TO NATURE TRANSITION PLANS

The TNFD has published a discussion paper on nature transition plans preparation and disclosure. The discussion paper covers an organization's dependencies, impacts, risks, and opportunities, with the exception of GHG emissions and climate change (see Figure 7). The guidance provides additional support for organizations looking to respond to the dependencies, impacts, risks, and opportunities identified through a LEAP assessment.

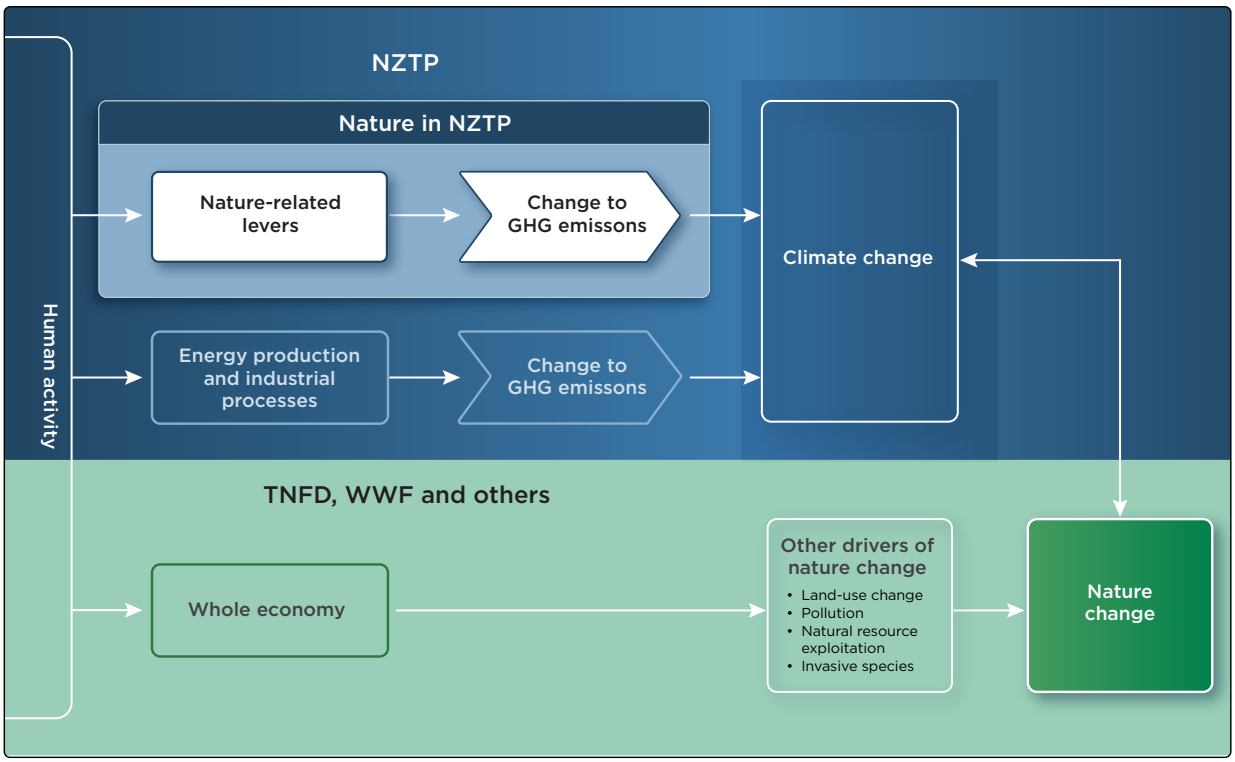
This consultation paper proposes guidance focused on nature in support of net-zero transitions. It does not focus on the broad nature transition and believes the TNFD's discussion paper is complementary in that manner. This consultation paper does discuss and propose limited guidance on synergies and trade-offs, and discusses integrated nature, climate, and social transition plans in Ongoing considerations.

Figure 7: Scope of this report and relationship to the nature space

GFANZ's work is distinct, but complementary to other work related to nature transition plans.

The GFANZ consultation paper covers nature-related levers that may directly or indirectly reduce emissions from sources or absorb emissions with nature sinks. It is a supplement to the GFANZ NZTP framework, which applies to anthropogenic emissions reductions efforts in general. Work by TNFD, WWF, and many others include components, development and disclosure of nature transition plans which focus on halting and reversing nature loss.

As climate change is a driver of nature loss, efforts to mitigate climate change support efforts to stem nature loss. Similarly, healthier ecosystems support GHG reduction.



GAPS IN THE LITERATURE

Current literature acknowledges integration of climate and nature in transition plans, but as an aspirational, rather than a normalized, practice.[43] Concrete solutions that directly address synergies and trade-offs between climate and nature are scarce. Often, the perspective is climate-only with a focus on energy sectors, missing opportunities to capitalize on a wider set of synergies between climate and nature goals and safeguard against negative nature impacts (trade-offs).

There are structural commonalities between net-zero transition plans and emerging nature transition plan frameworks that may support integrated practices in the future. Common topics addressed include scenario analysis, financial products and services, value chain engagement, and governance. However, the lack of detail and practical guidance hinders operational integration in financial institution net-zero transition plans.

This consultation paper seeks to fill part of the gap in current literature by focusing on the integration of nature-related levers in net-zero transition plans, including the potential synergies and trade-offs.

BOX 3. TNFD RECOMMENDATIONS

The Taskforce on Nature-related Financial Disclosures (TNFD) is a market-led, science-based, and government-supported initiative to help companies and financial institutions factor nature into financial decisions. The Taskforce consists of 40 senior executives from companies and financial institutions. Its recommendations and guidance allow, encourage, and enable organizations to assess, report, and act on their nature-related dependencies, impacts, risks, and opportunities.

The TNFD was formed in June 2021 with the support of the G20 Sustainable Finance Working Group. After two years of consultation with market participants, it released recommended disclosures[44] and implementation guidance in September 2023.

The voluntary recommendations and guidance are intended to enable businesses and finance to integrate nature into decision-making and shift global financial flows away from nature-negative outcomes and toward nature-positive outcomes, aligned with the GBF.[45]

The TNFD recommended disclosures are structured around the same four pillars that were recommended by the Task Force on Climate-related Financial Disclosures (TCFD) and incorporated in the ISSB's global baseline standards (IFRS S1 and IFRS S2). Those pillars are Governance, Strategy, Risk and Impact Management, Metrics and Targets. This familiar architecture allows companies and financial institutions to get started by building on their climate reporting capabilities and avoids introducing another risk-related framework into the market.

The TNFD developed guidance and other resources to help organizations assess nature-related issues. Its integrated assessment approach is called LEAP (Locate, Evaluate, Assess and Prepare). The four phases encourage entities to:

- **Locate** their interface with nature;
- **Evaluate** their dependencies and impacts on nature;
- **Assess** their nature-related risks and opportunities; and
- **Prepare** to respond to, and report on, material nature-related issues.

In the context of developing net-zero transition plans, a TNFD-consistent disclosure is a valuable input to strategically identifying and managing nature-related levers as net-zero solutions as well as potential synergies and trade-offs with any net-zero decision.

This consultation paper

This consultation paper focuses on the services that nature can provide in mitigating climate change to achieve net zero. The proposed guidance is intended to support financial institutions, with relevance for real-economy companies, on how they can credibly integrate nature in implementing their net-zero transition plans. Explicitly including nature-related levers, where appropriate, can help financial institutions identify and capture opportunities to reduce nature emissions, increase nature sinks, and support emissions reductions and sequestration through nature-related activities. It may also support the identification of synergies and trade-offs arising from actions to mitigate climate change. The discussion in Ongoing considerations deals with the general impacts to nature from climate change.

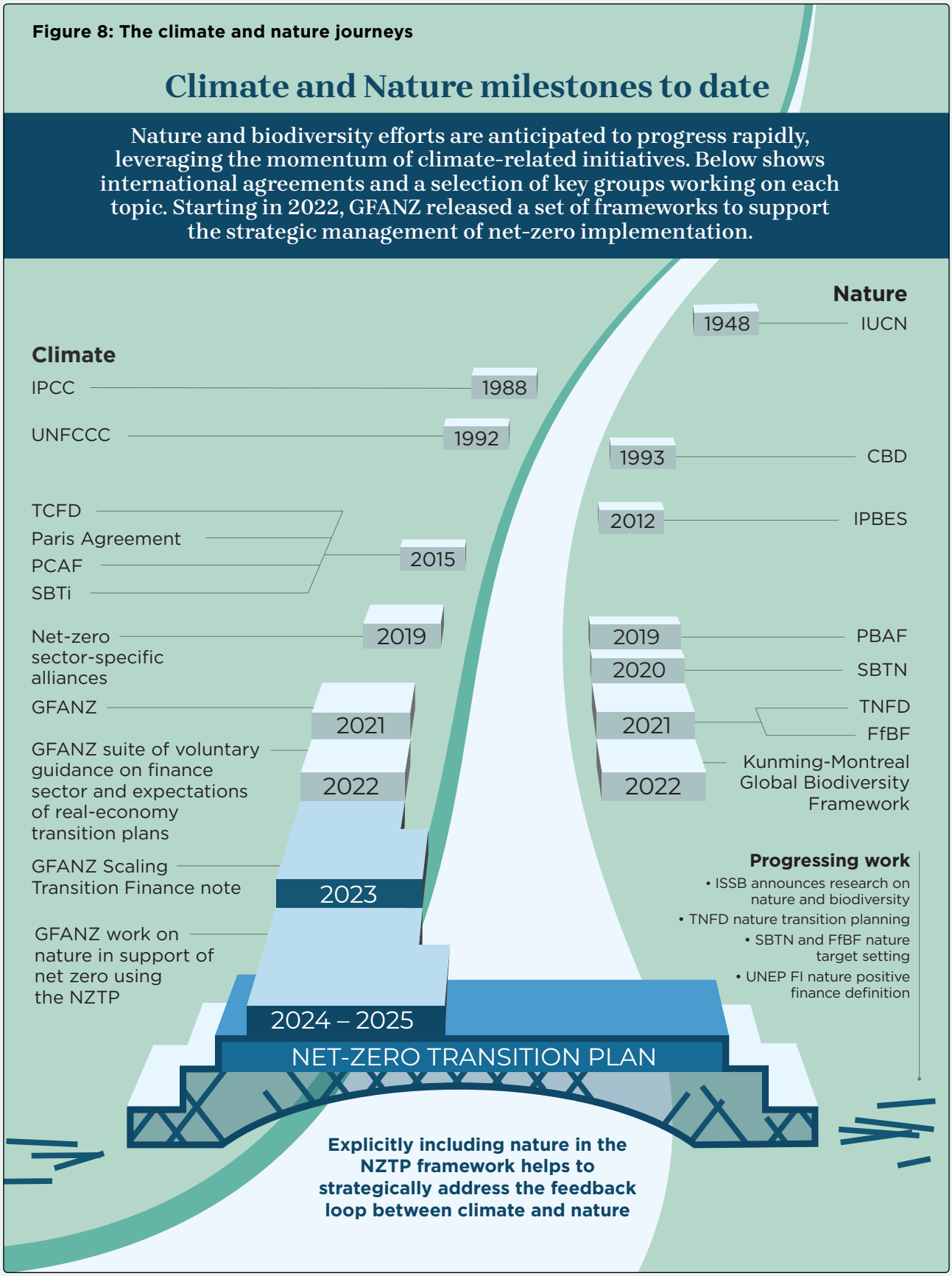
The contents of this paper are supplemental to the voluntary recommendations and guidance contained in the GFANZ NZTP report. Therefore, review of the GFANZ NZTP framework is necessary to provide important context for those choosing to consider the supplemental voluntary guidance in this paper. The GFANZ NZTP framework and related documents support net-zero commitments, through detailing components of credible transition plans.[46]

The voluntary guidance proposed in this paper is grouped according to the same five themes, and covers:

- Foundations: Priority of nature-related levers in the objectives of a net-zero transition plan
- Implementation Strategy: Integration of nature-related inputs, tools, and other information in financial products and services; integration of nature in internal decision-making and corporate policies
- Engagement Strategy: Nature-related considerations for engagement
- Metrics and Targets: Nature-related metrics and targets to complement emissions accounting
- Governance: Considerations for roles, responsibilities, and associated organizational needs

By explicitly incorporating nature-related levers in the GFANZ NZTP framework, this consultation paper begins to provide a globally applicable, voluntary, pan-finance-sector strategic approach that could be used to address nature as a systemic risk. Use of an established framework allows regulators and standard-setters to focus on developing consistent transparency requirements, ensures efficiencies across financial and real-economy industries when developing climate and nature transition plans, and enables comparability for users of climate- and nature-focused reports (see Figure 8). It also helps to boost progress on combating nature loss, estimated to be lagging behind climate-related developments by five to ten years.[47]

Figure 8: The climate and nature journeys



ONGOING CONSIDERATIONS

While financial institutions have begun to incorporate nature into climate strategies, this section, located at the end of this consultation paper, discusses areas where further consideration is needed to help enhance the use of nature-related levers in a global, pan-sector approach to net-zero transition planning. Areas discussed, which are being advanced by other organizations, are selection and standardization of nature-related data, integration of climate and nature scenarios, scaling of private finance in the blue economy, and the integration of climate and nature transition plans. Despite these areas of ongoing work, these challenges are not a reason to delay consideration of nature-related levers in net-zero transition plans.

CONSULTATION

The consultation for this paper is open for a 90-day period. Those wishing to provide feedback are encouraged to do so via the consultation survey. Please see the GFANZ website for a summary of the consultation paper, FAQs, the 2022 GFANZ NZTP report, the Expectations for Real-economy Transition Plans, and other resources.

Endnotes for Part A: Context

4 IPCC. AR6 Synthesis Report: Climate Change 2023, 2023.

5 IPCC. AR6 Synthesis Report: Climate Change 2023, 2023.

6 Griscom et al. Natural climate solutions, 2017. Marine and terrestrial ecosystems are already the sole sink for 57% of total CO_2 emissions as per Friedlingstein et al. Global Carbon Budget 2023. Earth System Science Data, 15(12), 2023.

7 Nigel Topping, Mahmoud Mohieldin. No net zero without nature, 2022.

8 Nearly 200 countries signed the Glasgow Climate Pact 2021, through which they resolved to "pursue efforts to limit the temperature increase to 1.5 degrees C" (UNFCCC. Glasgow Climate Pact 2021, 2021) and over 1,100 of the world's largest publicly traded companies have also made net-zero commitments (Net Zero Tracker, accessed September 2024).

9 GHG emissions from fossil fuel sources related to agriculture sector are already included in accounting and targeting methodologies and several initiatives, e.g., GHG Protocol, SBTi, SBTN, PBAF, etc. are developing methodologies for process, non-energy GHG sources tied to land, freshwater, and ocean places and resources.

10 UNFCCC. Outcome of the first global stocktake, 2024.

11 The NGFS published an initial Statement on Nature-Related Financial Risks in 2022. Then, in response to these identified risks, it developed the NGFS Conceptual Framework to guide Action by Central Banks and Supervisors, the final version of which was published in 2024, providing a principles-based approach to nature-related risk assessment that considers climate risks within the scope of nature-related financial risks.

12 References to the "GFANZ NZTP framework" and the "GFANZ NZTP report" refer specifically to GFANZ: Fundamentals, Recommendations, and Guidance, 2022.

13 TPT. Disclosure Framework, 2023. See https:/transitiontaskforce.net/ for more information.

14 IFRS. ISSB delivers further harmonisation of the sustainability disclosure landscape as it embarks on new work plan, 2024. Accessed September 2024.

15 US Department of the Treasury. Principles for Net-Zero Financing and Investment, 2023.

16 IPBES. Workshop: Biodiversity and Climate Change — Scientific outcome, 2021.

17 IPBES. The global report on biodiversity and ecosystem services, 2019. The other direct drivers are changes in land and sea use; direct exploitation of organisms; pollution; and invasion of alien species.

18 NGFS. Nature-related Financial Risks: a Conceptual Framework to guide Action by Central Banks and Supervisors, 2024.; WEF. Global Risks Report, 2023. Section 2.2.

19 UN. COP28 Joint Statement on Climate, Nature and People, 2023.

20 The focus of this report is mitigation, but similar arguments can be applied to adaptation.

21 IPCC. AR6 Synthesis Report: Climate Change 2023, 2023, p. 21-23.

22 IPCC. AR6 Synthesis Report: Climate Change 2023, 2023; Griscom et al. Natural climate solutions, 2017; Friedlingstein et al. Global Carbon Budget 2023. Earth System Science Data, 15(12), 2023.

23 Note that the 22% of emissions from AFOLU (IPCC. AR6 Synthesis Report, 2023) does not include emissions from fossil fuel sources such as vehicle use in agriculture. In this report, "degradation of ecosystems" may include land use change and/or management practices on land, or in ocean or freshwater bodies.

24 In addition to the potential 37% of the 2030 goal delivered through natural climate solutions (Griscom et al. Natural climate solutions, 2017), marine and terrestrial ecosystems are the sole sinks for 57% of manmade emissions (Friedlingstein et al. Global Carbon Budget 2023. Earth System Science Data, 15(12), 2023).

25 Girardin et al. Nature-based solutions can help cool the planet — if we act now, 2021, detail potential contributions to temperature reductions from NBS (0.1 degrees C under a 1.5 degrees C rise by 2055 scenario; 0.3 degrees C under a 2 degrees C rise by 2085 scenario; 0.3 degrees C under 3 degrees C by 2100 scenario). While the contribution increases in the long term, this is due to longer timelines for NBS rather than late adoption.

26 IPCC. Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change., 2023. C.3.5 p. 29 and C.3.6 p. 29-30.

27 IPCC. Climate Change 2022: Mitigation of Climate Change, 2022. See Chapter 12 Cross sectoral perspectives.

28 Each financial institution makes an independent decision to commit to a net-zero framework and its commitment requirements, e.g., through a net-zero alliance.

29 GHG Protocol. Land Sector and Removals Guidance, Draft of Testing and Review, 2022.

30 NatureFinance. Towards an Integrated Transition Framework, 2022.

31 Pörtner, et al. Scientific outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change, 2021.

32 Pörtner, et al. Scientific outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change, 2021.

33 Pörtner, et al. Scientific outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change, 2021.

34 World Resources Institute (WRI). The Global Land Squeeze: Managing the Growing Competition for Land, 2023.

35 Note that, due to the limited resource of arable land, any land use for bioenergy may increase pressures on natural ecosystems elsewhere and lead to deforestation. WRI. The Global Land Squeeze: Managing the Growing Competition for Land, 2023.

36 Pörtner, et al. Scientific outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change, 2021.

Endnotes for Part A: Context continued

37 CDP. Nature in Green Finance: Bridging the gap in environmental reporting, 2023.

38 GFI. Assessing the Materiality of Nature-Related Financial Risks for the UK, 2024; INSPIRE. Building blocks for central banks to develop nature scenarios, 2023; TPT. The Future for Nature in Transition Planning, 2024; WWF. Nature In Transition Plans, 2023.

39 IFRS. Educational material. Nature and social aspects of climate-related risks and opportunities, 2023.

40 Unlike engineered solutions (which can usually be implemented with relative certainty about the type, degree and timescale of benefits), nature-related levers may generate emissions reductions at a later stage than the term of investment and over timescales that may not match investment or electoral cycles, with a degree of uncertainty associated with biological processes. (Seddon et al. Understanding the value and limits of nature-based solutions to climate change and other global challenges, 2020.)

41 These include Business for Nature, Capitals Coalition, CDP, Finance for Biodiversity Foundation (FfBF), NGFS, PBAF, SBTN, TNFD, UN Environment Programme — Finance Initiative (UNEP — FI), the World Economic Forum (WEF), and others. For GHG emissions, the GHG Protocol is developing a land sector and removals guidance and SBTi has a target-setting protocol for FLAG (forest, land, and agriculture) sectors.

42 See the European Union's Corporate Sustainability Reporting Directive (CSRD), IFRS/ISSB news release on research projects about risks and opportunities related to nature and human capital, and the GRI updated standard for biodiversity 2024 (all accessed September 2024).

43 Research included a review of over 400 individual pieces of grey literature and a deep dive into 50 transition plan-focused pieces by a consortium of WWF-France, Trinomics, Sea Wolf, and CDP.

44 TNFD. Recommendations of the Taskforce on Nature-related Financial Disclosures, 2023.

45 The Nature Positive Initiative defines nature positive as "a global societal goal defined as 'Halt and reverse nature loss by 2030 on a 2020 baseline, and achieve full recovery by 2050'. To put this more simply, it means ensuring more nature in the world in 2030 than in 2020 and continued recovery after that."

46 GFANZ. Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations, and Guidance, 2022; GFANZ. Expectations for Real-economy Transition Plans, 2022; GFANZ. Measuring Portfolio Alignment: Driving Enhancement, Convergence, and Adoption, 2022; GFANZ. Scaling Transition Finance and Real-economy Decarbonization, Supplement to the 2022 Net-zero Transition Plans report, 2023.

47 Ranger et al., The Green Scorpion: the Macro-Criticality of Nature for Finance, 2023.

PART B:

Voluntary, Supplemental Guidance

Use of the supplemental guidance

This section provides proposed supplemental guidance to financial institutions on the use of nature-related levers within a net-zero transition plan. The information in this paper supplements the recommendations and guidance of the GFANZ Financial Institution Net-zero Transition Plans report (November 2022) and should be read in conjunction with the original report. Financial institutions that include nature GHG emissions in their net-zero commitment may find this guidance relevant, but any financial institution recognizing the linkage between climate and nature may find the discussion on synergies and trade-offs helpful.

The GFANZ Secretariat acknowledges that decisions around using nature-related levers will vary by jurisdiction and individual characteristics of each financial institution, including size, business model, sector coverage, and other factors. The following guidance therefore uses a flexible, principles-based approach. Please refer to How to read this paper at the beginning of this consultation paper for overarching considerations the reader should keep in mind.

This consultation paper does not cover nature transition planning, nor directly addresses impacts to nature and biodiversity loss or ecosystem services from climate change in general. It focuses on reduction and avoidance of nature GHG emissions and the preservation and increase of nature GHG sinks. This consultation paper acknowledges that nature-related levers may have positive or negative impacts on these other topics, which can be identified as synergies and trade-offs. Further, this consultation paper acknowledges that nature-related financial disclosure, especially nature dependencies, impacts, risks, and opportunities, can provide critical information in the processes and analyses described herein, but guidance on disclosure is out of scope for this paper and we refer the reader to other organizations, such as the TNFD, and resources as cited throughout.

Foundations

Individual financial institutions will take different approaches to achieving net-zero targets and prioritizing which financing strategies to use, depending on their unique circumstances of sector and geographic exposure, business model, resources and skills, influence, operating environment, portfolio and client characteristics and more. Defining their approach, objectives, and priorities within their commitment is a critical part of developing a detailed net-zero transition plan, allowing clear communication with their internal teams and external stakeholders. This includes articulating where and how a focus on nature-related levers can support objectives.

OBJECTIVES AND PRIORITIES

Overview

GFANZ NZTP Recommendation:[48] *Define the organization's objectives to reach net zero by 2050 or sooner, in line with science-based pathways to limit warming to 1.5 degrees C, stating clearly defined and measurable interim and long-term targets and strategic timelines, and identify the priority financing strategies of net-zero transition action to enable real-economy emissions reduction.*

Clear net-zero objectives along with priority key financing strategies provide clarity to internal and external stakeholders and allow comparison between financial institutions. The overall NTZP will be guided by the objectives and priorities toward meeting a net-zero target. Nature-related levers can provide part of the solution to achieving net-zero targets and could be part of the approach where these portfolio opportunities exist.

Supplemental guidance summary

Use of nature-related levers, where relevant to the individual financial institution, should be articulated in an institution's NZTP objectives and priorities, its corporate statement, and embedded in its application of the four key transition financing strategies.

Supplemental guidance

When articulating its transition objectives and priorities, a financial institution should include the use of nature-related levers, if this is a relevant option, and how they will be embedded within its net-zero transition plan and wider organization and corporate strategy (see Box 4 for considerations about the intersection between climate and nature within objectives). Managing human activity in nature can provide about a quarter[49] of the global emissions reductions needed and, additionally, nature-related emissions removals could contribute to over a third[50] of the CO_2 mitigation needed by 2030. Such levers might be projects or activities that are part of a transition plan of an aligning portfolio company, client, or value chain entity, or might be a technology or service that a company provides or is used in conjunction with a Managed Phaseout. An analysis of nature-related dependencies, risks, impacts, and opportunities is a valuable input to identifying nature-related levers. Explicit inclusion of nature-related levers would help to guide the overall transition plan.

If nature-related levers are deemed an appropriate or relevant mitigation approach for the financial institution, this focus should form part of the statement from senior executives or the oversight body, e.g., the Board, explaining how nature-related levers support transition finance and the institution's overall net-zero goals.

Specifically, in the objectives:

- **Coverage** should call out specific or prioritized areas with exposure to nature-related levers, e.g., locations, biomes, ecosystems, sectors, etc.
- **Timelines** should reflect biological timelines.
- **Key climate topics** should consider opportunities to support nature-related levers, e.g., halting and reversing deforestation (covered in the GFANZ NZTP report[51]), combating food waste, switching to low-emitting agricultural practices.

Financial institutions may choose to prioritize certain nature-related levers, issues or activities over others, depending on magnitude of impact, availability of scientific knowledge, maturity of solutions, relevance to the institution's business strategy and regional/sector exposure, or other factors. For example, where a financial institution operates in sectors or areas prone to deforestation, it may choose to prioritize avoiding or reducing deforestation. Another financial institution may consider the available scientific knowledge on climate and nature tipping points to guide its priorities (see Ongoing Considerations). Such prioritization should be articulated clearly to provide strategic context for the other themes of the financial institution's NZTP.

BOX 4. CLIMATE AND NATURE INTERSECTION IN OBJECTIVES

While this paper focuses on climate change — one of the five nature loss drivers with the largest global impact — financial institutions are becoming more aware of the systemic financial and economic risk from nature loss in itself[52] and the GBF has energized work on a broader nature transition.

Leading scientific organizations have concluded that climate and nature will need to be considered together (see Box 1 and Box 5). Institutions could consider how they will develop their strategic response to both issues.[53] This may include:

- Within its objectives and priorities, consideration of positive overlaps (synergies) and negative overlaps (trade-offs) between climate and nature.
- A prioritization methodology to inform processes and decision-making when determining priorities between climate and nature; this may be based on business characteristics, high-priority climate sectors, ecologically sensitive geographical areas,[54] and/or other global and local factors.
- A risk assessment methodology where there is overlap in solutions for climate change and nature loss mitigation.

Financial institutions should also review synergy and trade-off considerations that are embedded in the models behind any climate pathways being used. See section Ongoing Considerations for a discussion on the state of climate and nature modeling.

The GFANZ NZTP framework introduced the four key transition financing strategies and urged financial institutions to state how they will prioritize different key financing strategies. The 2023 Technical Review Note: Scaling Transition Finance and Real-economy Decarbonization, a supplement to the GFANZ NZTP report, provided principles-based attributes on the four key transition financing strategies and discussed various approaches to calculating Expected Emissions Reductions as a means for identifying and quantifying potential emissions reductions associated with transition finance activities.

Transition Finance, consisting of the four key transition financing strategies, is necessary for enabling an orderly and inclusive transition across the whole economy. However, the greatest emissions reductions may be achieved by directing financing and related services to — rather than divesting from — high-emitting sectors, entities, and assets across the four key transition financing strategies; this approach may temporarily increase financed emissions, but also may unlock deeper, more significant decarbonization over time. Importantly, the development of a Managed Phaseout approach for high-emitting assets provides an alternative to withdrawing finance (i.e., divesting) from these assets. While withdrawal of finance may encourage decarbonization, it can also potentially have the unintended consequence of prolonging the life of high-emitting assets and even worsen their GHG emissions profile if they are transferred to those with less climate ambition, disclosure, or scrutiny.

This consultation paper discusses how nature-related levers may be used within and/or across any of the four key transition financing strategies that a financial institution may choose to prioritize based on their individual business, resources, exposure, etc.

For example, investing in nature-related levers like alternative proteins may lead to an increase in financed emissions within the portfolio company developing, manufacturing, and supplying alternative proteins, but it can also contribute to decreased emissions outside of the portfolio as it supports a societal shift away from high-emitting activities such as cattle farming.

Table 1 shows how nature-related levers could support a key transition financing strategy, an approach, or a combination of the two. The examples are non-exhaustive and not mutually exclusive; they are intended for discussion purposes. Each financial institution may select the strategies and priorities appropriate for their business and net-zero commitment. The table should be read in conjunction with the GFANZ NZTP framework.

The nature-related levers may also be only one of a set of criteria the financial institution uses, for example, when considering general finance or the net-zero transition plan from the portfolio company or client. The examples may also be used in different combinations as appropriate to the financial institution. The modality of financing of these opportunities will differ based on the financial institution and Table 1 shows possible examples in the approach.

Nature-related levers could manifest in a key transition financing strategy as follows.

1. Financing or enabling of a nature-related lever (Climate Solution)
2. Incorporation (either via engagement or financing) of a nature-related lever as part of a broader financial institution net-zero strategy to support a client or portfolio company aligning to net zero (Aligned/Aligning)
3. Consideration of potential synergies between nature and other GHG emissions-reducing strategies (Managed Phaseout)

Table 1: Illustrative examples of potential nature-related levers in the four key transition financing strategies

KEY TRANSITION FINANCING STRATEGY	EXAMPLE NATURE-RELATED APPROACH	EXAMPLE OF NATURE-RELATED LEVER	CONTRIBUTION TO NET ZERO (NOT EXHAUSTIVE)
Climate Solutions (Financing or enabling a nature-related lever)	Asset class focus, such as real assets and related services E.g., buildings, roads, and rail	Green roofs — installation, value chain, technology, servicing companies	Emissions removal from newly created green roof ecosystem
	Emissions-removal focus or replacement of high-emitting activity focus, such as within sectors, regions, portfolios E.g., meat alternatives, tree planting	Company producing plant-based food products Value chain for plant-based food products Company conducting reforestation	Emissions avoided from replacement/reduction of a higher-emitting cattle farm (may or may not be in the footprint boundary of the plant-based company) Emissions removal from newly created forests
	Technology focus, such as financing thesis for portfolios or funds, or focus for services E.g., nature-related data collection solutions	Company producing plant-based food products Value chain for plant-based food products Company conducting reforestation	Allows quantification of emissions/human impact in a transient area, such as fishing grounds, and calculation of avoided emissions
Aligned/Aligning (Using a nature-related lever within a broader strategy of net-zero alignment)	Sectoral, such as within portfolios, funds, or lines of business E.g., agriculture, food products, restaurants	Agriculture companies implementing regenerative agriculture methods Restaurant companies reducing emissions from value chain (food inputs)	Improved GHG sequestration and/or emissions reductions
	Ecosystem specific or themed, e.g., ocean, land, or freshwater; or within a region or watershed, e.g., a specific river basin, ocean-related activities	Use of technology to transform a fish farm into a vertical seafood farm, e.g., co-farming of fish, seaweed, molluscs, etc.	Improved GHG sequestration and/or lowered emissions from the farm and surroundings Scaling of the technology may increase portfolio carbon footprints but avoid emissions in broader economy
	High-emitting activity, such as within portfolio of clients and companies, or themed funds or indices E.g., avoided deforestation, food waste, trawling	Avoid, stop, or reverse deforestation Switch from trawling to long lining or trapping	Avoided emissions or increased/new GHG sinks
		Certified sustainable food value chain	Reduced emissions across the food value chain through more efficient use of land and/or demand-side management
Managed Phaseout (Considering potential synergies of nature-related levers with other GHG reducing strategies)	Project based, such as through use-of-proceeds financing E.g., restoration of site after retirement of asset	Company supplying plant material for land restoration, following decommissioning of coal-fired power plant	GHG sequestration in vegetation on restored land
	General financing E.g., cessation or replacement of high-emitting activity	Eliminating deforestation in value chain	Emissions reduced from scope 3 and carbon sinks protected

Endnotes for Foundations

48 GFANZ. Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations, and Guidance, 2022, p. 29.

49 IPCC. AR6 Synthesis Report: Climate Change 2023, 2023.

50 Griscom et al. Natural climate solutions, 2017.

51 GFANZ. Financial Institution Net-zero Transition Plans, 2022.

52 NGFS. Nature-related Financial Risks: a Conceptual Framework to guide Action by Central Banks and Supervisors, 2024.

53 Analysis of nature impacts will depend on several factors such as local context, global issues, reference points, timelines, and more. It is outside the scope of this report to provide specific guidance on this topic. It may be helpful to refer to general sources such as the Taskforce on Nature-related Financial Disclosures, and resources focused on key sectors and actions, such as the downloadable list of key sector mapping and action guidance that accompanies the PRB Nature Target Setting Guidance (UNEP FI. PRB Nature Target Setting, 2023.), sector guidance from TNFD, or priority sectors lists from the Finance for Biodiversity Foundation and other groups..

54 Ecologically sensitive areas might be identified making use of the Locate L4 phase of the LEAP approach or the GRI 101: Biodiversity 2024 criteria for identifying ecologically sensitive areas.

Implementation Strategy

A financial institution's core business activities and decision-making processes are integral to translating its transition objectives and priorities into concrete goals and desired outcomes for business teams. The Implementation Strategy recommendations focus on the products and services offered by financial institutions (which can be key in allocating and securing capital for emissions reductions in the real economy); the internal analytics and processes that drive financing activity; and internal policies for financing climate-critical activities.

The voluntary guidance considers the characteristics of nature-related levers (see Box 2), which differ from energy levers, and their impact on implementation. Also, other structural aspects of nature-related levers could prove challenging to traditional financial products and services including, for example: lack of standardization as an asset class, lack of early-stage financing, policy and regulatory uncertainty, small and complex projects, high transaction costs, historic power imbalances, and weak governance systems.[55]

PRODUCTS AND SERVICES

Overview

GFANZ NZTP Recommendation:[56] Use existing and new products and services to support and increase clients' and portfolio companies' efforts to transition in line with 1.5 degrees C net-zero pathways. Include accelerating and scaling the net-zero transition in the real economy, providing transition-related education and advice, and supporting portfolio decarbonization in accordance with the institution's net-zero transition strategy.

Through its products and services, a financial institution can "facilitate and accelerate GHG emissions reduction; signal to the real economy that transition strategies will be supported with capital or insurance coverage; and educate clients, portfolio companies, and broader society on the need for net-zero transition."[57] Within this concept, products and services can also be geared toward supporting the net-zero transition through nature-related levers.

Supplemental guidance summary

Existing and new products and services should be assessed as to whether and how they can support nature-related levers through the key aspects of product design.

Supplemental guidance

Where financial institutions use nature-related levers in net-zero planning and implementation, they should assess whether and how their existing products and services can support and de-risk transition activities, or whether new products and services are needed. For example, a financial institution's suite of products and services could be geared to do the following:

- Provide financing, investment, insurance, or other services that support companiesand activities developing mitigation actions involving ecosystems, environmental assets,

and natural commodities. This could include, where appropriate, having the product structure support connected groups, emerging nature-related technology (e.g., operational, monitoring, etc.) and processes (particularly those with longer timelines[58] and large capex needs), smaller project sizes, and local involvement.

- Construct a portfolio that is geared toward nature-related levers with a clear contribution to the net-zero transition. This could include a focus on sectors with exposure to natural climate solutions and/or other nature-related climate mitigation activities or technologies, or services such as due diligence for nature-related opportunities.
- Educate and advise clients and portfolio companies on nature-related opportunities that address emissions reductions and/or emission removals, including topics such as appropriate safeguards and accountability, monitoring and measurement of climate and nature outcomes, and assessing nature impacts and dependencies with repercussions for climate in their value chains.
- Educate and advise clients and portfolio companies on identification, assessment, and management of potential synergies and trade-offs (see Box 1) between outcomes for nature and climate associated with natural climate solutions, other nature-related climate mitigation activities, and potentially any other climate mitigation activity.

Individual financial institutions will determine product and service net-zero priority focus based on their own portfolio, business strategy, and sector/geographical exposure.[59] For nature-related levers, financial institutions could consider focusing on:

- sectors that have generally higher dependence or impact on nature (e.g., agriculture, forestry, food manufacturing);
- locations with high potential opportunity for nature-related levers due to the biome(s) and/or ecosystem(s) present (e.g., operations in a biodiversity-rich forest); and/or
- human activities affecting the ecosystem, by impact or process (e.g., manure management, forestry).[60]

The GFANZ Financial Institution Net-zero Transition Plans report discussed aspects of net-zero product design. Table 2 shows how additional nature-related considerations can augment these aspects.

Table 2: Nature-related considerations in net-zero product design

KEY ASPECT	NZTP CONSIDERATIONS	NATURE-RELATED CONSIDERATIONS
Real-economy impact	Will the product or service support and/or create incentives for the client or portfolio company to decarbonize in a meaningful way, in addition to meeting the financial institution's own net-zero targets?	Would the product or service support nature GHG emissions removals? Would the product or service support or engage connected groups? Does the product or service account for landscape/jurisdictional approaches or cover appropriate spatial areas? Does the product or service account for the biological timescales of nature-related levers? Would the product or service support and/or create incentives that result in synergies for nature? Would the product or service minimize or mitigate trade-offs for nature?
Transparency and integrity	Is the purpose of the product or service clear and transparent? Is it labeled clearly, tied to an industry standard, and/or verified by a third-party audit (if relevant) to avoid potential greenwashing claims?	Is the product or service tied to science-based assessment(s) of GHG emissions reductions from biogenic sources or removals? Is the product or service transparent on expected nature impacts and/or claims?
Data availability	Are there sufficient datasets or proxies available to build the product or service, and to measure the impact of the product or service if it is offered?	Is data available and of suitable quality and granularity (or can data be collected) to measure the climate and nature impact of the product or service if it is offered?[61]
Scale	Is the product or service commercially viable to allow it to scale? Is the product or service measured against specific performance indicators to ensure it is being provided at a meaningful scale?	As many solutions in the land/water management area are new, would products and services support research and development in this area in order to support scaling finance? Can products or services be deployed within or across similar biomes with or without relatively simple modifications?
Acceleration	Is the product or service geared toward accelerating climate solutions or the transition in hard-to-abate sectors in line with 1.5 degrees C scenarios or sectoral pathways?	Does the 1.5 degrees C scenario, sectoral pathway or commodity pathway appropriately include nature-related inputs and assumptions?
Methodology	Is there freedom in the net-zero product design process to allow for creativity and innovation?	*The same consideration applies to nature.*

ACTIVITIES AND DECISION-MAKING

Overview:

GFANZ NZTP Recommendation:[62] *Embed the financial institution's net-zero objectives and priorities in its core evaluation and decision-making tools and processes to support its net-zero commitment. This applies to both top-down/oversight structures and bottom-up tools and actions.*

Financial institutions use analytical tools and review processes to evaluate and inform financing decisions, many of which may not account for transition objectives. If institutions are to align their business activities with net-zero commitments, then they should consider integrating net-zero data, targets, and objectives into evaluation and decision-making tools and processes.

Supplemental guidance summary

Financial institutions should consider adjusting analysis and decision-making processes to account for the distinct characteristics of nature-related levers. This may be helped by a portfolio review for nature-related lever opportunities. The processes should include identification of synergies and trade-offs, and consider and document mitigation strategies.

Supplemental guidance

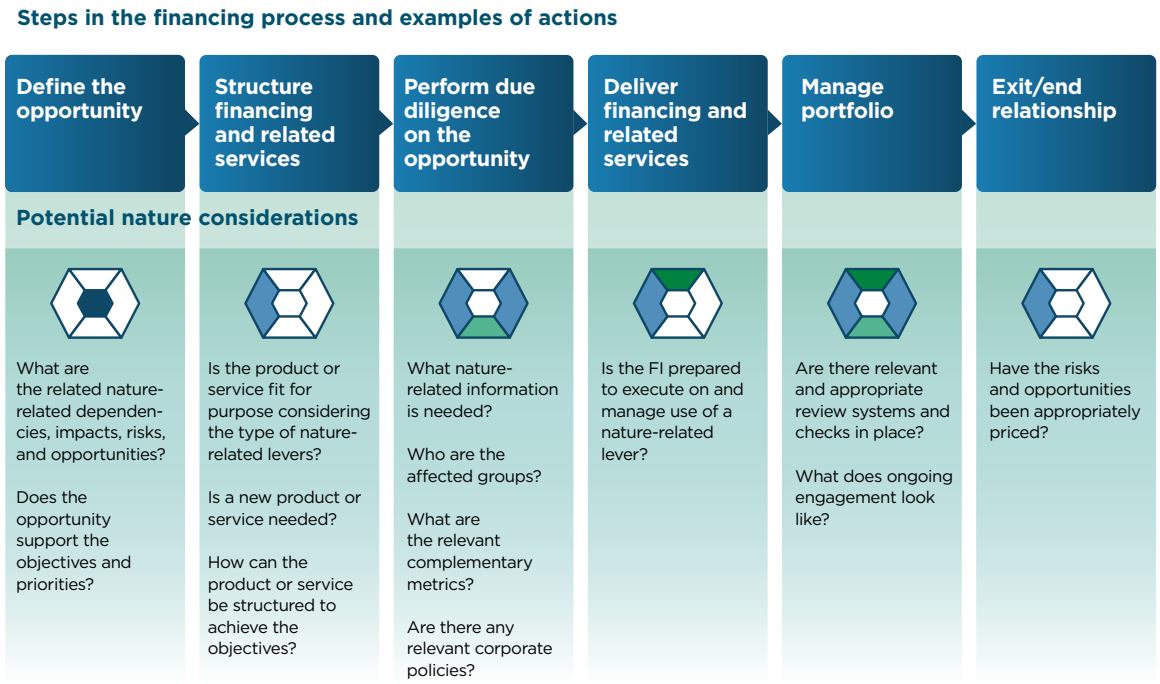
General

Financial institutions should consider adjustments to decision-making criteria so as to integrate nature-related objectives and data on impacts and dependencies. Relevant areas to review and modify may include, for example:

- Factors in risk, expected return, and pricing models: accounting for sector and geographic elements for location-specific nature-related levers.
- Integrating climate-nature synergies and trade-offs (which may include biodiversity impacts, involvement of connected groups, long-term monitoring, opportunity for scaling, among others) when assessing net-zero activities.
- Diligence processes in committees or reviews of third parties, such as asset managers, OCIOs, and investment consultants: integrating nature-related information, including on climate-nature synergies and trade-offs.
- Financing opportunity assessment and management of ongoing relationships: evaluating whether and how the value chain is considered.
- Data management: incorporating complementary nature-related data from clients and portfolio companies such as engagement with connected groups, ecosystem metrics (including species and services as relevant), and biodiversity impacts.
    - For example, evaluate net-zero scenario pathways for land, water, and other resource inputs such as land use change, land use trade-offs between climate needs and other uses (food security, conservation, etc.), agriculture productivity, nature-related policies, and demand-side changes, as appropriate.

Figure 9 illustrates the steps in the financing process where nature-related levers might be identified and potential considerations that might apply to decision-making and the wider transition plan.

Figure 9: Nature-related levers in the financing process



To support the decision-making process, financial institutions should consider modifying and using both top-down and bottom-up tools that provide nature-related knowledge and information. Examples include:

- Incorporating nature-related aspects into top-down tools that inform their own core decision-making. For example:
  - Taxonomy-based information, e.g., EU taxonomy, regional taxonomies, initiatives such as the Climate Bonds Initiative (CBI) taxonomy for land use and marine resources
  - Asset ratings incorporating potential nature-related mitigation opportunities
  - Green capital weighting with specific weights for nature-related mitigation opportunities
  - Internal thresholds and criteria on use of nature-related mitigation actions for net zero
  - A hierarchy of actions, such as SBTN's Action Framework (AR3T)[63]
  - Carve outs for supporting early stage, smaller corporates, or other structural considerations particularly found with nature-related mitigation activities
- Utilizing recognized and specialized frameworks and tools to evaluate nature-related climate change mitigation actions and potential associated nature impacts (synergies and trade-offs) from the bottom up. The following sources provide various tools, methodologies, and frameworks that may be relevant, and financial institutions may also refer to compendiums of nature-related tools for other references — TNFD, IUCN, WWF, Finance for Biodiversity Foundation, NA 100, and GRI. Also, general nature frameworks may be useful such as the ACT-D framework. Please see Appendix G for further details on these and other resources.

Portfolio management

Identification of nature-related levers already in portfolios, including exposure to AFOLU activities, provides information that could be integrated into models and decision-making analysis and other areas of a financial institution's NZTP, such as the Engagement Strategy. Such portfolio analysis may also be helpful when considering the financial institution's exposure across an ecosystem, region, or nature-related issue. Financial institutions should consider reviewing their portfolio of existing

clients and companies regularly and/or as scientific understanding and methodologies progress.

In addition to new opportunities, financial institutions should review their clients and portfolio companies to identify nature-related climate mitigation opportunities that are present in existing relationships. An analysis of nature-related dependencies, impacts, risks, and opportunities of clients and portfolio companies, among other factors, would be helpful in this review.

Synergies and trade-offs

In implementing or updating their NZTP, financial institutions should consider that any climate mitigation activity may have positive or negative impacts on nature. While the focus of an NZTP is on emissions reductions, negative impacts on nature could lead to an increase in GHG emissions. For example, this can occur: 1) by causing natural systems to increase emissions or begin emitting (e.g., flooding an area for hydropower that causes or increases methane release); or 2) by decreasing the capacity of nature to act as a GHG emissions sink (e.g., converting forest to cropland; degrading biodiversity-rich sites (such as peatlands) while mining for critical minerals). Climate mitigation and nature loss-mitigation activities may also be mutually exclusive; for example, if a piece of land is used to grow trees, it cannot be used for a solar farm. See the section Ongoing considerations for a discussion on scenario work identifying challenges of land competition.

Conversely, positive impacts on nature, such as improving health and abundance of ecosystems and biodiversity, may decrease GHG emissions and may protect and create GHG emissions sinks (e.g., regenerative agriculture requires less fertilizer and mechanized work than traditional farming and healthier soils absorb more carbon from the atmosphere).

Net-zero transition planning is an iterative process, and synergies and trade-offs may be identified and accounted for at any stage in plan development. Within decision-making processes, financial institutions should identify whether synergies for climate and nature loss mitigation and/or potential negative nature impacts from any net-zero activity are associated with their financing, investment, insurance and related products and services (see Box 5). Where trade-offs are present or expected to emerge, financial institutions should consider assessing whether portfolio companies or clients have strategies to mitigate and safeguard the associated ecosystem.

Such assessments:

- should rely on credible¶¶ information, science, experts (including external sources, if needed), disclosure from the company or client,[64] and local knowledge to capture immediate and longer-term, positive and negative, and direct and indirect impacts as inputs into a comparative analysis. Complex issues may require deeper analysis;
- should consider taking a pragmatic approach, including what has a higher probability of real-economy impact in the timeframes identified by science;
- should be explicit about the trade-offs and assumptions used and should detail the reasoning behind a decision;
- should consider opportunities to design solutions to the trade-offs;
- should consider incorporating a sensitivity analysis to inputs that may be particularly relevant to nature-related levers, such as timelines; and
- should identify climate and nature synergies and trade-offs for new opportunities as well as existing business.

¶¶ For the purposes of this paper, "credible information" refers to information that is sourced to an independent third-party organization that has acknowledged expertise on the subject in question. As nature is very dependent on local conditions, both globally accepted information and local expertise may be needed.

Synergies and trade-offs may only emerge or be identified after an activity is underway. Financial institutions should allow for revisiting the activity over time to identify synergies and trade-offs that may have developed or become apparent. Reviews should take place regularly and/or as new information emerges.

Financial institutions should document identified synergies and trade-offs and any relevant response by portfolio companies and clients, and should consider integrating all of this into their decision-making process where sound and credible information on action is available.

BOX 5. ADDRESSING SYNERGIES AND TRADE-OFFS

Multiple leading organizations have noted that trade-offs will exist between actions supporting climate mitigation and those addressing nature loss.

The IUCN stated that maximizing one key ecosystem benefit, e.g., climate mitigation, "will almost certainly result in a reduction of the quality and quantity of other ecosystem benefits".[65] WEF discussed how climate solutions draw from ecosystems, potentially setting up "new battlefronts" across resource demands, social issues, and nature loss.[66] Prioritizing "win-win" or synergistic activities may uncover cost and operational efficiencies when addressing climate change and nature together.[67] While it may be desirable to select synergistic activities, specific guidance on the assessment of benefits to nature is outside the scope of this consultation paper. Such analysis may be highly specific to the context of the activity, including location, ecosystem and species affected, and associated social outcomes, among other factors.

As financial institutions acquire greater knowledge and skills to address climate change and nature and biodiversity loss, synergies and trade-offs may be better and more frequently identified. Financial institutions may wish to weigh the positive climate impacts of an activity against known negative nature impacts. Discussion from the following organizations may be helpful in such a process.

- A joint IPBES and IPCC workshop on biodiversity and climate change discussed trade-offs through a lens of prioritizing protection of carbon-rich ecosystems, restoring degraded ecosystems, managing working areas such as found in agriculture, forestry, fishing, etc., and creating green spaces.[68] The workshop also identified a challenge in evaluating land-based climate mitigation actions: the full climate consequences of land-based climate mitigation actions need to be considered, but many of these consequences lack formal recognition in UNFCCC guidelines.[69]
- IPCC identified 10 climate mitigation options on land with "no or only little adverse impacts on other land challenges such as food security or adaptation."[70]
- The IUCN discussed a principle of nature-based solutions to manage trade-offs:[71]
  - Criterion 6: nature-based solutions equitably balance trade-offs between achievement of their primary goal(s) and the continued provision of multiple benefits. Further, "…trade-offs can be successfully managed if the likely consequences are properly assessed, fully disclosed and agreed upon by the most affected stakeholders" and "critically, it is important to recognise that trade-offs have limits, which means that safeguards will be necessary to ensure that the long-term stabilising properties of ecosystem regulating and supporting services are not exceeded."[72]
- FfBF identifies trade-offs and synergies in different solution categories and makes recommendations. It notes that sector policies can be a significant lever to manage trade-offs.[73]

HYPOTHETICAL CASE STUDY

The aim of this hypothetical case study is to show how climate- and nature-related synergies and/or trade-offs might be identified and considered when assessing investments within a net-zero transition framework. It highlights questions a financial institution could ask in analyzing synergies and trade-offs. This case study focuses on direct investment, but the concepts outlined are relevant to a range of financial products and services. Financial institutions are encouraged to consider the distinct characteristics and requirements of their NZTP, specific asset classes, portfolios, business models, sectors, and regions when applying these concepts. The case study is illustrative, not exhaustive; it does not cover all potential applications of the concepts presented in this consultation paper nor does the outcome described purport to be the only possible outcome.

SYNOPSIS

FI Global is an institutional investor with exposure to diverse asset classes worldwide. As part of the Foundations theme in its NZTP, FI Global has recognized there can be no net zero without nature. Accordingly, FI Global has committed to using nature-related levers to support net-zero implementation. It also committed to embed nature considerations in its application of the four key transition financing strategies, where possible.

FI Global is looking at two investment opportunities that show promise in lowering its portfolio emissions and contributing to the broader economic net-zero transition:

- **Opportunity A:** To invest $30 million via a blended finance vehicle to an agroforestry developer, AgCo, to support a 5,000-hectare agroforestry project
- **Opportunity B:** To invest $90 million via construction loan to company SolCo to support the build of a 100-megawatt (MW) utility-scale solar project

FI Global has analyzed the potential impacts as well as the synergies and trade-offs for climate and nature goals within these investments.

DETAILS

Opportunity A: Agroforestry

FI Global is interested in an agroforestry project integrating perennial crops among layers of vegetation and trees. The institution is particularly interested in this natural climate solution because it provides socio-economic benefits and ecosystem services while generating outsized returns when compared to its recent investments in soy crops. In this instance, AgCo would build a multi-strata agroforestry project (perennial crops with layers of carbon-sequestering vegetation). This system grows and sells agricultural products while simultaneously rebuilding a forest to provide some of the ecosystem services that a natural forest would provide.

FI Global evaluates opportunities against three investment objectives:

1. Earning returns
2. Delivering real-world benefits
3. Meeting its net-zero commitments

FI Global feels confident of the returns with this investment because agroforestry has been shown to have higher revenue per hectare when compared to traditional monoculture systems like the ones the institution has previously invested in. Additionally, this investment opportunity is de-risked because it would be supported by a loan led by a Development Financial Institution. FI Global understands the real-world benefits from similar agroforestry investments have been threefold: they have restored degraded pasturelands, improved biodiversity, and created hundreds of jobs for local farm workers. Finally, industry estimates for multi-

strata agroforestry suggest that this project has the potential to sequester 4 metric tonnes of carbon per hectare per year, bringing the potential total of this project to 20,000 tonnes of CO_2 sequestration per year, which would help the financial institution meet its broader net-zero commitments.

Sector	Sustainable Agriculture
Solution	Agroforestry
Investment (USD)	$30 million
Type of Financing	Blended Finance
Area	5,000 hectares
Term	10 years

Nature considerations and due diligence

To uphold its commitment to embed nature considerations in transition financing strategies, FI Global used internal and external experts (as planned under both the Implementation and Skills and culture components of its NZTP) to understand the feasibility of this project. Through its due diligence FI Global confirms the benefits to nature and biodiversity that similar projects have had. It also discovers that implementing a multi-strata agroforestry project means addressing a number of significant hurdles:

- Partner farmer groups will have to weather a j-curve in profitability (an initial loss in profitability followed by a significant increase), which is difficult with narrow margins in agriculture;
- There is a large skills gap and technical assistance will be required to succeed; and
- Existing project models are often not suited to other locations or must be largely modified.

FI Global also learns through its due diligence that existing projects took a simplified approach to building a version of natural forests, whereas AgCo is taking a more advanced approach (species by species) in an attempt to mirror the complexity of the surrounding natural forest. The rich plant diversity in the region where the project is planned is particularly difficult to replicate, and this makes it difficult to estimate the carbon sequestration.

Synergies and trade-offs

FI Global convenes the relevant internal sustainability and deal teams to assess whether these hurdles can be overcome and still provide acceptable financial, climate, and nature returns. The firm's internal synergies and trade-offs analysis considers that:

- Investing in a large agroforestry opportunity would significantly contribute to the institution's climate and nature targets;
- The potential returns and biodiversity benefits uphold both its fiduciary duty and its broader commitments to nature in a meaningful way, even if the carbon sequestered cannot be easily estimated;
- Carbon sequestration measurement, reporting, and verification (MRV) is a fast-developing field that may improve assessment of the sequestered carbon over the term of the investment.

To address the uncertainty around carbon sequestration and potential greenwashing risks of claiming a large amount of emissions reductions, a member of the FI Global team suggests adopting a conservative approach to estimate the carbon sequestration. Such an approach has precedence in other agroforestry transactions the team studied but would need to be customized for the complexity of this project. The team then discusses if a two-fold approach to MRV would provide the needed information: satellite imagery to measure above ground, coupled with soil probes to measure below ground biomass and carbon. Ultimately, FI Global acknowledges that the project may not satisfy the third pillar of its investment objectives (meeting its net-zero commitments) because of the difficulties in quantifying the carbon sequestration.

Discussion of next steps and key decision points

While two of the three pillars of its investment objectives can be met, FI Global is now faced with the potential trade-off of this project not contributing to the net-zero pillar. It considers the following:

- Whether it is worth investing in a natural climate solution that provides carbon sequestration that may not be accurately quantified.
- The best MRV approach and the associated costs.
- How the project will measure the biodiversity improvements.
- How much of the carbon sequestration could be quantified, and future prospects of better data.
- The costs of technical assistance for this complex project.
- The policy landscape of the region, and how shifting policies could affect the project.
- Whether another agroforestry project could be found, as there is a scarcity of projects seeking significant investment.

Opportunity B: Solar Power

FI Global is also interested in a solar power investment. This opportunity involves financing the development, operation, and maintenance of a solar farm and transmission lines.

FI Global evaluates this opportunity against the same three investment objectives it used for the agroforestry project:

1. Earning returns
2. Delivering real-world benefits
3. Meeting its net-zero commitments

FI Global feels the potential return on investment will be strong, as solar is a proven technology with low performance risk and a predictable internal rate of return. At 100 MW, the project will support the area's shift away from fossil fuels, powering approximately 100,000 homes, and will avoid 140,000 tonnes of CO_2e per year to meet growing demand. By financing this project, FI Global's energy supply banking ratio (ESBR) will improve. The ESBR compares the financing of low-carbon energy supply to the financing of fossil fuel energy supply. Improving its ESBR is important to FI Global because, in its NZTP, the institution committed to achieving an ESBR of 2:1 by 2027.

Sector	Renewables
Solution	Utility Scale Solar
Investment (USD)	$90 million
Type of Financing	Debt via Construction Loan
Area	500 acres (approximately 200 ha)
Energy Output	100 MW
Term	25 years

Nature considerations and due diligence

To uphold its commitment to embed nature considerations in transition financing strategies, FI Global used internal and external experts (as planned under both the Implementation and Skills and culture components of its NZTP) to research the impacts on nature from similar solar projects. The results formed part of its investment due diligence. FI Global learned that ground-mounted panel installation can negatively affect soil health by altering the soils' physical, chemical, and biochemical properties. Over time, the physical cover from the panels may also reduce the soil's water-holding capacity, temperature, and microbial activity. It also learned that birds are particularly harmed by solar infrastructure, due to collisions from solar glare and habitat disruption.

Similar projects have encountered legal disputes when located in an area of natural beauty. Local residents have claimed the solar fields diminish the

natural landscape and hurt property values. Legal battles can significantly delay project timelines, dramatically increase costs, and cause reputational damage to the developer and its financiers.

Following this research, FI Global conducted a similar analysis on the specific solar project site. FI Global was particularly interested in understanding the site's soil health and biodiversity baseline. This analysis found that the solar project could face a number of the general risks previously identified. FI Global learned that the project will be sited on a portion of land that:

- is a biodiversity hotspot with a number of "at risk" birds;
- has nutrient-rich, healthy soil; and
- contains a critical habitat that is essential to the conservation of several local species.

Furthermore, a portion of the site is designated an area of natural beauty, which generates significant tourism revenue for the local community.

Given the project's adverse impacts on the natural environment, FI Global applies an internal mitigation hierarchy to improve the synergies and trade-offs for the project.

Synergies and trade-offs

FI Global's mitigation hierarchy is to:

1. Avoid adverse impacts
2. Minimize those that can't be avoided
3. Offset any remaining negative impacts

Under the "avoid" mitigation strategy, FI Global engaged SolCo about the possibility of moving the project location, preferably to a brownfield site or to abandoned or degraded lands. SolCo determined that the project could be shifted away from critical habitat areas and onto portions of land with significantly lower soil health. However, even if it did so, the new site is still a biodiversity hotspot, and a portion of the area of natural beauty would still be used.

Under the "minimize" mitigation strategy, FI Global investigated whether the project could be altered to:

- have a buffer zone to protect the critical habitat sites;
- serve as a wildlife corridor;
- preserve water quality in the surrounding areas, in consultation with hydrologists and environmental engineers;
- minimize construction disturbances (e.g., noise and vibration) to reduce stress on surrounding wildlife.

Looking ahead, FI Global seeks to monitor the project's effects on the ecosystem over time as climate change may affect migration patterns and shift critical habitat in the future. Additionally, to minimize legal, development, and reputational risks, FI Global looked into how it could engage the local community and communicate these nature considerations and potential project changes.

During this portion of the analysis, FI Global identified a potential synergy that could benefit both climate and nature. An agrovoltaic system uses the land in between solar panels to grow agricultural products. FI Global determined that if the project were to implement an agrovoltaic system on the land with degraded soil, this could increase the carbon sequestration capacity — offsetting some of the project's overall emissions — and improve the health of the soil, which in turn could enhance biodiversity. Although an agrovoltaic system could generate positive impacts, implementation can be costly, carries a number of production risks, and requires longer time horizons.

Discussion of next steps and decision points

FI Global's synergy and trade-off analysis unearthed options to mitigate the project's impacts on the natural environment and generate additional benefits. Many of these options will increase upfront costs, even though they will deliver greater climate mitigation benefits in the longer term. With nature considerations embedded in its NZTP, FI Global must decide whether to proceed with this investment, given its three investment objectives (earning returns, delivering real-world benefits, and meeting its net-zero commitments).

Armed with a better understanding of the synergies, trade-offs, and mitigation options, FI Global convenes the relevant internal sustainability and deal teams to assess whether hurdles can be overcome and still provide acceptable financial, climate, and nature returns. They consider the following:

- Quantifying the positive and negative impacts over different timescales (short, medium, and long term). The power from the solar installation will immediately reduce emissions by displacing fossil fuel power and will continue to do so for the life of the panels. However, there may be greater or different long-term climate and nature benefits from installing an agrovoltaic system or maintaining/protecting critical habitat.
- The cost and benefits of engagement with local communities and connected groups to minimize development, legal, and reputational risks.
- The impact of the project on the local economy (i.e., creating jobs during construction, protecting the area of natural beauty for tourism and ecosystem services, and, in the case of creating agrovoltaic land use, introducing new agricultural products into the local economy).
- The cost and commitment of developing and managing agrovoltaic land.
- The feasibility, cost, and commitment of regular monitoring of the biodiversity, soil, and water health at the project site, both with and without the mitigation actions, including availability and accuracy of data and local expertise.
- The regulatory and standard-setting direction on climate, nature, and building policies.

INVESTMENT DECISIONS

FI Global recognizes that synergies and tradeoffs are inevitable with both investment opportunities.

In Opportunity A, FI Global decides to proceed with the agroforestry investment. It will earn desired returns and produce social, nature, and climate benefits that align with the institution's broader commitments, even though the climate benefits (carbon sequestration) may have to be conservatively estimated.

Following the decision, under the Engagement component of its NZTP, FI Global and AgCo begin to work with a multi-disciplinary group on the multi-strata agroforestry approach taken. It also works to raise awareness of the need to improve the MRV practices for this advanced natural-climate solution. FI Global also expresses appreciation for the supportive government policies and development financing which de-risked this opportunity.

With Opportunity B, the SolCo developer informs FI Global that they cannot move the site. While this decision means that the project will likely hurt the area's biodiversity, a recent court ruling from the local government — which was based on expert testimonials and evidence from local researchers — determined that the damaging effects of the climate crisis will be exponentially more harmful to biodiversity in this region than the effects of similar projects; thus FI Global decides to proceed with the investment. SolCo decides to not pursue the agrovoltaic system as a synergy because it feels the upfront costs are too high. FI Global does, however, push for several actions to mitigate adverse biodiversity effects. It advocates for the involvement of ecologists during construction to minimize wildlife and nature disturbances, to build the project so it can act as a wildlife corridor, and to monitor ecological impacts during the project's lifespan.

With both opportunities, FI Global has embedded nature considerations in the Activities and decision-making component of its NZTP Implementation Strategy. Finally, the experience served to validate the time and energy the institution dedicated to restructuring its roles, responsibilities, and remuneration, as well as investing in the upskilling of relevant deal teams in both climate and nature. Due to this restructuring, FI Global was able make decisions early in the investment process that efficiently and effectively supported its commitments and obligations.

POLICIES AND CONDITIONS

Overview

GFANZ NZTP Recommendation:[74] Establish and apply policies and conditions on priority sectors and activities, such as thermal coal, oil and gas, and deforestation. Include other sectors and activities that are high-emitting, or otherwise harmful to the climate, to define business boundaries in line with the institution's net-zero objectives and priorities.

A financial institution's policies and conditions can be used to manage their interactions with high-emitting activities and physical assets; to transition those assets to a net-zero pathway; and to speed the real-economy transition to net zero. They can set out a clear management process for priority areas and communicate the organization's intentions both internally and externally.

The Financial Institution Net-zero Transition Plans: Supplemental Information appendix included a deep dive on policies covering activities that contribute to deforestation (Box 6). Please refer to the Policies examples chapter for more information (excerpts in Appendix F).[75]

Supplemental guidance summary

Financial institutions should consider setting their own policies, using the six elements of a net-zero policy, where there are opportunities to implement nature-related levers.

Supplemental guidance

Financial institutions should consider setting their own corporate policies for sectors or activities, relevant to their business and aligned with objectives and priorities, where there are opportunities to implement natural climate solutions and/or other nature-related climate mitigation activities to support a net-zero transition.

Financial institutions could also consider setting their own corporate policies for broader issues of nature and biodiversity and specifying interlinkages with climate change policies.[76, 77] In such cases, nature-related topics should be considered in each of the policy elements that were introduced in the GFANZ NZTP framework (see Table 3).

Table 3: Nature-related considerations in elements of net-zero policies

POLICY ELEMENT	NZTP DESCRIPTION	POTENTIAL NATURE-RELATED ADDITIONS
Objective	The overarching goal of the policy, how it supports implementation of the institution's net-zero transition ambition and priorities, and how it is informed by science.	Use of nature-related levers or prioritized sectors or geographies, e.g., reversing nature loss in ecologically sensitive areas, regenerative agriculture models in the food value chain. Impacts on nature loss from climate mitigation activities.
Scope	The type of company, asset, project, and/or activity, as well as the consideration across the supply chain, to which the policy applies. Scope could include the types of business activities within the financial institution to which the policy applies, with the aim to cover the whole business where feasible over time.	Types of activities, projects, or businesses that are largely dependent or impactful on nature, or that operate in locations that may be ecologically sensitive. Nature impacts or nature-related levers may occur over a region or area such as a landscape or watershed. They may also be specific to the value chain. Any relevant commitments that may lead to synergies and trade-offs that the financial institution has made, e.g., a deforestation pledge.
Conditions	Criteria or conditions consistent with a science-based net-zero transition and under which the financial institution provides products and services within the activities, geographies, and sectors/business areas defined in the policy.	Management for impacts on nature, such as monitoring potential or expected trade-offs and/or establishing mitigation plans; inclusion of connected groups (see Box 7 and Box 8); use of accepted standards for nature-related emission/removal quantification.
Exclusions	Specific prohibited companies, assets, projects, and/or activities that cannot be served or financed by the financial institution upon conditions not being met. Examples include the prohibition of services or financing to entities in scope that do not have mitigation plans or whose activities involve expansion of high-emitting sources. Any exclusions a financial institution chooses to apply should be informed by science-based pathways and determined unilaterally.	Considering negative nature impacts and biodiversity loss, e.g. clear-cut logging, identified trade-offs. Examples include the prohibition of services or financing to entities in scope that practice clear-cut logging and where engagement is infeasible. Any exclusions a financial institution chooses to apply should be informed by current scientific understanding, including pathways if available, and determined unilaterally.
Timelines	A roadmap for the transition to net zero in the context of the policy, outlining when and under what circumstances the new and existing conditions and exclusions will apply. These timelines should be consistent with the science-based pathways used to set net-zero targets.	Adjustment for biological timelines where such timelines do not match typical financial product and service timelines, e.g., land restoration after early retirement of a high-emitting asset, being cognizant of significant milestones informed by science such as 2030 and 2050 for net-zero reductions. Policies could include an implementation roadmap explaining nature-related levers, conditions and exclusions that will apply over longer timelines.
Transparency	Disclosure of methodology used within the policy, metrics used to demonstrate compliance, and/or progress, and the governance and review process associated with the policy. Additionally, financial institutions should disclose the policies' scope and percentage coverage of the portfolio or otherwise, and any changes to the scope or coverage change.	*Same considerations apply to nature*

BOX 6. DEFORESTATION: A MAJOR FOCUS WITHIN NATURE

Deforestation accounts for half of the emissions from the agriculture, forestry, and other land-use (AFOLU) sector, itself responsible for 22% of global GHG emissions.[78] Tropical primary forest loss in 2023 totaled 3.7 million hectares, the equivalent of losing almost 10 football (soccer) fields of forest per minute. This forest loss produced 2.4 gigatonnes (Gt) of CO_2 emissions in 2023, equivalent to almost half of the annual fossil fuel emissions of the United States, and does not include the loss of the sinks and associated removal activity.[79] Addressing activities that contribute to deforestation, where present in client and portfolio companies, is an example of a climate mitigation action in NZTPs that overlaps with nature issues.[80]

A variety of tools are available to help companies and financiers map their exposures to deforestation and identify protected, high-carbon-value or key biodiversity areas where safeguards, including against leakage, are needed.[81] Awareness and momentum have grown through initiatives such as: the Finance Sector Deforestation Action, which was launched in 2021 at COP26 and comprises 34 financial institutions that are independently working to eliminate commodity-driven deforestation risks in their individual investment and lending portfolios by 2025;[82] and the COP28 outcome of the first global stocktake, which emphasized the importance of "halting and reversing deforestation and forest degradation by 2030".[83]

Action on deforestation, such as the Glasgow Leaders' Declaration on Forests and Land Use and the EU Regulation on deforestation-free products, has brought natural ecosystems and the importance of the value chain to the forefront, particularly to financial institutions whose portfolio companies or clients are directly involved or have strong ties throughout the value chain. Lessons learned on exposures and mitigation activities can be applied in terrestrial biomes beyond forests, such as grasslands, as well as freshwater and ocean biomes, to identify nature-related net-zero action relevant to specific companies and financial institution portfolios and clients.

Endnotes for Implementation Strategy

55 Coalition for Private Investment in Conservation. Towards Building a Capital Continuum for Nature-Positive Investments, 2023; Ducros, A. and Steele, P. Biocredits to finance nature and people: emerging lessons. IIED, 2022; UNEP. State of finance for nature, 2023.

56 GFANZ. Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations, and Guidance, 2022, p. 39.

57 GFANZ. Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations, and Guidance, 2022, p. 39.

58 UNEP. Analyzing Key Financial Mechanisms & Instruments For Financing Biodiversity, 2022 noted that the five-year maturity length of sustainability-linked loans and bonds was more suited to finance outputs than biodiversity outcomes, but long-term debt instruments can match the long-term nature of biodiversity and sustainable land use investments. The report and World Bank Group report, Mobilizing Private Finance for Nature, 2020, also noted that product innovation may need insurance as a market-based mechanism to support protection and restoration of natural habitat, such as parametric insurance products.

59 Many organizations have compiled lists of high-priority sectors from the point of view of nature and biodiversity loss, including Finance for Biodiversity Foundation with four tool providers (Briefing Paper: Top 10 Biodiversity-Impact Ranking of Company Industries, 2023); PBAF (Taking biodiversity into account: PBAF Standard v2023-Assessment of Dependencies on ecosystem services, 2023), and ShareAction (The Time is Now: three ways the financial sector can take action to address biodiversity loss today, 2022). These lists could be starting points for considering nature-related climate mitigation opportunities. In addition, a UNDP Sustainable Insurance Forum report (Nature-Related Risks in the Global Insurance Sector, 2021) detailed how nature-related risks could manifest through economic sectors and how insurance is impacted by and can impact nature, including development of nature-aligned products (section 3.2.4).

Other organizations, such as Business for Nature (Sector Actions Towards a Nature-Positive Future), Drawdown (The Drawdown Review, 2020), and IFC (Biodiversity Finance Reference Guide, updated May 2023) have compiled resources on how nature interacts with specific sectors.

60 Activities involving the natural environment may be defined by their impact on the environment or by the processes employed. Both impact- and process-based approaches may be applicable as an area of focus depending on the financial institution's objectives, local and scientific information available, and other factors.

61 Specific datasets may not be available or complete and a financial institution may choose to engage to obtain data and should consider if the particular approach or process is backed by science. Some considerations on the current state of nature-related data are discussed in Ongoing considerations.

62 GFANZ. Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations, and Guidance, 2022, p. 46.

63 SBTN's Initial Guidance for Business (2020) introduced the Action Framework (AR3T). The AR3T framework was developed on the basis of the mitigation hierarchy, set out in the International Financial Corporation's Performance Standard 6, and is used as a general framework for company action. It is called AR3T because it covers actions to: Avoid and Reduce pressures on nature loss; Regenerate and Restore so that nature can recover; and Transform underlying systems to address the drivers of nature loss.

64 TNFD. Recommendations of the Taskforce on Nature-related Financial Disclosures, 2023. TNFD. Guidance on the identification and assessment of nature-related Issues: the LEAP approach V1.1, 2023.

65 IUCN. Guidance for using the IUCN Global Standard for Nature-based Solutions, 2020, p. 32.

66 WEF. WEF Global Risks Report 2023, 2023.

67 UNEP. Analyzing Key Financial Mechanisms & Instruments for Financing Biodiversity, 2022.

68 The report from a joint IPBES-IPCC workshop cites "They prioritise protection of intact ecosystems, managing working lands and restoring native cover." The report details each action for specific types of ecosystems, e.g., forests, non-forest carbon rich ecosystems, etc. (Pörtner, et al. Scientific outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change, 2021.)

69 "These consequences include effects mediated by changes in non-CO_2 greenhouse gas emissions, reflectivity of the surface to solar radiation (albedo), evapotranspiration, and the concentration of aerosols in the atmosphere, as well as indirect land-use change arising from large forest-area or bioenergy cropland expansion. These effects may either reinforce or counteract climate change mitigation…" (Pörtner, et al. Scientific outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change, 2021, p.18.)

70 IPCC. Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems, 2019.

71 IUCN. Guidance for using the IUCN Global Standard for Nature-based Solutions, 2020. See other criteria that deal with related issues such as scale (Criterion 2).

72 IUCN. Guidance for using the IUCN Global Standard for Nature-based Solutions, 2020, p32.

73 FfBF. Unlocking the biodiversity-climate nexus, 2023. See table 1, p. 23, p. 30.

74 GFANZ. Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations, and Guidance, 2022, p. 52.

75 GFANZ. Financial Institution Net-zero Transition Plans: Supplemental Information, 2022. p. 109.

76 PRI. Developing a Biodiversity Policy, 2024.

77 ShareAction (in the report Point of No Returns 2023 Part IV: Climate and Biodiversity, 2023) found that nearly half of the asset managers surveyed had no sector policies for biodiversity, and those that did primarily focus on agriculture and forestry (p. 9). ShareAction (in the banking assessment report In Debt to the Planet, 2022) found banks had similar biases with policies in agriculture, forestry and fisheries (p. 82).

Engagement Strategy

There are three main engagement approaches financial institutions may use to help implement their net-zero transition plan:

1. Engage with clients and portfolio companies.
2. Engage with financial sector peers and industry associations.
3. Engage with governments and the public sector.

As well, the GFANZ report Expectations for Real-economy Transition Plans[84] recognized that the value chain was a key focus of engagement for real-economy companies. The voluntary guidance below considers all of these engagement target groups.

Engagement strategies could be a useful approach in addressing the distinct characteristics of nature-related levers that typically differ from energy-related mitigation measures (Box 2). In both engagement topics and targets, the voluntary guidance below considered these characteristics, which include long timescales to realize emissions outcomes from some nature-related levers, the location-specificity of nature, and data limitations.

CLIENTS AND PORTFOLIO COMPANIES

Overview

GFANZ NZTP Recommendation:[85] Proactively and constructively provide feedback and support to clients and portfolio companies to encourage net zero-aligned transition strategies, plans, and progress with an escalation framework with consequences when engagement is ineffective.

Financial institutions can play a significant role in supporting and advising clients and portfolio companies on their approach to the transition to net zero. Different types of institutions have different capabilities and client mixes, so engagement can vary broadly. Financial institutions should develop an engagement strategy that supports their overall net-zero strategy consistent with their commitment.

Supplemental guidance summary

Engagement should be augmented to include a two-way flow of information, advising and supporting clients, portfolio companies, the value chain and connected groups*** about nature-related levers, contribution to transition plans, and synergies and trade-offs.

*** For this paper, the term “connected groups” is used to refer collectively to any individual or group of peoples who are affected by the activities in question or who may have pertinent information on the activities. These individuals or groups may include, depending on the unique locations, circumstances, and activities: local communities, small and individual stakeholders, value chain members, Indigenous Peoples, local and regional governing and supervisory bodies, academia and subject experts, marginalized individuals and communities, among others.

Supplemental guidance

Where financial institutions identify that nature-related levers could be used in their NZTP, their net-zero engagement strategy should be augmented include nature-related considerations. Table 4 shows how nature-related considerations could be added to the characteristics of an NZTP engagement strategy.

Table 4: Nature-related considerations in engaging with client and portfolio companies

CHARACTERISTIC	NZTP CONSIDERATIONS	NATURE-RELATED CONSIDERATIONS
Clear objectives (of an engagement strategy)	The desired behaviors, requests, or results from clients or portfolio companies (including implementing a net-zero transition plan).	Desired requests or results could include: improved client or portfolio company understanding; transparency; explicit integration of nature into client or portfolio company transition plans.
Timing of engagement	Length of engagement, deadlines, and milestones to indicate progress.	Engagement length, deadlines, and milestones should reflect biological timeframes that may differ from timelines for financial products and services and may require long-term stewardship, more regular checkpoints, and ongoing engagement. They should also be cognizant of significant milestones informed by science, such as 2030 and 2050 for net-zero reductions, perhaps through an escalation process.[86]
Coverage (of an engagement strategy)	Extent of engagement over client and company portfolios (e.g., as a percentage of the portfolio) and how to prioritize if 100% engagement has not been reached (e.g., by greatest potential influence or highest emissions).	Extent of engagement should consider the degree to which value chain actors, Indigenous Peoples, Local Communities and marginalized groups are reached (including e.g., by ensuring free, prior and informed consent (FPIC)). This coverage may be a topic of engagement with the real-economy client, portfolio company, or intermediary (i.e., to determine to which extent their engagement considered these groups), rather than a feature of the financial institution's direct engagement. Prioritization of engagement activities may consider: • where there may be greater potential for emissions reductions and/or removals; • awareness of nature-related mitigation opportunities among clients and portfolio companies; • sector-specific nature-related dependencies, impacts, risks, and opportunities; • opportunities to address drivers of nature loss that are also contributing to GHG emissions; • presence of targets or ability to set targets; or • presence of transition plans or ability to develop transition plans that include nature.
Method of engagement	Including meetings, letters, conferences, educational material, and other forms of engagement selected based on engagement target and relationship (e.g., equity ownership, debt holder, client) and other considerations including levers available to the financial institution (e.g., side letters, insurance contracts) or length of time of the relationship or influence.	*The same considerations apply to nature.*

BOX 7. ENGAGEMENT WITH THE VALUE CHAIN

The two GFANZ reports, Financial Institution Net-zero Transition Plans and Expectations for Real-economy Transition Plans, present a transition planning framework that can apply to financial institutions and real-economy companies equally, establishing a shared language. However, where a financial institution would consider climate engagement with clients and portfolio companies, the focus of engagement for real-economy companies is within the value chain.

For nature-related levers, information from and involvement of the value chain are key, because of the location-specificity and data challenges commonly found with these types of activities.

For example, while regional emission factors might be used to estimate a GHG footprint without value chain engagement, similar factors may not exist for nature-related metrics. Instead, the information and data needed to adequately measure and monitor nature-related levers in some cases may be primarily or only accessible via engagement with clients, portfolio companies, and value chain actors who are closer to the activity and the specific ecosystem. The importance of the value chain is reflected in the TNFD recommendations,[87] which explicitly differentiate between risk and impact identification for direct operations and for the value chain.

Engaging with value chain actors on environmental assets or place-based activities has some challenges. Engagement may include organizations that are:

- Dispersed as opposed to concentrated (e.g., in a physical corporation);
- Resource-constrained due to size of organization, e.g., small farms or individuals, or financial vulnerability
- Unable to participate in engagement for various reasons (e.g., awareness and communication issues)[88]

For financial institutions, engagement with the value chain may be indirect, through the real-economy company that is undertaking the nature-related climate mitigation activity. Disclosure from the real-economy company on its engagement plan, execution, and outcomes is therefore helpful. Where financial institutions engage directly with the value chain, the considerations in this box may be helpful. Some examples may be large financing or insurance transactions, direct investing in private equity or real assets, or financial data services.

Financial institutions may find it useful to start conversations with their real-economy counterparts, asset managers, or other intermediaries on how they engage with value-chain stakeholders on nature-related levers. Encouraging transparent and comprehensive disclosure from real-economy companies (especially when done in accordance with known frameworks and standards such as TNFD or IFRS S2) can facilitate the exchange of important nature-related information that will help to implement an NZTP via nature-related levers, and identify and assess synergies and trade-offs. Financial institutions may find it helpful to refer to the Accountability Framework's Operational Guidance on Supply Chain Management[89] for an overview of supply chain management for sustainability outcomes, and the Finance for Biodiversity Foundation's Guide on Engagement with Companies[90] for context about engaging on nature exposures, including the value chain. Further initiatives offer information and guidance on deforestation-free value chain management.[91]

While gathering value chain data may be a key aim of and input into engagement efforts, it may take some time to gather. In the absence of such data, and in order to begin integrating nature considerations in financing decisions, financial institutions may also consider proxy data that is more readily available such as geospatial data, field data from governments or third parties.

To better understand the client or portfolio company's business with respect to climate impacts and how nature-related actions may be used in support of net-zero implementation, the following may be required:

- Nature-related dependencies, impacts, risks, and opportunities where they relate to net zero. This is particularly relevant in sectors with high emissions from nature sources and potential for nature sinks. TNFD has published a set of recommended disclosures[92] as well as guidance on the identification and assessment of nature-related issues (the LEAP approach).[93] Additionally, IFRS has developed educational material showing how the S2 standard applies at the intersection of climate and nature.[94]
- The extent to which assumptions of nature-related emissions and emissions reductions underlie net-zero pathways.

The client or portfolio company's awareness of nature impacts throughout its value chain, and specifically the implications on connected groups (see Box 8 for a discussion on Indigenous Peoples and Local Communities).

Examples of client-specific or portfolio-company-specific engagement on nature-related levers may include:

- Communicating the financial institution's objectives around nature-related levers to clients and portfolio companies (or value chain, if relevant) and explain any policies and conditions being implemented.
- Supporting and advising the relevant business[95] on topics such as how nature-related levers (e.g., avoiding deforestation) might fit into an NZTP and wider corporate strategy; the inextricable linkage between climate and nature; and identification of potential synergies and trade-offs between climate and nature.
- Seeking understanding of how the nature-related levers are, or could be, part of the company's or client's transition plan.
- Requesting metrics and data on GHG emissions and removals from nature-related activities, as well as dependencies, impacts, risks, and opportunities.[96]
- Encouraging transparency through the use of relevant disclosure frameworks, such as the TNFD or others.[97]
- Monitoring and supporting client and portfolio company actions on use of nature-related levers in their transition plans.
- Obtaining information on the identification and management of synergies and trade-offs between outcomes for nature and climate associated with natural climate solutions, other nature-related levers, and potentially any net-zero activity.[98]
- Encouraging the identification of priority sectors, regions, locations, and/or opportunities where nature-related levers for net zero are available and could be of particular importance for the global net-zero transition; e.g., areas/sectors of greatest potential influence or highest emissions.[99,100]
- Exercising rights with respect to proxy voting, director voting, and shareholder resolutions to signal to companies the financial institution's expectations for integration of nature-related levers into net-zero transition planning.
- Discussing the extent to which the relevant business engages with its value chain on the topic of nature-related levers (see Box 7).
- Understanding the approach that was taken in engaging connected groups (this could include asking whether FPIC was secured).
- Discussing the approach taken to enable or support a just transition. Financial institutions may refer to the Just Nature framework of just transition expectations of business.[101]
- Encouraging transparent disclosure of nature-related activities that impact climate mitigation, including approaches taken in value chain[102] and beyond value chain engagement, such as landscape and jurisdictional approaches.[103]
- Encouraging formation of new networks to support understanding of and action on nature-related dependencies, impacts, risks, and opportunities as they impact climate mitigation across connected areas such as watersheds, biomes, ecosystems, etc., and participation in multi-stakeholder initiatives if appropriate.[104]

BOX 8. ENGAGING WITH INDIGENOUS PEOPLES AND LOCAL COMMUNITIES (IP&LC)

Nature, environmental assets, and natural commodities are the basis of many lives and livelihoods, especially among IP&LC. Success in the use of nature-related levers requires involvement of connected groups, including IP&LC. Negative impacts of activities in nature, including those from nature-related mitigation actions, could place human rights and IP&LC rights at risk.[105] This risk has significant social implications in addition to the other engagement considerations mentioned in this paper.

Effective, early, and continuous engagement can facilitate the mutually beneficial involvement of IP&LC in design and execution of actions and projects, including drawing on local, traditional knowledge.[106] While there is no formal definition for Indigenous Peoples adopted in international law and a strict definition is seen as unnecessary and undesirable,[107] it has been found that biodiversity loss progresses 30% more slowly in Indigenous lands compared to others.[108]

The importance of human-rights-based approaches, inclusive decision-making, and whole society approaches in engagement is highlighted both in the Convention of Biological Diversity (CBD) text and the Kunming-Montreal Global Biodiversity Framework (GBF), with a particular focus on IP&LC, and includes the concept of free, prior and informed consent (FPIC). Importantly for any engagement activities, as recognized "peoples," Indigenous Peoples also have specific human rights under international human rights law,[109] as enshrined in the International Labour Organization's Convention 169 on Indigenous and Tribal Peoples, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and the CBD.

Marginalized groups may require particular attention in engagement approaches, given the heightened risk of harm.[†††] Within IP&LC — as within other communities and groupings — some individuals may be included as a marginalized group, due to gender, age, or disabilities, potentially necessitating additional care in engagement approaches.[110] These groups may include, depending on local context, migrant workers, women, elders, children and youth, Indigenous Peoples, people with disabilities, and the global south.[111]

While engagement may be carried out by real-economy companies or intermediaries such as asset managers, a financial institution can ask its counterparties for information on how engagement was conducted, and whether or which standards were followed; for example, international standards for human rights and environmental due diligence as laid out in the UN Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework (2011) and the OECD Guidelines for Multinational Enterprises on Responsible Business Conduct (2023).

[†††] Marginalized groups are those that have certain socio-economic characteristics that make them more likely to suffer from discrimination, unequal access to rights, unequal access to – and control over – resources, or unequal access to development opportunities. Adopted from TNFD. Guidance on engagement with Indigenous Peoples and Local Communities and affected stakeholders, 2024, p. 18.

For more specific frameworks and guidance on engagement with IP&LC and marginalized groups, financial institutions may wish to refer to the following publications:

- TNFD Guidance on engagement with Indigenous Peoples, Local Communities and affected stakeholders, 2023.
- SBTN Stakeholder Engagement Guidance v0.1, 2023.
- Annexes on Engagement with Indigenous Peoples in the OECD Due Diligence Guidance for Meaningful Stakeholder Engagement in the Extractive Sector, 2017, and OECD-FAO Guidance for Responsible Agricultural Supply Chains, 2016.
- The requirements for customary rights holders and other stakeholder engagement under the Verra Nature Framework (draft consultation version 2023).
- World Benchmarking Alliance Nature Benchmark Investor Guidance, 2022, for suggested questions to ask counterparties on IP&LC engagement.
- GRI 101: Biodiversity 2024's requirements to report on engagement for restoration and rehabilitation, as well as the disclosures in GRI 411: Rights of Indigenous Peoples 2016 and GRI 413: Local Communities 2016.
- Principles & Guidelines for Direct Access Funding for Indigenous Peoples' Climate action, Biodiversity conservation and Fighting desertification for a sustainable planet, 2022.
- Business for Nature's Nature Strategy Handbook for considerations and guiding questions in assessment and collaboration, building on the ACT-D framework (Assess, Commit, Transform, Disclose framework).
- Nature Action 100's Company Benchmark Indicators, 2024.
- The Accountability Framework's Core Principles and operational guidance, especially the guidance on Respecting the Rights of Indigenous Peoples and Local Communities[112] and on Free, Prior and Informed Consent.[113]

INDUSTRY

Overview

GFANZ NZTP Recommendation:[114] Proactively engage with peers in the industry to 1) as appropriate, exchange transition expertise and collectively work on common challenges and 2) represent the financial sector's views cohesively to external stakeholders, such as clients and governments.

A collaborative approach that involves industry peers and industry-related bodies (including, for example, civil society, nongovernmental organizations, academia) is needed to increase awareness and support use of nature-related levers for net-zero implementation and to exchange nature-related expertise, as such topics are new to finance.

Supplemental guidance summary

Engagement with relevant groups may include industry peers, industry-related bodies, academia, nongovernmental organizations, and local groups and may be on an individual, landscape, or jurisdictional basis in order to collaborate, gather or develop pertinent data, tools or methodologies.

Supplemental guidance

Examples of topics for engagement with finance sector peers, industry-related bodies, academia, nongovernmental organizations and local groups may include:

- Raising awareness of the need for nature-related levers in meeting global net-zero targets, the current funding gap for such activities, as well as subsidies[115] and policies that currently hinder their implementation.
- Highlighting and addressing synergies and trade-offs at the nexus of climate and nature.[116]
- Using, expanding, and developing climate-focused collaborations for research and information sharing to explore specific challenges that hinder financing of nature-related levers for climate mitigation at scale, and possible solutions. Such challenges could pertain to:
  - data availability;
  - specific contexts (e.g. sectoral, regional) and their potential for nature-related actions and levers that deliver outcomes in support of net zero;
  - methodology development for measuring emissions reductions from or sequestration in ecosystems; and/or
  - the location-specificity and longer timescales associated with nature-related levers.
- Supporting and scaling the work of nature-focused initiatives and groups such as TNFD, SBTN, NA100, the Finance for Biodiversity Foundation, UNEP FI and PRI Spring.[117] Insights from this wider field are expected to support the scaling of nature-related action for net zero.
- Learning from other institutions about their experience with relevant tools, data, engagement principles, and financing vehicles relating to nature. This may help identify and overcome specific gaps hindering progress.
- Representing a voluntary pan-financial sector view on critical issues, which could include emission sinks and sources in nature (e.g., deforestation, soil degradation) as well as challenges in scaling financing for nature-related levers (e.g., due to lacking/inconsistent data).

Alternative approaches

The complexity of natural systems and the location-specificity of nature-related levers may make landscape or jurisdictional approaches to engagement desirable or necessary.[118] For example, stakeholders within a landscape[119] could collaborate to advance shared sustainability goals, including transition to net zero, and reconcile and optimize multiple objectives (social, economic, and environmental). Collaboration could be guided by processes of integrated landscape management, convenings of diverse stakeholders to develop and implement land-use plans, policies, investments, and other interventions.[120]

GOVERNMENT AND PUBLIC SECTOR

Overview

GFANZ NZTP Recommendation:[121] Direct and indirect[122] lobbying and public sector engagement should, in a consistent manner, support an orderly transition to net zero, and as appropriate, encourage consistency of clients' and portfolio companies' lobbying and advocacy efforts with the institution's own net-zero objectives.

Financial institutions engage with a range of government and public-sector institutions on a broad set of topics, including the net-zero transition, with the goal of influencing the direction of policy and regulation. The characteristics of nature-related levers may require specific consideration.[123]

Supplemental guidance summary

Engagement should consider regional and local governments, including governing structures of IP&LC, and proactively include nature-related topics in support of net-zero commitments.

Supplemental guidance

Policies that encourage climate action and disclosure are becoming more widespread[124] and some governments are introducing policies to make it more difficult and/or more expensive to compromise or damage nature,[125] as well as policies to tackle emissions from nature sources.[126] However, environmentally harmful subsidies have been estimated at $1.8 trillion globally, including many subsidies that specifically impair nature's ability to function as an effective sink for emissions,[127] distorting the financial analysis of such opportunities.

Engagement should consider including regional and local governments, as well as government structures of IP&LC, due to the location-specific aspect of nature-related levers.

Financial institutions should consider proactively including nature-related topics pertaining to net-zero commitments as part of their engagement with public sector institutions on net zero. Examples of possible engagement topics include:

- Discussing the need for nature-related levers in net-zero implementation at the national, regional, and local levels, and in the private sector; the challenges in using such levers; and the link between nature and financial stability.[128]
- Seeking clarity on the role of nature within national targets, strategies and plans (including NDCs and NBSAPs),[129] and in particular, assumptions on nature sinks and sources within net-zero pathways.
- Requesting clear policy signals from government and regulators on wider nature strategy, and how policies might affect management of synergies and trade-offs between nature and climate targets.[130] For example, clear regulations and government policies serve to create a level playing field for real-economy companies and the activities being financed[131] and remove risks for early adopters.
- Encouraging appropriate economic incentives and policies that support development and scaling of natural climate solutions and other nature-related levers as part of general catalyzation of transition finance.132 Incentives can increase data availability and the suite of investable opportunities.
- Encouraging uptake of nature-related disclosures, such as the TNFD, to improve quality and availability of data required to employ nature-related levers in the net-zero transition.[133]
- Integrating nature-related actions when mobilizing capital to emerging markets and

developing economies — often the home to critical ecosystems and carbon sinks.[134]

- Integrating nature with climate considerations in a "whole-of-government" approach to avoid silos and effectively address systemic issues.[135]
- Discussing the need for data and information, such as pathways, to support informed decision-making.

The TPT Nature Working Group highlighted the policy cues that are needed to support the development of integrative nature and climate transition plans (see Box 9).

In reviewing direct and indirect policy engagement strategy and whether they are aligned with the institution's net-zero commitments and with the overall transition to a net-zero economy,[136] financial institutions should also consider nature-related levers in support the broader economy net-zero transition. Some approaches to this may include:

- Review trade association positions on nature, with consideration of synergies and trade-offs between climate and net zero.
- Engage on policy, either with senior government leadership if available and appropriate, or through industry groups or trade associations or formal consultations, to support nature synergies with net-zero implementation.
- Provide analysis, research, or thought leadership on the case for policy action on nature and climate synergies.

BOX 9. RECOMMENDATIONS OF THE TRANSITION PLAN TASKFORCE (TPT) NATURE WORKING GROUP

The UK TPT Nature Working Group was asked to advise on the appropriate consideration of nature in the TPT's work. The working group paper[137] provided advice on integrating nature into the TPT Disclosure Framework and suite of sector guidance, and suggested an integrative approach to holistic nature and climate transition planning. It highlights the policy cues that are needed to support this development in the following five recommendations.

1. **UK policymakers continue to develop effective mandatory reporting requirements for climate transition plans,** reflecting the IFRS S2 standard and the TPT Disclosure Framework, and strengthen expectations on compliance.
2. **UK Government publish an updated NBSAP setting out how it will deliver on the commitments under the Global Biodiversity Framework, including disclosure policy, setting economic strategies, and fiscal decision-making.**
3. Building on recommendation 2), **UK Government should use the NBSAP to set out a staged approach to introducing TNFD-aligned disclosures and then climate-nature transition planning.** This can inform consultation on implementation, balancing the need to act with developing capabilities amongst business. In doing so, the UK Government must continue UK leadership whilst seeking integration, consolidation and international alignment of reporting standards.
4. **Technical bodies and NGOs should continue to play a critical role in working with government, regulators and business to build capability, awareness and best practice, and to continue to update and develop nature-related standards and guidance,** to ensure transition plans follow the latest science.
5. Reflecting the TPT model, **UK Government, technical bodies and business should collaborate on a holistic disclosure framework** that integrates climate and nature transition planning guidance, in a format which can be used within a regulatory approach.

Endnotes for Engagement Strategy

78 IPCC. AR6 Synthesis Report: Climate Change 2023, 2023, p. 5.

79 WRI. Forest Pulse, April 2024; WRI. Global Forest Review, update 8, 2024.

80 The NGFS has developed an illustrative case study for nature-related financial risk associated with degradation of the Amazon rainforest. NGFS. Nature-related Financial Risks: a Conceptual Framework to guide Action by Central Banks and Supervisors, 2024.

81 For an overview of such tools: WBCSD. Deforestation-free finance: A guide on tools and frameworks for financial institutions, 2023.

82 Finance Sector Deforestation Action (FSDA). Progress Report, 2024.

83 UNFCCC. Outcome of the first global stocktake, 2024.

84 GFANZ. Expectations for Real-economy Transition Plans, 2022.

85 GFANZ. Financial Institution Net-zero Transition Plans, 2022.

86 The GFANZ NZTP report, p. 62, provides guidance on the role of an escalation process when the engagement target is not responsive.

87 TNFD. Recommendations of the Taskforce on Nature-related Financial Disclosures, 2023.

88 In cases where engagement targets may be resource constrained or unable to participate in engagement, the concept of FPIC is of particular importance.

89 Accountability Framework. Operational Guidance on Supply Chain Management, revised May 2020.

90 Finance for Biodiversity Foundation. Guide on Engagement with Companies, 2022.

91 Examples include the upcoming Deforestation-free Transition (DEFT) Pathway or the Team Europe Initiative on Deforestation-free Value Chains.

92 TNFD. Recommendations of the Taskforce on Nature-related Financial Disclosures, 2023.

93 TNFD. Guidance on the identification and assessment of nature-related issues: The LEAP approach, 2023.

94 IFRS. Educational material-Nature and social aspects of climate-related risks and opportunities, 2023.

95 For a financial institution, this may include portfolio companies and clients, and for a financial institution or real-economy company this may be connected groups.

96 Refer to Table 5 for considerations in the selection of nature-related complementary metrics and targets in the context of nature-related net-zero implementation activities.

97 Disclosure in accordance with known frameworks and standards such as TNFD, IFRS S2, or CDP would be particularly useful for collation and comparability. For an overview of various disclosure frameworks and standards, financial institutions may refer to a comparison by UNEP FI, WWF, and GEF. Accountability for Nature: Comparison of Nature-Related Assessment and Disclosure Frameworks and Standards, 2024.

98 Significant frameworks and publications addressing engagement on synergies and trade-offs at the climate-nature nexus include: FfBF. Unlocking the biodiversity-climate nexus, 2023; The 10 Equator Principles for determining, assessing, and managing related environmental and social risks, including at the nexus.

99 WBCSD. An Introductory Guide for Net Zero Target Setting for Farm-Based Agricultural Emissions, 2022.; ISEAL. Effective company actions in landscapes and jurisdictions v1.0, February 2022.

100 Note that in many cases, sectors with high emissions, regardless of whether emissions sources are nature-based or not, are also associated with biodiversity loss, causing feedback loops that exacerbate impacts on both nature and climate. (ShareAction. The Time is Now, 2022.) Organizations may consider outputs of ENCORE or the LEAP approach or those of emerging tools such as the Nature Finance Align App in conjunction with emissions data to guide focus areas for their engagement.

101 Muller and Robins. Just Nature: How finance can support a just transition at the interface of action on climate and biodiversity, 2022. Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy, London School of Economics and Political Science.

102 Some frameworks currently available would accommodate disclosure on value chain including, but not limited to, the CDP full corporate questionnaire (which in 2024 combines three existing questionnaires across climate change, forests, and water security); TNFD. Guidance on value chains, v1.0, 2024; and IFRS S2.

103 CDP. Landscape and Jurisdictional Approaches Opportunities to finance a nature-positive net-zero transition, 2022; CDP. Global Corporate Report on Forest Jurisdictional Approaches, 2022.

104 ISEAL. Joint landscape position papers and roadmap, 2022.

105 TNFD. Guidance on engagement with Indigenous Peoples, Local Communities and affected stakeholders, 2024.

106 SBTN. Stakeholder Engagement Guidance v0.1, 2023.

107 TNFD Glossary, version 2.0, 2024.

108 Purvis, A. et al. IPBES Global assessment report on biodiversity and ecosystem services-Chapter 2.2 Status and Trends-Nature, 2019.

109 SBTN. Stakeholder Engagement Guidance v0.1, 2023.

110 TNFD. Guidance on engagement with Indigenous Peoples, Local Communities and affected stakeholders, 2024.

111 TNFD. Guidance on engagement with Indigenous Peoples, Local Communities and affected stakeholders, 2024; SBTN. Stakeholder Engagement Guidance v0.1, 2023.

Endnotes for Engagement Strategy continued

112 Accountability Framework. Operational Guidance on Respecting the Rights of Indigenous Peoples and Local Communities, 2020.

113 Accountability Framework. Operational Guidance on Free, Prior and Informed Consent, 2020.

114 GFANZ. Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations, and Guidance, 2022, p. 70.

115 Earth Track. Protecting Nature by Reforming Environmentally Harmful Subsidies: The Role of Business, 2022.

116 See, for example, the efforts of CA100+ in reducing the impacts of the food sector on climate.

117 The Finance for Biodiversity Foundation's Guide on Engagement with Companies provides an overview of some key initiatives in the nature and biodiversity space.

118 The IPBES Global Assessment Report 2019 notes that nature goals for 2030 and beyond may only be achieved through transformative changes across economic, social, political, and technological factors.

119 For jurisdictional approaches, the landscape is defined by administrative boundaries of subnational governments and the approach is implemented with a high level of government involvement. (CDP. Assessing the Credibility of Disclosed Corporate Engagements in Landscape and Jurisdictional Approaches, 2023; CDP. Collective action: Corporate Engagement in Landscape and Jurisdictional Approaches, 2021; ISEAL. Effective company actions in landscapes and jurisdictions v1.0, 2022). Watersheds may also be an appropriate area to define engagement.

120 CDP. Collective action: Corporate Engagement in Landscape and Jurisdictional Approaches, 2021.

121 GFANZ. Financial Institution Net-zero Transition Plans, 2022.

122 As per the GFANZ NZTP framework, "indirect" is taken to mean "via a third party on behalf of the institution, such as an industry trade association."

123 Nature-related levers often have characteristics that are not commonly found in energy-based levers. See Box 2 for a discussion on these characteristics. For more detail, see Pörtner et al. Scientific outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change, 2021.

124 World Bank. Reality Check: Lessons from 25 Policies Advancing a Low-Carbon Future. Climate Change and Development Series, 2023.

125 See for example the CSRD (ESRS E4-1); US Endangered Species Act; the European Union's Regulation on Deforestation-free products (EUDR); the US OMB Ecosystem Services Guidance; and the UK's Biodiversity Net Gain.

126 See Denmark's carbon tax on livestock as part of the Aftale om et grønt Danmark. Accessed August 2024.

127 Earth Track. Protecting Nature by Reforming Environmentally Harmful Subsidies: The Role of Business, 2022.

128 NGFS. Statement on Nature-Related Financial Risks, 2022.

129 The IPBES-IPCC co-sponsored workshop on biodiversity and climate change recognized that NDCs do not yet fully recognize or account for nature-related levers (such as emissions from agriculture and other nature-related activities) and NBSAPs have yet to involve civil society to the same degree as NDCs. The workshop further concluded that "The mutual reinforcing of climate change and biodiversity loss means that satisfactorily resolving either issue requires consideration of the other" (Pörtner et al. IPBES-IPCC co-sponsored workshop report on biodiversity and climate change, 2021, p. 15.)

130 Pörtner et al. Scientific outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change, 2021; Pörtner et al. Overcoming the coupled climate and biodiversity crises and their societal impacts, 2023.

131 World Bank Group. Mobilizing Private Finance for Nature, 2020.

132 Incentives could come in the form of sustainable agricultural via rural credit programs, due diligence legislation for supply chains via blended finance structures, or more indirectly through green taxonomies and transparency measures. UNEP, Global Canopy, ELD. State of Finance for Nature, 2023.

133 UBS. Bloom or bust white paper, 2024; Finance for Biodiversity Foundation. Aligning Financial Flows with the Global Biodiversity Framework: Translating Ambition into Implementation-Key Recommendations for Governments from the Financial Sector, 2024.

134 Neugarten, et al. Mapping the planet's critical areas for biodiversity and nature's contributions to people. Nature communications, 2024; OECD. Natural Resources and Pro-Poor Growth: The Economics and Politics, 2008, p. 5; AIGCC and PwC. Nature at a Tipping Point. A guide and case studies for Asia Pacific investors on managing nature-related risks, 2024.

135 PRI. Nature Policy Roadmap: Policy recommendations for scaling up investor action for nature, 2024.

136 The GFANZ NZTP report, p. 75, included guidance on policy engagement and alignment with net zero.

137 TPT Nature Working Group. The Future for Nature in Transition Planning, 2024.

Metrics and Targets

Metrics and targets can be used for multiple purposes, such as signaling a commitment to net zero; driving action inside an institution; increasing understanding of client and portfolio company plans; and channeling financing to real-economy transition activities.[138] Nature-related metrics can be considered alongside metrics for climate outcomes.

Healthy ecosystems, in general, result in lower GHG emissions and greater absorption of GHG emissions. Climate mitigation actions that deliver GHG emissions reductions in the short term, but cause negative impacts to nature in the medium and long term, may impair nature's ability to act as a carbon sink or result in higher emissions as ecosystems degrade. Relying on emissions-based metrics alone could therefore send misleading signals about longer-term climate change mitigation using nature-related levers.

METRICS AND TARGETS

Overview

GFANZ NZTP Recommendation:[139] Establish a suite of metrics and targets to drive execution of the net-zero transition plan and monitor progress of results in the near, medium, and long term. Include metrics and targets focused on aligning financial activity in support of the real-economy net-zero transition; on executing the transition plan; and on measuring changes in client and portfolio GHG emissions.

Specific metrics and targets methodologies may be more suited to a certain sector or net-zero financing approach. Financial institutions should take care to set and use various metrics and targets appropriately.[140]

While GHG emissions and real-economy climate metrics continue to be the focus of net-zero efforts, we propose the use of complementary nature-related metrics and targets. There are benefits to financial institutions in monitoring climate metrics and targets alongside nature-related metrics and targets, including process efficiencies, holistic strategic management of these interconnected issues, and improved identification of synergies and trade-offs.

Supplemental guidance summary

Financial institutions should consider measuring and monitoring complementary nature-related metrics and targets alongside climate ones. This includes monitoring where nature-related credits are used. A number of tools and methodologies are noted.

Supplemental guidance

Metrics and targets are necessary to drive ambition, track progress, and communicate results.

Where GHG emissions reductions are linked to nature-related activities, or in the cases of synergies and trade-offs associated with climate mitigation activities, complementary nature-related metrics and targets should be selected and monitored.

Guidance on development and use of GHG emissions removals toward net-zero commitments is nascent. Removals can be based in ecosystems and can be considered a Climate Solution (one of the four key transition financing strategies) that support a net-zero transition across the economy. Financial institutions should consider measuring and monitoring removals alongside their portfolio emissions, if relevant to their net-zero transition plan.

In some cases where emissions arise from anthropogenic activity with nature (i.e., non-energy related and non-process-related emissions), accounting methodologies are nascent.[141] To support full coverage of the portfolio of clients and companies, financial institutions could monitor available guidance on accounting for nature-related emissions[142] and adjust metrics and targets as needed and in accordance with their net-zero commitment requirements.

Where financial institutions also have nature transition targets, they could be monitored alongside climate targets to:

- benefit from efficiencies in data collection and monitoring processes;
- promote strategic management and oversight of both sets of issues;
- support identification and analysis of synergies and trade-offs; and
- be transparent on both climate and nature strategies, and progress, as well as their intersections.

Where a financial institution chooses to set and monitor dedicated or complementary nature transition metrics and targets, it should consider the closely linked efforts of the teams working on climate and net-zero metrics and targets and the teams working on nature.

Selecting complementary nature-related metrics and targets

Relying on emissions-based metrics alone could be misleading for longer-term climate change mitigation. In the case of nature, negative impacts to nature from climate mitigation decisions, may impair nature's ability to act as a carbon sink or even result in further emissions as ecosystems degrade. Financial institutions should consider the following reasons for selecting nature-related metrics and targets:

- to support expected GHG emissions reductions (or removals), by measuring improvements in ecosystems, especially if tangible emissions reductions lag behind observable changes in ecosystem condition;
- to support monitoring of the expected impacts of synergies and trade-offs, which in turn may indicate that the financial institution needs to adjust its approach;
- to monitor specific engagement activities, including with IP&LC and marginalized groups;
- to account for longer timelines reflecting biological processes.

Financial institutions could consider the aspect of nature most relevant to the issue in question — be that impact drivers or aspects of the state of an ecosystem (e.g., ecosystem extent and condition, species populations, extinction risk) — and look to measure that aspect.[143]

Financial institutions could identify priority issues and sectors and focus on the greatest opportunities for nature-related levers or the greatest expected synergies and trade-offs. Lists of priority sectors for nature[144] and high-impact commodities[145] have been developed by various organizations and the

SBTN provides guidance on prioritization in nature target setting.[146]

Financial institutions should consider customizing the metrics to account for the location-specific context of the activity.‡‡‡ Customization could occur:

- at a client or portfolio company level
- at an activity location level
- at a biome, jurisdictional, landscape or ecosystem level
- across a financial institution's portfolio, to help understand the institution-wide impact on priority natural issues or sectors, such as water or forests, to match the objectives set in Foundations.

Selection of complementary nature-related metrics and targets should be aligned with financial sector guidance to support transparency and comparability.

Guidance on nature-related metrics and targets is a fast-developing area. Financial institutions should not delay selection of metrics due to their nascency and range of options, but should review metrics and targets regularly and adjust them as needed in accordance with new insights or sectoral guidance. Measuring and monitoring a limited initial set of nature-related metrics and targets can support net-zero transition efforts, even if expansions and adjustments are required at a later stage.[147]

Table 5 provides examples illustrating where complementary nature-related metrics and targets may aid net-zero aims under each of the four key transition financing strategies.

‡‡‡ Note that depending on the client/portfolio company's activity and context in question, complementary metrics and targets may not always be impact/outcome-based; activity/process-based metrics and targets may provide useful information (e.g. volumes of financing provided for nature-related climate mitigation activities), especially but not exclusively where impact/outcome-based data is unavailable. Engagement could encourage the collection of impact/outcome-based data.

Table 5: Illustrative examples of complementary nature-related metrics in transition finance

STRATEGY	EXAMPLE OPPORTUNITY	COMPLEMENTARY NATURE-RELATED METRICS CHOSEN	RATIONALE FOR USE OF NATURE-RELATED METRICS IN THE NET-ZERO CONTEXT
Climate Solutions	Solar panel field replaces fossil fuel power	The amount of land use change and other metrics reflecting ecosystem condition and extent	Land conversion (due to site and access road development) may lead to immediate CO_2 emissions and other GHG stored in cleared biomass; disrupted ecosystems may be impaired in their ability to sequester future emissions. Restoration and protection of ecosystems on and around the site may offer additional CO_2 sequestration benefits in the medium and long term.
Aligned/Aligning	Switch to passive cooling systems that use water and airflow to reduce use of electricity or fossil fuel to power HVAC systems	The amount of water used, overall waterbody quality and health, including ecosystem condition	Exploitation and degradation of freshwater ecosystems used for water supply may lead to GHG emissions and may impair the ability of the ecosystem to store future emissions.
Managed Phaseout	Early retirement of coal-fired power plant	Ecosystem health on site and in neighboring/ watershed areas	Depending on measures taken to dismantle and remove materials and equipment, pollutant runoff may negatively impact nearby and connected ecosystems, releasing GHG emissions and impairing their sequestration capacity. 'Greening' of the site may offer CO_2 sequestration potential in biomass in the medium and long term.
		Quantity and previous condition of land converted for biofuel plantation to replace power provision	Replacement of the energy previously provided by the phased-out fossil-fuel power station with energy derived from biogenic material may lead to further land degradation elsewhere due to intensive plantation of biofuel crops, leading to emissions from the degraded ecosystems.

For climate mitigation activities under any of the four key transition financing strategies, financial institutions selecting complementary nature-related metrics should consider:

- The nature-related dependencies, impacts, risks, and opportunities[148] associated with the activity and the location — does it depend on, or impact, any natural system, service, or asset; is it associated with any key impact drivers;[149] does the activity depend on the state of nature being maintained or improved?[150]
- The location and environmental context of potential impacts — are there ecologically sensitive areas or species that warrant prioritization for monitoring?
- Activity or site-specific baseline conditions relating to nature and nature-based emissions — what were conditions like prior to commencement of the activity?
- Links to the connected ecosystem (e.g., watershed, landscape, etc.) — are the natural services or assets shared? Is the activity upstream or downstream of other users of the ecosystem?
- Connected groups, particularly IP&LC and marginalized communities — do they hold rights and agency over the location, the natural services or assets, or biological intellectual property?
- The position of the activity within the value chain and potential challenges associated with

some value chain organizations — are value chain organizations dispersed or concentrated (e.g., all within one physical corporation)? Are value chain actors resource constrained or otherwise disadvantaged (e.g., due to communication issues)?

- The time from commencement of the activity to expected emissions reductions or removals — are emissions or removals expected in the short term or do they depend on biological lifecycles (e.g. of a growing forest)? Is the activity associated with long-term stewardship?

Carbon credits

Where carbon credits are used, financial institutions should monitor types of credits related to nature. Note that guidance on the use of such credits is still in development at time of writing and financial institutions are directed to their sector alliances for updates. High-quality, high-integrity credits are an important vehicle to support nature-related climate mitigation actions.

The Integrity Council for the Voluntary Carbon Market (ICVCM) and Voluntary Carbon Markets Integrity Initiative (VCMI) have produced guidance to support the development and use of high-quality carbon credits and bolster voluntary carbon markets. At the time of writing, the ICVCM is working on several methodologies related to nature, with further additions anticipated in the future:[151]

- Afforestation, reforestation, and revegetation
- Biodigesters (home and industrial)
- Buffer practices (field borders, riparian buffers, grass waterways)
- Improved forest management
- Nutrient/nitrogen management
- Rice cultivation methane avoidance
- Sustainable agriculture (rotational crops, low till/no tillage, structural and vegetative practices, etc.)

Tools, methodologies, and guidance on nature-related metrics and targets

There is work underway on tools and methods for several aspects of nature-related metrics and targets, such as biodiversity, land use change, nature and biodiversity loss drivers, and other topics.

Table 6 indicates some of the tools and methods available at the time of writing. It is not an exhaustive list. Financial institutions should research and select the tools and methods best suited to their unique business and circumstances, recognizing that methodologies and guidance are evolving. Financial institutions may wish to consider the extent to which tools or methods are informed by science, transparent, and decision-useful for the financial sector.

Table 6: Indicative, non-exhaustive list of resources on nature-related metrics and targets.

For more information and full citations, refer to Appendix G.

RESOURCE		TOPIC
PREDOMINANTLY APPLIES TO TARGET SETTING		
Finance for Biodiversity Foundation's Nature Target Setting Framework for Asset Managers and Asset Owners		Sectoral nature target setting; nature loss drivers
SBTN metrics and targets (Note: resources mentioned here are part of a wider target setting framework)[152]	Land	Technical guidance: science-based target setting for land
	Freshwater	Technical guidance: science-based target setting for freshwater
	Ocean	Technical guidance: science-based target setting for ocean ecosystems; in development, expected 2025
	Biodiversity	Biodiversity as part of the wider target-setting guidance framework
TNFD metrics architecture (Disclosure Recommendations, section 4, annexes 1 and 2); guidance on assessment metrics and state of nature measurement (TNFD LEAP approach, annexes 1 and 2, Report section for target setting); TNFD Additional Guidance for Financial Institutions; TNFD Guidance for corporates on science-based targets for nature; TNFD Additional Guidance by Sector (section 3 of each sector document)		Recommendations on guidance on the assessment and measurement of nature-related dependencies, impacts, risks and opportunities, including metrics and target setting.
PRB Nature Target Setting Guidance		Nature target-setting approach for banks
SBTi FLAG		Climate target-setting for land-based emissions
PREDOMINANTLY APPLIES TO ACCOUNTING		
PBAF Standard		Biodiversity impact and dependency assessment
System of Environmental-Economic Accounting (SEEA-EA)		Ecosystem services accounting
Ecosystem Services Valuation Database (ESVD)		Database of economic values of ecosystem services
The Align project — Aligning accounting approaches for nature		Principles and criteria for biodiversity measurement and valuation
Greenhouse Gas Protocol Land Sector and Removals Guidance (draft for pilot testing)		Accounting framework for GHG emissions and removals from land management, land use change, biogenic products, carbon dioxide removal technologies, and related activities in GHG inventories. In development

RESOURCE	TOPIC
PREDOMINANTLY APPLIES TO GENERAL INFORMATION FINDING/METRICS	
ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure)	Knowledge base enabling the assessment of biodiversity impacts and dependencies
trase	Supply chain data
Forest IQ[153]	Portfolio screening for deforestation risks
UNEP-FI Indicator Library	Suite of indicators and metrics for both climate and nature
Corporate Biodiversity Footprint (CBF)	Biodiversity impact assessment methodology
The Integrated Biodiversity Assessment Tool (IBAT)	Spatial biodiversity data; screening tool
UN WCMC Global Critical Habitat Screening Layer	Spatial information of terrestrial and marine critical habitats
Nature Finance. Nature Align App	GBF alignment tracking tool; baseline assessment of exposure to nature In development, release anticipated for October 2024
TOOL AND METHODOLOGY OVERVIEWS, TOOLKITS AND DATABASES	
Nature and Climate Action Navigator by the Global Commons Alliance's Accountability Accelerator, the Climate Champions Team, and AccountAbility	A comprehensive overview of management resources in support of net-zero and nature action.
TNFD Tools Catalogue	Overview of nature-related data tools currently available to financial institutions and real-economy companies, allowing for filtering by sectors, biomes, realms and LEAP approach phases.
Capitals Coalition Natural Capital Toolkit	Interactive database to support business in finding the right tools to measure and value natural capital.
TNFD and PBAF's Biodiversity footprinting approaches for financial institutions	Provides an overview of state of nature metrics and current biodiversity footprinting approaches, including their limitations.
Finance for Biodiversity Foundation Guide on biodiversity measurement approaches	Guidance on biodiversity impact quantification
Nature Positive Initiative — consensus metrics for measuring nature positive outcomes	Guidance on best available data and metrics to inspire action towards nature-positive outcomes. In development.
UNEP FI, WWF and GEF's Accountability for Nature report	Overview of various nature-related assessment and disclosure frameworks and standards
EU Business and Biodiversity Platform's Biodiversity Measurement Navigation Wheel	Identification framework for the most suitable biodiversity measurement tool

Endnotes for Metrics and Targets

138 GFANZ. Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations, and Guidance, 2022, p. 77.

139 GFANZ. Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations, and Guidance, 2022, p. 77.

140 GFANZ. Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations, and Guidance, 2022, p. 77.

141 GHG Protocol. Land Sector and Removals Guidance-Part 1: Accounting and Reporting Requirements and Guidance, 2022.

142 See for example GHG Protocol. Land Sector and Removals Guidance-Part 1: Accounting and Reporting Requirements and Guidance, 2022.

143 Approaches for quantifying outcomes for nature include: PBAF and TNFD. Biodiversity footprinting approaches for financial institutions, 2023; TNFD. Recommendations of the Taskforce on Nature-related Financial Disclosures, 2023. (TNFD global core metrics for impact driver measurement); TNFD. Guidance on the identification and assessment of nature-related issues: The LEAP approach, version 1.1, 2023 (see annex 2 for guidance on measurement of changes in the state of nature); The Nature Positive Initiative is also working on how to practically measure the state of nature.

144 Finance for Biodiversity Foundation. Nature Target Setting Framework for Asset Managers and Asset Owners, 2024; PRB Nature Target Setting Guidance, Key sector mapping & action guidance, 2023; TNFD. Sector guidance: Additional guidance for financial institutions, 2024.

145 SBTN. High Impact Commodity List v1, May 2023.

146 SBTN. Technical Guidance: Step 2 Interpret & Prioritize, 2024.

147 Finance for Biodiversity Foundation. Act Now! The why and how of biodiversity integration by financial institutions, 2022.

148 Financial institutions may find it helpful to refer to the concept of impact and dependency pathways when assessing dependencies, impacts, risks, and opportunities linked with their activities. See TNFD. Guidance on the identification and assessment of nature-related issues: The LEAP approach, version 1.1, 2023.

149 For activities associated with any of the five key impact drivers of nature change, the TNFD's guidance on core global metrics may be used.

150 State of nature metrics are covered in Appendix 2 of the TNFD LEAP approach and will receive further attention in the work led by the Nature Positive Initiative.

151 A current list of all carbon credit categories and associated methodologies assessed or under assessment by ICVCM can be found on the ICVCM website.

152 Refer to the overview: SBTN. SBTN Guide for readers, 2023 and to the corporate manual: SBTN. Corporate manual for setting science-based targets for nature, 2024.

153 Note that ForestIQ is a platform that draws on datasets such as trase and ZSL SPOTT.

Governance

In general, the GFANZ NZTP report guidance for climate governance is relevant to the use of nature-related levers. Governance structures and practices are key to setting direction and driving momentum and accountability.

ROLES, RESPONSIBILITIES, AND REMUNERATION

Overview

GFANZ NZTP Recommendation:[154] Define roles for the Board or strategy oversight body and senior management ensuring they have ownership, oversight, and responsibility for the net-zero targets. Assign appropriate individuals and teams to all aspects of both design and delivery of the transition plan. Use remuneration incentives for all roles, where possible. Review the transition plan regularly to ensure material updates/developments are incorporated; challenges are reviewed as an opportunity to correct course; and implementation risks are properly managed.[155]

Several functions within a financial institution are typically involved in the design and execution of a net-zero transition plan. Establishing effective governance processes and structures, with clear roles, responsibilities, and remuneration, is critical to the success of the plan's design and execution.

Supplemental guidance summary

Roles and responsibilities for nature-related levers should be clearly defined. Structuring includes considering interim milestones to support biological timelines, and how to support identification of synergies and trade-offs.

Supplemental guidance

When establishing roles and responsibilities for net-zero implementation, financial institutions should clearly define where nature-related levers fit within those roles. Assigning responsibility for nature-related levers should consider various roles, such as oversight and analysis, and include leading the identification and uptake of such levers where they are relevant and consistent with the institution's net-zero objectives and priorities. Defining the above responsibilities should occur at the level of the Board, or equivalent governing body; at the executive and senior management levels; and within the implementation roles in teams throughout the organization.

Financial institutions could consider a governance structure that supports identification and consideration of synergies and trade-offs involving climate change and nature loss mitigation impacts. Some considerations may include the following:

- If there are separate governing structures for climate and nature, a process for timely communication between the two may improve management of synergies and trade-offs.
- If the same governing structure is used for climate and nature, priorities should be clearly discussed.
- Decisions related to synergies and trade-offs should be transparently reported to governance leaders (senior management and governing body).

When reporting on the status of the NZTP to senior management and the strategy oversight body, key nature-related items could include the selected complementary nature-related metrics and exposure, dependencies, impacts, risks, and opportunities, per the TNFD recommendations. These should be reported particularly for nature-related climate mitigation actions.

Timelines

Nature-related levers may have timelines based on biological functions, which may differ from the timelines the financial institution uses for monitoring, measuring, and reporting its NZTP progress. Impacts to the ecosystem from any climate mitigation activity may take time to manifest.

In developing incentives and remuneration, as well as monitoring, review, and reporting processes, financial institutions should consider how to appropriately support the use of nature-related levers where such timelines are longer than normally considered, including setting interim milestones to monitor progress.

Financial institutions should adjust monitoring, review, and reporting processes to capture ecosystem impacts on a best-effort basis.

SKILLS AND CULTURE

Overview

GFANZ NZTP recommendation:[156] *Provide training and development support to the teams and individuals designing, implementing, and overseeing the plan so that they have sufficient skills and knowledge to perform their roles (including at the Board and senior management level). Implement a change management program and foster open communications to embed the net-zero transition plan into the organization's culture and practices.*

A net-zero commitment will require the whole of the organization to understand and support the implementation. Implementing a net-zero transition will be a multiyear effort and should be designed to withstand changes in the Board and senior management. Therefore, adoption of the plan requires a commitment to culture change, communication, broader training for employees, and innovation.

Climate awareness and understanding has matured in the financial sector and real economy in recent years, but highly specific technical knowledge is often needed. Knowledge of the interconnections between nature and climate is less mature, and will require greater effort to build awareness and skills across an organization.

Supplemental guidance summary

Financial institution teams should have access to ongoing, relevant, nature-related training and experts, including interdisciplinary knowledge, that should be reviewed regularly and as key developments occur.

Supplemental guidance

Awareness and understanding of nature-related levers in support of net-zero implementation is a new area in both private finance and the real economy. The term "nature" is broad and the expertise required to appropriately assess levers relevant to a net-zero transition plan will be specific to the financial institution, proposed nature-related activity, location, and ecosystem.

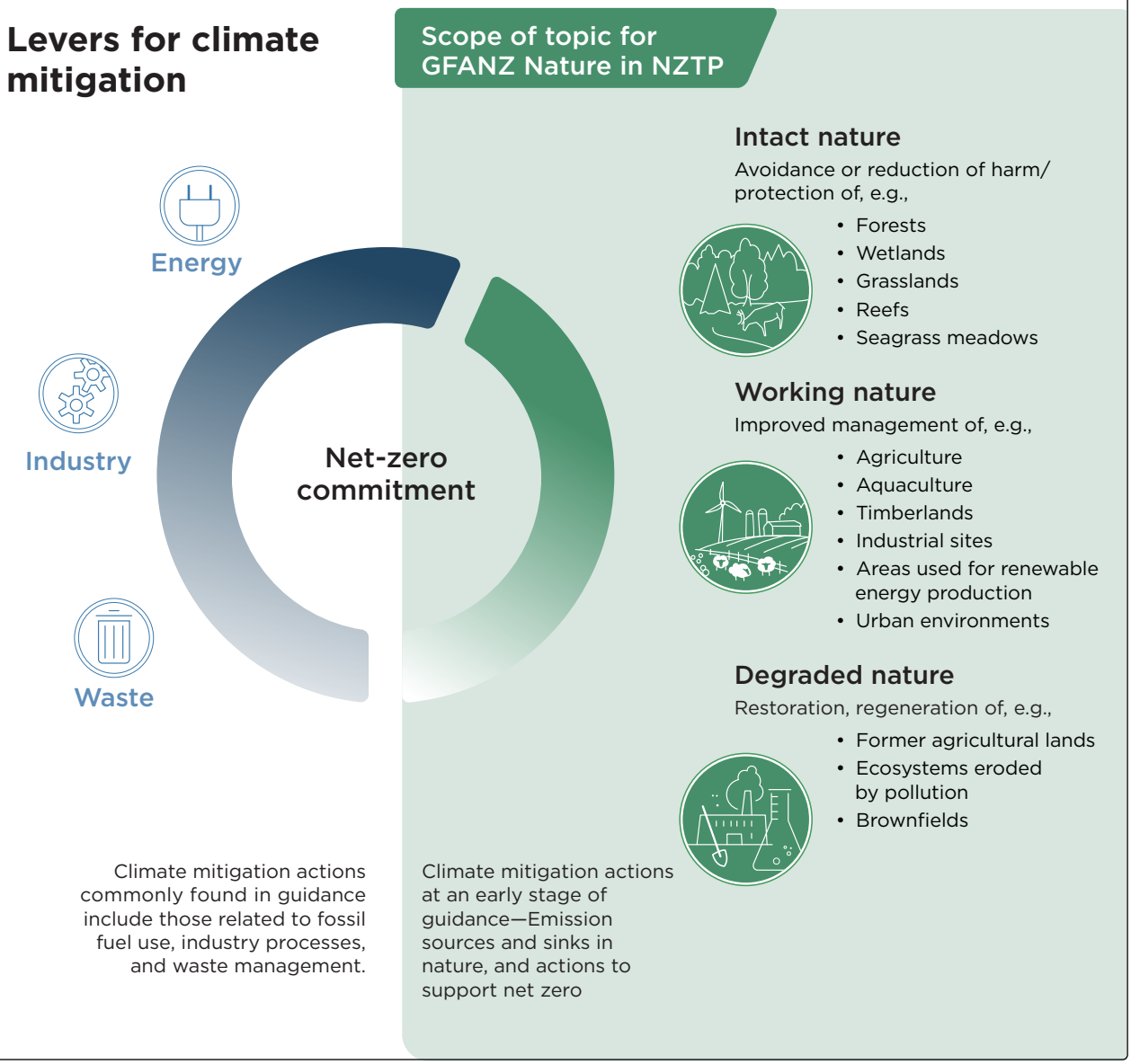
In addition to having access to climate experts, all levels of the institution as needed should have access to ongoing and relevant training in the biological context underlying nature-related levers for climate mitigation that a financial institution is prioritizing. The training may involve access to external expertise (e.g. scientific, such as ecologists, environmental scientists; or local expertise, such as IP&LC, land owners, farmers) as well as specialized resources appropriate to the project and nature-related activity in question, but establishing a minimum level of understanding internally should be considered.

Nature and climate are inextricably linked and the knowledge required may be interdisciplinary, e.g. technical, financial, policy, etc. Institutions should consider securing access to interdisciplinary experts to support a deeper understanding of a range of issues, particularly around synergies and trade-offs, or develop skill sets to synthesize and apply knowledge from specific areas in decision-useful manners.

The understanding of nature-related dependencies, impacts, levers, metrics and targets is a fast-developing area. Institutional knowledge, skill sets, and access to experts should thus be reviewed regularly and as key developments occur. See Figure 10 for a range of topics that could be considered for training about nature-related levers and their relevance to net zero.

Figure 10: Levers for climate mitigation

Much of the climate change mitigation literature has focused on levers found in energy, industry, and waste management processes. This consultation paper considers levers associated with nature as shown in the non-exhaustive examples on the right hand side. Institutions may require capacity building on the contribution of nature to net zero and



Endnotes for Governance

154 GFANZ. Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations, and Guidance, 2022, p. 87.

155 GFANZ. Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations, and Guidance, 2022, p. 87.

156 GFANZ. Financial Institution Net-zero Transition Plans: Fundamentals, Recommendations, and Guidance, 2022, p. 93.

PART C:

Moving forward

Ongoing considerations

OVERVIEW

This section highlights some important and challenging topics relevant to nature-related levers, such as nature-related data, science-based scenarios, the blue economy, and the concept of integrated transition planning. Further work on these topics would be required to develop pan-sectoral, globally applicable voluntary guidance.

However, these challenges are not reasons to delay consideration of nature-related levers. Thought leadership, tools, methodologies, and guidance in these areas are rapidly progressing. Financial institutions should consider following and engaging in the development of these topics, if resources allow, to support decision-useful development.

DATA CHALLENGES

Nature-related data, metrics, and targets

The data challenge is two-fold:

1. Selecting what metrics to track: There is an overwhelming number of options for metrics and no widely accepted or widely used standard.
2. Ongoing measurement and monitoring: Once relevant metrics have been selected, poor quality and lack of data, especially for the location or point in time, may still pose problems.

Challenge 1: Selecting what metrics to track

Unlike climate, where GHG emissions can be expressed as a single metric that links directly to climate change outcomes,[157] there is no individual metric to capture pressures on and the state of the multiple dimensions of nature. Nature-related decision-useful metrics are likely to differ by location and project.

Organizations have developed different approaches to metric and target choice and to fulfill different purposes (i.e., disclosure, target-setting, footprinting, strategic decision-making).[158] Scale and granularity of data required for each of these purposes, and the pricing and licensing of different data offerings, may also affect metric choice. A financial institution therefore has many decisions to make around metric selection. The TNFD has pinpointed metrics that characterize the "state of nature" as an area of further work since there are not yet widely accepted metrics for this indicator.[159] The Nature Positive Initiative has developed an initial short list of practical and accessible nature metrics to monitor nature-positive outcomes for consultation.[160] This development supports the selection of decision-useful and comparable nature-related metrics as outlined in the metrics and targets section of this consultation paper.

Challenge 2: Ongoing measuring and monitoring (data gaps, quality, and resolution)

Comprehensive high-quality data for the relevant timeframes, specific locations and at the needed granularity and quality is only sometimes available, making it difficult to assess progress and effectiveness. In many cases, even the specific location of a project or asset may not be available,[161] making it challenging to trace the impacts of a given action on nature and emissions. In the case of a cocoa farm, for example, the coordinates for the buildings, as well as data about the farmed land, may not be known to a financial institution or in a suitable format. The TNFD is currently developing a blueprint for a nature-related public data facility,[162] following the model of the Net-Zero Data Public Utility.[163]

Reliable, reproducible measurement methods are indispensable[164] and would support credible transition plans. Technological and scientific developments, such as high-resolution remote sensing data (e.g., from satellites, drones), environmental DNA ("eDNA") and bioacoustics, often termed "nature tech," can capture high-quality in-situ data even in remote areas, but are not yet deployed at scale.[165] Nature tech solutions can also empower smaller value chain actors, marginalized groups, Indigenous Peoples, Local Communities and others to actively participate in establishing a transparent and reliable database for nature.[166] For nature tech to live up to its full potential, it will require regional uptake and training at sites where high-quality, dependable information is needed, as well as financial support from data end users.[167]

Voluntary reporting (e.g., TNFD, GRI), the mandatory requirements of the CSRD, and the increasing jurisdictional move toward mandatory application of the IFRS S1 and S2 mean that many financial institutions and real-economy companies are developing their understanding of what nature-related information they require, both in terms of specific datapoints, and overarching metric types. By starting to work on nature, financial institutions will be able to identify and communicate their data requirements clearly to their value chains and data providers, and make use of currently available tools and metrics guidance (see Table 6) which will enable progress on data challenges over time.

Nature and climate scenarios and pathways

Science-based pathways and scenarios are key inputs in transition plans. All IPCC pathways that limit climate change to 1.5 degrees C rely on assumptions around nature-related levers, both the avoidance of emissions from further degradation of ecosystems, and the increased sequestration of GHG in ecosystems.[168] However, integrated assessment models that often underlie climate scenario analysis have been highlighted as insufficient at understanding "second-round effects [and] non-linearities" expected to be prevalent in nature and joint climate-nature scenarios.[169] Scenarios that fail to consider the cascading and compounding nature-related risks have been shown to significantly underestimate climate risks and opportunities because of the interdependencies of nature and climate.[170]

Particularly, tipping points — critical thresholds that, if breached, lead to potentially irreversible and self-perpetuating changes to critical systems — are poorly represented in climate models.[171] An often-cited example of such a tipping point is the destabilization and potential dieback of the Amazon Rainforest in response to a changing climate and land clearance. Such an event would manifest not gradually and in linear fashion, but through a series of mutually reinforcing shocks.[172] At the time of writing there are no quantitative nature scenarios comparable to those provided by the NGFS and IEA for climate,[173] although the NGFS has provided recommendations for the development of nature scenarios.[174] Work is ongoing by various initiatives to develop integrated climate-nature scenarios.[175] This includes movements to ensure social considerations and local and traditional knowledge are more appropriately reflected.[176]

The blue economy

Some of the key feedback loops between climate change and nature loss take place in oceans and marine systems. The ocean CO_2 sink has been estimated to be responsible for sequestering 26% of total CO_2 emissions, very close to the 31% sequestration provided by land.[177] Looking ahead, it has been estimated that oceans alone might deliver 35% of emission reductions needed by 2050.[178] Providing these services, however, has caused acidification, warming, and sinking oxygen[179] levels in the marine systems as climate change progresses, which is threatening the health and biodiversity of oceans worldwide.[180]

To date, the focus in nature initiatives for climate is often land use change, with little guidance available for private finance on net-zero implementation levers associated with ocean, marine, and coastal systems.[181]

Even with conservation approaches, implementation of marine protection remains insufficient,[182] with financing lacking, particularly from the private sector, as evidenced by the fact that UN Sustainable Development Goal (SDG) 14, "Life Below Water," has received the least funding among the SDGs.[183]

A number of initiatives have been developed to encourage private finance in a sustainable blue economy,[§§§] such as the Sustainable Blue Economy Finance Principles (SBEFP),[184] the first global guiding framework for banks, insurers, and investors on what sustainable financing for oceans might entail. The UNEP FI's Sustainable Blue Economy Finance Initiative aims to facilitate adoption and implementation of the SBEFP.[185] The UN Global Compact has issued Blue Bonds Guidance to support finance flows to ocean-related projects.[186]

Private financing volumes (usually debt, blended finance, and impact-only)[187] flowing to the blue economy are only a fraction of those provided by development banks, public, and intergovernmental sources.[188] The reluctance of private finance has been linked to multiple barriers, including significant gaps in knowledge and data about the state, economic importance, and contribution of ocean systems to net zero;[189] the lack of a supportive and stable policy environment; and the high risk of ocean investment.[190] While the same factors likely apply to financing other nature-related levers, they often appear most strongly in the case of oceans.

The next frontier: integrated transition planning

Including nature-related considerations in net-zero transition planning is a step toward joint management of climate and nature. However, net-zero commitments rely on quantification of emissions reductions, which may not be feasible for all nature-related actions. Outside of the activities covered under nature-related levers, there are actions that will impact the state of nature and therefore support or hinder climate change mitigation, but quantifying the specific emissions, emissions reductions or removals from incremental or general ecosystem impacts is currently difficult or impossible. Consequently, "acting through a climate change lens alone will not be enough to address the nature crisis,"[191] nor will it cover the full range of actions that can avoid emissions sources or increase sinks in nature. Introductions of invasive species, for example, might impact an ecosystem so that it starts or increases GHG emissions. However, quantifying the associated emissions is not possible at this time.

Nature provides a multitude of ecosystem services that are under threat due to nature and biodiversity loss. These services include provisioning, e.g., food, natural medicines, fresh water and fuel; regulating, e.g., natural hazards, climate; cultural, e.g., recreation and ecotourism; and supporting, i.e. underpinning the health of ecosystems.[192] While half of global GDP is either moderately or highly dependent on nature,[193] extinction rates are tens to hundreds of times higher than averages across the past 10 million years.[194] Around 25% of species in plant and animal groups assessed by the 2019 IPBES Global assessment report are threatened with extinction.[195]

§§§ This term is defined by the Sustainable Blue Economy Finance Principles as an economy that "provides social and economic benefits for current and future generations; restores, protects and maintains diverse, productive and resilient ecosystems; and is based on clean technologies, renewable energy and circular material flows."

While this consultation paper approaches nature for the purpose of net-zero implementation, halting and reversing nature and biodiversity loss is a critical aim in its own right as governments have recognized in the Kunming-Montreal Global Biodiversity Framework (GBF).[196]

At the same time, there is growing recognition of the social repercussions of action on climate and nature. The Just Transition Finance Lab states that "the sustainability transformation will only be successful if it is seen to be fair and inclusive."[197] The necessity of adequate engagement, inclusion and fair treatment, especially of IP&LC, is recognized in both the climate space[198] and the nature space.[199] A Taskforce on Inequality and Social-related Disclosures, following in the footsteps of TNFD and TCFD before it, was formed in 2024.[200]

There is a need to consider nature and climate jointly with social considerations. This is illustrated by the "land squeeze" where various objectives — food and commodity production, conservation to meet biodiversity targets, and nature-related climate change mitigation actions — all compete for limited space.[201]

From nature in Net-zero Transition Plans to integrated transition plans

These intricate interconnections between climate, nature, and society make an integrated approach, including in risk and opportunity assessment,[202] reporting and disclosure,[203] and transition planning,[204] increasingly necessary. Integrated transition planning is an important area of further work to more fully account for and manage the complex interdependencies, synergies, and trade-offs.[205]

Key topics and challenges include:

- difficult decisions inherent in managing synergies and trade-offs between nature, climate, and social outcomes
- logistical challenges (e.g., differing maturity levels of measuring and accounting approaches)
- nascent understanding of the complex interlinkages (e.g., tipping points).

A central challenge is defining "nature transition." Having a clear and common understanding among business, finance, government, and civil society about a "nature transition" is necessary to drive actions and accountability. This is an evolving concept, often termed "nature positive," and rooted in the global societal goal to "Halt and reverse nature loss by 2030 on a 2020 baseline, and achieve full recovery by 2050," consistent with the GBF mission.[206] The Nature Positive Initiative[207] is leading work to drive alignment around the definition, integrity, and use of "nature positive" as a term, as well as to provide guidance to support progress toward "nature positive."

The UK TPT Nature Working Group identified further challenges to integrating nature and climate transition plans, including capability and data gaps, executive expertise and mandates, and cost and resource uncertainty due to the lack of formal guidance of nature in transition planning.¶¶¶

¶¶¶ Note that at the time of writing the TNFD is developing a framework for nature transition planning, modelled after and using the same themes and components of the GFANZ Net-zero Transition Plan framework and the UK TPT disclosure framework. Publication of the final framework is anticipated in Q1 2025.

Despite such challenges, there are benefits to develop integrated transition plans:[208]

- Alleviating increasing reporting burdens: consolidating disclosure of multiple, related topics in one place.
- Improving overall sustainability progress: identifying the most efficient and robust approach to meeting nature, climate, and social aims, avoiding trade-offs, prioritizing synergies, and avoiding the development of silos/ inefficiencies.
- Clear communication: clarifying objectives and helping stakeholders, including governments and regulators, to better understand actions and policies needed to achieve the targets.

This proposed supplemental guidance on nature-related levers in support of net-zero implementation can be an interim step to obtain some of the benefits associated with full integration. Financial institutions that have already started transition planning for net zero may find it less challenging to begin including nature considerations in their transition plans, rather than approaching nature as an entirely separate, complex topic. Including nature in NZTPs allows for iterative progress toward fully integrated transition planning, and can support net-zero aims while simultaneously fast-tracking progress on nature and potentially contributing to solutions to the challenges noted above.

Endnotes for Ongoing considerations

157 TNFD and PBAF. Discussion paper on Biodiversity footprinting approaches for financial institutions, 2023.

158 The SBTN has developed nature target-setting guidance for land and freshwater systems, with further guidance for biodiversity as a specific feature of nature; it focuses on indicators of the state of nature as well as pressures on it. The TNFD's disclosure framework focuses on impact driver metrics and proposes a pragmatic set of core and additional metrics and targets for the measurement of nature dependencies, impacts, risks, and opportunities, designed for market usability but based in science. Both organizations recognize the challenges inherent in the process and advocate a location-based approach.

159 TNFD. Recommendations of the Taskforce on Nature-related Financial Disclosures. 2023.

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174 NGFS. Recommendations toward the development of scenarios for assessing nature-related economic and financial risks, 2023.

175 IPR. Forecast Policy Scenario + Nature (FPS + Nature), 2023; Environmental Change Institute, University of Oxford. The Green Scorpion: the Macro-Criticality of Nature for Finance, 2023; Nature Finance, Climate-nature scenario development for financial risk assessment-Invitation for Feedback on Scenario Development Framework, 2024.

176 See IPBES task force on scenarios and models.

177 Earth System Science Data. Global Carbon Budget, 2023.

178 Climate Champions. Ocean breakthroughs, accessed August 2024.

179 Decreasing aquatic oxygen levels have even been proposed as a potential tenth planetary boundary at risk of being breached. See Rose et al. Aquatic deoxygenation as a planetary boundary and key regulator of Earth system stability, 2024.

180 Journal of Marine Science and Engineering. A Comprehensive Review of Climatic Threats and Adaptation of Marine Biodiversity, 2024.

181 See for example the SBTN target-setting guidance (existing for land and freshwater, in development for oceans), or the GHG Protocol's land sector and removals guidance pilot.

182 Society for Conservation Biology. Ocean protection quality is lagging behind quantity: Applying a scientific framework to assess real marine protected area progress against the 30 by 30 target, 2024.

183 Economist Impact. What's the score on SDG14 at half time? 2023; UNEP. Turning the Tide: How to Finance a Sustainable Ocean Recovery, 2020.

184 The SBEFP were developed by the European Commission, WWF, WRI, and the European Investment Bank (EIB).

185 UNEP FI. Setting Sail: Target Setting in the Sustainable Blue Economy-A manual for the implementation of the Turning the Tide and Diving Deep guidance, 2024. See also UNEP FI resources

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199 LSE. Just Nature: How finance can support a just transition at the interface of action on climate and biodiversity, 2022.

200 See Taskforce on Inequality and Social-related Financial Disclosures (TISFD) website at www.tisfd.org.

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202 NatureFinance. Towards an Integrated Transition Framework: Managing Risks and Opportunities at the Nature-Climate Nexus, 2022; NGFS. Nature-related Financial Risks: a Conceptual Framework to guide Action by Central Banks and Supervisors, 2024.

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A look ahead

This consultation paper proposes voluntary, supplemental guidance and discussion to support financial institutions as they implement their net-zero transition plans. Interest in, and understanding of, the key role of nature in achieving a net-zero transition is rapidly increasing. Given that nature GHG emissions represent at least 22% of global emissions, there is no net zero without reducing nature emissions. Given that nature sinks could provide 37% of potential mitigation, increasing nature emissions removals is also key to achieving net-zero. Financial institutions can find these opportunities by working with clients and portfolio companies.

Explicitly including nature-related levers in a net-zero transition plan helps to strategically manage synergies and trade-offs. The guidance proposed in this paper aims to advance net-zero implementation by integrating the use of nature-related levers as part of a credible transition plan across the whole of a financial institution.

Figure 11 illustrates how nature could be explicitly included in net-zero transition plans. To travel this path, the financial sector will benefit from:

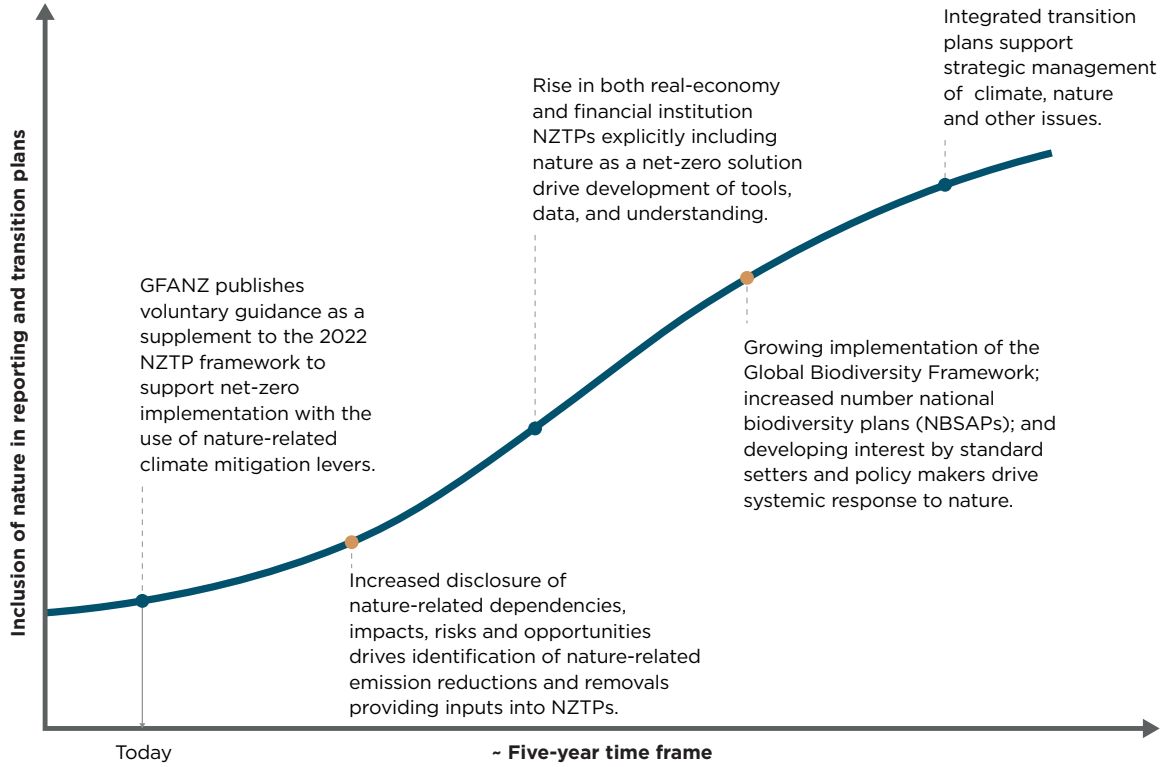
- increased development and disclosure of transition plans, climate-related financial reporting, and nature-related dependencies, impacts, risks, and opportunities;
- increased availability of nature-related data;
- integrated modeling of climate change and nature loss;
- implementation of the Global Biodiversity Framework in national plans;
- development of private finance opportunities in the blue economy.

Explicitly and strategically using nature-related levers, while addressing synergies and trade-offs between climate change and nature loss actions, will accelerate the net-zero transition, increase financing flows to the four key transition financing strategies, and support action on nature loss. GFANZ therefore encourages financial institutions to consider taking action in three areas:

1. Reduce nature GHG emissions as per 1.5 degree C-aligned pathways
2. Support opportunities to protect, conserve, restore, and regenerate nature and increase nature GHG sinks
3. Recognize the inextricable linkage between climate change and nature loss and consider nature loss alongside net-zero activities

The voluntary, supplemental guidance in this consultation paper is aimed at supporting financial institutions in reducing real-world nature-related emissions found in their footprints. It also includes insights for real-economy companies as they develop, disclose, and implement their own transition plans. Many organizations are developing tools, methodologies, and guidance on nature-related dependencies, impacts, risks, and opportunities for activities, companies, and portfolios; these are key data and information for net-zero transition plans. Financial institutions can track progress, contribute to development, and apply such methodologies and tools in their financing decisions to accelerate reduction of nature GHG emissions and support their transition plan implementation.

Figure 11: Example of uptake of nature in support of net-zero implementation



Nature GHG emission sinks are also key to achieving net zero through investing in natural climate solution opportunities or high-integrity carbon credits. Financial institutions can use the developing methodologies to find opportunities to protect, conserve, restore, and regenerate nature and expand nature sinks as part of their net-zero commitment and/or alongside net-zero targeting efforts.

There is growing understanding of the benefits of integrating nature and climate transition plans. Addressing climate and nature together acknowledges the deep linkage between the two issues, supports institutions striving for synergies that benefit both issues, and allows them to identify, assess, and manage trade-offs. Using common frameworks such as the GFANZ NZTP framework can also reduce effort and disclosure burdens. Financial institutions should recognize the challenges in addressing climate and nature separately, and instead consider nature as integral to climate strategies. The voluntary guidance in this consultation paper can help identify and develop integrated opportunities as part of their net-zero transition planning and implementation.

As national plans for nature are developed, clarity on policies and how these plans connect to national climate plans could catalyze action at greater speed and scale. The near-term challenge is to incorporate the science of nature into tangible actions and financial flows in the real economy. This is a road that policymakers and financial institutions are already walking with climate. We must do the same with nature as quickly as possible.

Appendices

Appendix A: List of content

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Appendix B: Glossary and abbreviations

The language used in this paper takes terminology from TNFD. "Glossary." Version 1.0 September 2023 and from GFANZ. Financial institutions net-zero transition plans. 2022. Terms that are used in this paper are repeated below for convenience, but readers are directed to the original publications for all other terms.

If the Source lists "TNFD," the term, definition, and original sources are taken directly from the TNFD glossary. If the label "TNFD" is missing, we are suggesting a new key term and definition. Lastly, if the Source lists "Adapted from TNFD," the key term and definition were taken from TNFD reports, but small changes were made.

Glossary index of related terms

MAIN TERM	RELATED TERMS
Area	Area of influence; Area controlled/managed; Key diversity area; Protected area
AR3T framework	Avoid; Reduce; Regenerate; Restore; Transform
Assets	Assets; Ecosystem assets; Environmental assets
Credits and offsets	Biodiversity offsets; Carbon credits/carbon offsets
Ecosystem	Ecosystem; Ecosystem condition; Ecosystem extent; Ecosystem function; Ecosystem health; Ecosystem services; Ecosystem stability risk; Ecosystem type; Natural ecosystem; Threatened ecosystem
Habitat	Habitat (ecological) conductivity; Habitat fragmentation
Impacts and dependencies (on nature)	Dependencies (on nature); Dependency pathway (on nature); Impacts (on nature); Impact drivers; Impact pathway; Direct impact; Indirect impact
IP&LC **Indigenous Peoples and Local Communities**	IP&LC; Indigenous Peoples; Local communities
Locations	Priority locations; Sensitive locations
Natural commodities (resources)	Natural commodity; High impact natural commodities
Scenario	Scenario; Scenario pathways
Species	Species; Native species; Invasive alien species; Threatened species; Wild species; Species composition; Species richness

GLOSSARY BY ALPHABET

1.5 degrees C-aligned
A pathway of emissions of greenhouse gases and other climate forcers that provides an approximately one-in-two to two-in-three chance, given current knowledge of the climate response, of global warming either remaining below 1.5 degrees C or returning to 1.5 degrees C by around 2100 following an overshoot. Pathways giving at least 50% probability based on current knowledge of limiting global warming to below 1.5 degrees C are classified as "no overshoot," while those limiting warming to below 1.6 degrees C and returning to 1.5 degrees C by 2100 are classified as 1.5 degrees C "low overshoot."

(IPCC. Annex 1: Glossary, 2018; IPCC. Summary for Policymakers, 2018, p. 24.)

Adaptation
Adjustment in natural or human systems to an actual or expected environmental change and its effects, whether through genetic or behavioural change, in a way that seeks to moderate harm or exploit beneficial opportunities.

Compare Mitigation

(TNFD; Adapted from the Fifth National Climate Assessment and the IPBES glossary)

Afforestation
Establishment of the forest through planting and/or deliberate seeding on land that, until then, was under a different land use, implies a transformation of land use from non-forest to forest.

Compare Deforestation, Reforestation

(TNFD; Food and Agriculture Organization (2000) On Definitions of Forest and Forest Change; Food and Agriculture Organization (2020) Forest Resources Assessment-Terms and Definitions)

AIGCC
Asia Investor Group on Climate Change

Area of influence
The area covered by ecosystems and environmental assets on which an organisation's activities and assets have potential direct or indirect dependencies or impacts, including or cumulative impacts. This will usually extend beyond the physical footprint of the organisation's activities and assets.

(TNFD)

Area controlled/managed
A clearly defined geographical space that an entity has the power to govern financially and operationally to obtain benefits from its activities.

(TNFD; Adapted from International Financial Reporting Standard Glossary)

Assets
In this paper, unless otherwise specified, "assets" can refer to physical or financial assets and sometimes both depending on the application to various financial products, services, and business models. Physical assets are also known as tangible assets. For most businesses, physical assets usually refer to properties, equipment, and inventory. A financial asset is an asset that gets its value from a contractual right or ownership claim. Cash, stocks, bonds, mutual funds, and bank deposits are all examples of financial assets.

(GFANZ. Financial Institution Net-zero Transition Plans Supplemental Information, November 2022.)

Atmosphere
Atmosphere includes the gaseous medium and its suspended particulate liquids and solids above the land realm, extending to the altitudinal limits of life.

(Keith A. et al. (2020) IUCN Global Ecosystem Typology 2.0: Descriptive profiles for biomes and ecosystem functional groups)

Avoid—AR3T framework
Prevent impact from happening in the first place; eliminate the impact entirely.

(SBTN (2020) Science-Based Targets for Nature-Initial Guidance for Business)

Biodiversity (= biological diversity)
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.

(TNFD; Convention on Biological Diversity (1992) Article 2)

Biodiversity offsets (credits and offsets)
Biodiversity offsets are measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken. The goal of biodiversity offsets is to achieve no net loss and preferably a net gain of biodiversity on the ground with respect to species composition, habitat structure and ecosystem function and people's use and cultural values associated with biodiversity.

(TNFD; Business and Biodiversity Offsets Programme (2012) Glossary, 2nd Updated Edition; CDP (2022) Forests Reporting Guidance)

Biome
Global-scale zones, generally defined by the type of plant life that they support in response to average rainfall and temperature patterns e.g. tundra, coral reefs or savannas.

For the purpose of metrics, biomes are defined in the IUCN Global Ecosystem Typology as the component of a realm united by a few common major ecological drivers that regulate major ecological functions. Biomes are derived from the top-down by subdivision of realms (Level 1).

(TNFD; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (2019) Global Assessment Report on Biodiversity and Ecosystem Services; See Keith A. et al. (2020) IUCN Global Ecosystem Typology 2.0: Descriptive profiles for biomes and ecosystem functional groups)

Carbon credits/carbon offsets (credits and offsets)
An emissions unit that is issued by a carbon crediting programme and represents an emission reduction or removal of greenhouse gases. Carbon credits are uniquely serialised, issued, tracked and cancelled by means of an electronic registry. Carbon credits are often referred to interchangeably as carbon offsets.

(ISSB. IFRS S2 Climate-related Disclosures, June 2023.); GFANZ. Financial Institution Net-zero Transition Plans-Supplemental Information, November 2022.)

Conservation
An action taken to promote the persistence of ecosystems and biodiversity.

(TNFD; Adapted from Levin, S. A. ed. (2009) The Princeton Guide to Ecology Princeton, NJ: Princeton University Press)

Conversion
Change of a natural ecosystem to another land use or profound change in a natural ecosystem's species composition, structure, or function. Deforestation is one form of conversion (conversion of natural forests). Conversion includes severe degradation or the introduction of management practices that result in substantial and sustained change in the ecosystem's former species composition, structure, or function. Change to natural ecosystems that meets this definition is considered to be conversion regardless of whether or not it is legal.

Compare Land use change

(TNFD; Accountability Framework initiative (2020) Terms and Definitions)

CDP
Formerly known as Climate Disclosure Project

Deforestation
Loss of natural forest as a result of: (i) conversion to agriculture or other non-forest land use; (ii) conversion to a tree plantation; or (iii) severe and sustained degradation.

Explanatory notes:

- This definition pertains to no-deforestation supply chains that generally focus on preventing the conversion of natural forests;
- Severe and sustained degradation (scenario iii in the definition) constitutes deforestation even if the land is not subsequently used for a non-forest land use;
- Loss of natural forest that meets this definition is considered to be deforestation regardless of whether or not it is legal;
- The Accountability Framework's definition of deforestation signifies 'gross deforestation' of natural forest where 'gross' is used in the sense of "total; aggregate; without deduction for reforestation or other offset."

Compare Afforestation, Reforestation

(TNFD; Accountability Framework, Terms and Definitions, 2024)

Degradation
Changes within a natural ecosystem that significantly and negatively affect its species composition, structure, and/or function and reduce the ecosystem's capacity to supply products, support biodiversity, and/or deliver ecosystem services. Degradation may be considered conversion if it: is large-scale and progressive or enduring; alters ecosystem composition, structure, and function to the extent that regeneration to a previous state is unlikely; or, leads to a change in land use (e.g., to agriculture or other use that is not a natural forest or other natural ecosystem).

(TNFD; Accountability Framework initiative (2020) Terms and Definitions)

Dependencies (on nature)
Dependencies are aspects of environmental assets and ecosystem services that a person or an organization relies on to function. A company's business model, for example, may be dependent on the ecosystem services of water flow, water quality regulation and the regulation of hazards like fires and floods; provision of suitable habitat for pollinators, who in turn provide a service directly to economies; and carbon sequestration.

(TNFD; Adapted from Science Based Targets Network (2023) SBTN Glossary of Terms)

Dependency pathway (on nature)
A dependency pathway shows how a particular business activity depends upon specific features of natural capital. It identifies how observed or potential changes in natural capital affect the costs and/or benefits of doing business.

(TNFD; Capitals Coalition (2016) Natural Capital Protocol)

Direct impact
A change in the state of nature caused by a business activity with a direct causal link.

(TNFD; Climate Disclosure Standards Board (2021) Framework Application Guidance for Biodiversity-related Disclosures, Endangered Wildlife Trust (2020) The Biological Diversity Protocol, Capitals Coalition and Cambridge Conservation Initiative (2020) Integrated Biodiversity into Natural Capital Assessments)

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

(TNFD; Convention on Biological Diversity (1992) Article 2; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (2019) Global Assessment Report on Biodiversity and Ecosystem Services)

Ecosystem assets
A form of environmental assets that relate to diverse ecosystems. These are contiguous spaces of a specific ecosystem type characterised by a distinct set of biotic and abiotic components and their interactions.

Note that this is considered a statistical representation of the ecosystem definition, according to SEEA EA.

Compare Ecosystem

(TNFD; Adapted from United Nations et al. (2021) System of Environmental-Economic Accounting-Ecosystem Accounting (SEEA EA))

Ecosystem condition
The quality of an ecosystem measured by its abiotic and biotic characteristics. Condition is assessed by an ecosystem's composition, structure and function which, in turn, underpins the ecological integrity of the ecosystem, and supports its capacity to supply ecosystem services on an ongoing basis.

(TNFD; Adapted from United Nations et al. (2021) System of Environmental-Economic Accounting-Ecosystem Accounting (SEEA EA))

Ecosystem extent
Area coverage of a particular ecosystem, usually measured in terms of spatial area.

(TNFD; United Nations et al. (2021) System of Environmental-Economic Accounting-Ecosystem Accounting)

Ecosystem function
The flow of energy and materials through the biotic and abiotic components of an ecosystem. This includes many processes such as biomass production, trophic transfer through plants and animals, nutrient cycling, water dynamics and heat transfer.

(TNFD; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (2019) Global Assessment Report on Biodiversity and Ecosystem Services)

Ecosystem health
Used to describe the condition of an ecosystem, by analogy with human health. Note that there is no universally accepted benchmark for a healthy ecosystem. Rather, the apparent health status of an ecosystem can vary, depending upon which metrics are employed to assess it and which societal aspirations are driving the assessment.

(TNFD; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services IPBES Glossary)

Ecosystem services
The contributions of ecosystems to the benefits that are used in economic and other human activity.

(TNFD; United Nations et al. (2021) System of Environmental-Economic Accounting-Ecosystem Accounting)

Ecosystem stability risk
Risk of an event that leads to a destabilisation of a critical natural system, so it no longer can provide ecosystem services in the same manner as before. For example, tipping points are reached, regime shifts and/or ecosystem collapses occur that generate forms of physical and/or transition risk. This is one form of nature-related systemic risk.

Compare Tipping point

(TNFD; Goldin, I & Mariathasan, M (2014) The Butterfly Defect: How Globalisation Creates Systemic Risks and What to do about it, International Risk Governance Centre (2018) IRGC Guidelines for the Governance of Systemic Risks, Kaufmann, G & Scott, K (2003) What Is Systemic Risk, and Do Bank Regulators Retard or Contribute to It?, Network for Greening the Financial System (2023) Nature-related Financial Risks: A Conceptual Framework to guide Action by Central Banks and Supervisors, Organisation for Economic Co-operation and Development (2023) A supervisory framework for assessing nature-related financial risks: identifying and navigating biodiversity risks)

Ecosystem type
TNFD refers to the IUCN Global Ecosystem Typology 2.0 that defines 25 biomes and 108 Ecosystem Functional Groups and reflects a distinct set of abiotic and biotic components and their interactions.

(TNFD; Keith A. et al. (2020) IUCN Global Ecosystem Typology 2.0: Descriptive Profiles for Biomes and Ecosystem Functional Groups)

Environmental assets
The naturally occurring living and non-living components of the Earth, together constituting the biophysical environment, which may provide benefits to humanity.

Note that this definition includes ecosystems, according to SEEA EA.

Compare Ecosystem

(TNFD; United Nations et al. (2021) System of Environmental-Economic Accounting-Ecosystem Accounting (SEEA EA))

ESG
Environmental, social, and corporate governance

Freshwater
All permanent and temporary freshwater bodies as well as saline water bodies that are not directly connected to the oceans.

Compare Land, Ocean, Atmosphere

(TNFD; The United States Geological Survey (USGS) (2018) Water Science Glossary of Terms; World Health Organization (WHO) (2017) Guidelines for Drinking-Water Quality)

Freshwater use change
The change from one freshwater use category to another.

Compare Land use change, Ocean use change

(TNFD; Adapted from the definitions for Land use change from Science Based Targets Initiative (2022) Forest, Land and Agriculture Guidance Science Based Target-Setting Guidance and IPBES Glossary)

GFANZ
Glasgow Financial Alliance for Net Zero

GHG
Greenhouse gases; emissions that include carbon dioxide, methane, and nitrous oxide, among others.

(IPCC. IPCC Updates Methodology for Greenhouse Gas Inventories, 2019. The definition excludes water vapor.)

Habitat
The area, characterized by its abiotic and biotic properties, that is habitable by a particular species.

(TNFD; Keith, D. et al (2020) IUCN Global Ecosystem Typology 2.0: Descriptive Profiles for Biomes and Ecosystem Functional Groups)

Habitat (ecological) connectivity (=ecosystem connectivity)
The degree to which the landscape facilitates the movement of organisms (animals, plant reproductive structures, pollen, pollinators, spores, etc.) and other environmentally important resources, such as nutrients and moisture, between similar habitats. Connectivity is hampered by fragmentation.

(TNFD; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services IPBES Glossary)

Habitat fragmentation
A general term describing the set of processes by which habitat loss results in the division of continuous habitats into a greater number of smaller patches of lesser total and isolated from each other by a matrix of dissimilar habitats. Habitat fragmentation, which leads to a barrier effect, may occur through natural processes (e.g. forest and grassland fires, flooding) and through human activities (e.g. forestry, agriculture, urbanisation).

(TNFD; Intergovernmental Platform on Biodiversity and Ecosystem Services IPBES Glossary)

High-impact natural commodities
High-impact natural commodities refer to commodities or products where production has significant negative impacts on nature.

(Adapted from TNFD; Based on Science Based Targets Network (2023) SBTN High Impact Commodity List)

IGCC
Investor Group on Climate Change

IIGCC
Institutional Investors Group on Climate Change

Impacts (on nature)
Changes in the state of nature (quality or quantity), which may result in changes to the capacity of nature to provide social and economic functions. Impacts can be positive or negative. They can be the result of an organization's or another party's actions and can be direct, indirect or cumulative. A single impact driver may be associated with multiple impacts.

(TNFD; Science Based Targets Network (2023) SBTN Glossary of Terms, Climate Disclosure Standards Board (2021) Application guidance for Biodiversity- related Disclosures; See further definition of impacts from Impact Management Platform)

Impact drivers
A measurable quantity of a natural resource that is used as a natural input to production (e.g. the volume of sand and gravel used in construction) or a measurable non-product output of a business activity (e.g., a kilogram of NOx emissions released into the atmosphere by a manufacturing facility).

(TNFD; Capitals Coalition (2016) Natural Capital Protocol; See further definition of impact drivers from Impact Management Platform)

Impact pathway
An impact pathway describes how, as a result of a specific business activity, a particular impact driver results in changes in natural capital, and how these changes in natural capital affect different stakeholders.

(TNFD; Capitals Coalition (2016) Natural Capital Protocol; See further definition of impact pathway from Impact Management Platform)

Indirect impact
A change in the state of nature caused by a business activity with an indirect causal link (e.g., a change indirectly caused by climate change, to which an organization's greenhouse gas emissions contributed).

(TNFD; Climate Disclosure Standards Board (2021) Framework Application Guidance for Biodiversity-related Disclosures, Endangered Wildlife Trust (2020) The Biological Diversity Protocol, Capitals Coalition and Cambridge Conservation Initiative (2020) Integrated Biodiversity into Natural Capital Assessments)

Industry-related bodies
May include civil society and nongovernmental organizations providing subject matter expertise, targeted initiatives, and collaborative opportunities among other purposes (e.g., ShareAction, WWF, World Resources Institute, and others).

(GFANZ. Financial Institution Net-zero Transition Plans Supplemental Information, November 2022.)

IP&LC (Indigenous Peoples and Local Communities)
Note that there is no formal definition for IP&LC adopted in international law. The below definition is taken from the IPBES glossary.

Indigenous Peoples and local communities (IP&LC) are, typically, ethnic groups who are descended from and identify with the original inhabitants of a given region, in contrast to groups that have settled, occupied or colonized the area more recently.

For more detail see Indigenous Peoples; Local Communities.

(IPBES Glossary)

Indigenous Peoples
There is no formal definition adopted in international law. A strict definition is seen as unnecessary and undesirable.

The United Nations use a working definition from the Martinez Cobo Study:

'Indigenous communities, peoples and nations are those which, having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing on those territories, or parts of them. They form at present non-dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions and legal system.'

It also notes that an Indigenous person is: '... one who belongs to these indigenous populations through self-identification as indigenous (group consciousness) and is recognised and accepted by these populations as one of its members (acceptance by the group). This preserves for these communities the sovereign right and power to decide who belongs to them, without external interference.'

According to ILO Convention 169, Indigenous Peoples are descendants of population "which inhabited a country or geographical region during its conquest or colonization or the establishment of present state boundaries" and "retain some or all of their own social, economic, cultural and political institutions".

(TNFD; Asia Pacific Forum of National Human Rights Institutions and the Office of the United Nations High Commissioner for Human Rights (August 2013) The United Nations Declaration on the Rights of Indigenous Peoples, Office of the United Nations High Commissioner for Human Rights. A Manual for National Human Rights Institutions)

Invasive alien species (invasive species, alien species, nonnative species
Species whose introduction and/or spread by human action outside their natural distribution threatens biological diversity, food security, and human health and well-being. "Alien" refers to the species having been introduced outside its natural distribution ("exotic", "non-native", and "nonindigenous" are synonyms for "alien"). "Invasive" means tending to expand into and modify ecosystems to which it has been introduced. Thus, a species may be alien without being invasive, or, in the case of a species native to a region, it may increase and become invasive, without actually being an alien species.

(TNFD; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services IPBES Glossary, European Commission (2023) Annex 2 to the Commission Delegated Regulation, supplementing Directive 2013/34/EU as amended by Directive 2022/2464 (CSRD), as regards Sustainability Reporting Standards)

IPCC
Intergovernmental Panel on Climate Change

ISSB
International Sustainability Standards Board

Key Biodiversity Area
A site contributing significantly to the global persistence of biodiversity.

See Sensitive locations

(TNFD; International Union for Conservation of Nature (2016) A Global Standard for the Identification of Key Biodiversity Areas: Version 1.0)

Land
Land includes all dry land, its vegetation cover, nearby atmosphere and substrate (soils, rocks) to the rooting depth of plants, and associated animals and microbes.

Compare Ocean, Freshwater, Atmosphere

(TNFD; International Union for Conservation of Nature (2023) IUCN Global Ecosystem Typology

Land use change
Transformation from one land use category (e.g., cropland, grassland, forest/woodland, urban/industrial, wetland/tundra) to another category (e.g., transformation from natural forest to cropland).

Compare Ocean use change, Freshwater use change

(Science Based Targets Initiative (2023) Forest, land and agriculture science-based target-setting guidance; IPCC (2019) Annex I: Glossary [van Diemen, R. (ed.)] Climate Change and Land: an IPCC Special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems.)

Leakage
A collateral effect caused when an activity or environmental policy indirectly triggers impacts that go against its aims, thus reducing the overall benefit of the intervention.

(Adapted from TNFD; Bastos Lima et al. (2019) Leakage and Boosting Effects in Environmental Governance: A Framework for Analysis)

Local Communities
The term 'Local Communities' is used based on the characteristic listed by the Convention on Biological Diversity and its article 8 (j) which refer to: 'Local communities embodying traditional lifestyles relevant for the conservation and sustainable of biological diversity'.

Convention on Biological Diversity, Article 8: In-situ Conservation

The Convention on Biological Diversity in its decision XI/14, Article 8(j) and related provisions, 'Takes note of the characteristics listed in section I of the annex to the report of the Expert Group Meeting as potentially useful advice in identifying local communities, within the mandate of the Convention.'

Convention on Biological Diversity, Decision adopted by the Conference of the Parties to the Convention on Biological Diversity at its Eleventh Meeting. XI/14. Article 8(j) and related provisions.

The experts recommended that a working definition may be possible based on the following characteristics, some of which could be considered essential:

Local Communities living in rural and urban areas of various ecosystems may exhibit some of the following characteristics:

A. Self-identification as a local community;
B. Lifestyles linked to traditions associated with natural cycles (symbiotic relationships or dependence), the use of and dependence on biological resources and linked to the sustainable use of nature and biodiversity;
C. The community occupies a definable territory traditionally occupied and/or used, permanently or periodically. These territories are important for the maintenance of social, cultural, and economic aspects of the community;
D. Traditions (often referring to common history, culture, language, rituals, symbols and customs) and are dynamic and may evolve;
E. Technology/ knowledge/ innovations/ practices associated with the sustainable use and conservation of biological resources;
F. Social cohesion and willingness to be represented as a local community;
G. Traditional knowledge transmitted from generation to generation including in oral form;
H. A set of social rules (e.g., that regulate land conflicts/sharing of benefits) and organizational-specific community/ traditional/ customary laws and institutions;
I. Expression of customary and/or collective rights;
J. Self-regulation by their customs and traditional forms of organization and institutions;
K. Performance and maintenance of economic activities traditionally, including for subsistence, sustainable development and/ or survival;
L. Biological (including genetic) and cultural heritage (bio-cultural heritage);
M. Spiritual and cultural values of biodiversity and territories;
N. Culture, including traditional cultural expressions captured through local languages, highlighting common interest and values;
O. Sometimes marginalized from modern geopolitical systems and structures;
P. Biodiversity often incorporated into traditional place names;
Q. Foods and food preparation systems and traditional medicines are closely connected to biodiversity/ environment;
R. May have had little or no prior contact with other sectors of society resulting in distinctness or may choose to remain distinct;
S. Practice of traditional occupations and livelihoods;
T. May live in extended family, clan or tribal structures;
U. Belief and value systems, including spirituality, are often linked to biodiversity;
V. Shared common property over land and natural resources;
W. Traditional right holders to natural resources;
X. Vulnerability to outsiders and little concept of intellectual property rights.

(TNFD; Report of the Expert Group Meeting of Local Community Representatives within the Context of Article 8(j) and Related Provisions of the Convention on Biological Diversity)

Mitigation
Action(s) taken to reduce the extent of a negative impact.

(TNFD; GRI (2022) GRI Standards Glossary modified from UN (2012) The Corporate Responsibility to Respect Human Rights: An Interpretive Guide)

Mitigation hierarchy (and conservation hierarchy)
The mitigation hierarchy is the sequence of actions to anticipate and avoid, and where avoidance is not possible, minimise, and, when impacts occur, restore, and where significant residual impacts remain, offset for biodiversity-related risks and impacts on affected communities and the environment.

The conservation hierarchy goes beyond mitigating impacts, to encompass any activities affecting nature. This means that conservation actions to address historical, systemic and non-attributable biodiversity loss can be accounted for in the same framework as actions to mitigate specific impacts.

The TNFD aligns to the SBTN AR3T Framework that covers actions to avoid future impacts, reduce current impacts, regenerate and restore ecosystems, and transform the systems in which companies are embedded. It is built on the mitigation hierarchy set out in the International Financial Corporation's (IFC) Performance Standard 6 and the Conservation Hierarchy.

(TNFD; Adapted from Cross Sector Biodiversity Initiative (2015) A Cross Sector Guide for Implementing the Mitigation Hierarchy: Executive Summary and Overview, Conservation Hierarchy, Science Based Targets Network (2023) Step 4. Act)

Native species
Taxa that have originated in a given area without human involvement, or that have arrived there without intentional or unintentional intervention of humans, from an area in which they are native. (This definition excludes products of hybridization involving alien taxa since "human involvement", in this case, includes the introduction of an alien parent.)

(Pyšek et al., 2004. Alien plants in checklists and floras: towards better communication between taxonomists and ecologists.; IPBES Glossary)

Natural ecosystem
An ecosystem that substantially resembles — in terms of species composition, structure, and ecological function — one that is or would be found in a given area in the absence of major human impacts. This includes human-managed ecosystems where much of the natural species composition, structure, and ecological function is present.

Natural ecosystems include:

- Largely "pristine" natural ecosystems that have not been subject to major human impacts in recent history;
- Regenerated natural ecosystems that were subject to major impacts in the past (for instance by agriculture, livestock raising, tree plantations, or intensive logging) but where the main causes of impact have ceased or greatly diminished and the ecosystem has attained species composition, structure, and ecological function similar to prior or other contemporary natural ecosystems;
- Managed natural ecosystems (including many ecosystems that could be referred to as "seminatural") where much of the ecosystem's composition, structure, and ecological function are present—this includes managed natural forests as well as native grasslands or rangelands that are, or have historically been, grazed by livestock;
- Natural ecosystems that have been partially degraded by anthropogenic or natural causes (e.g., harvesting, fire, climate change, invasive species, or others) but where the land has not been converted to another use and where much of the ecosystem's composition, structure, and ecological function remain present or are expected to regenerate naturally or by management for ecological restoration.

(TNFD; Science Based Targets Network (2023) Step 3: Measure, Set, Disclose: Land (Version 0.3))

Natural capital
The stock of renewable and non-renewable natural resources (e.g., plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people.

(TNFD; Capitals Coalition (2016) Natural Capital Protocol)

Natural climate enablers
Non-place-based actions, such as suppliers found in a value chain or low-carbon demand-side alternatives, that indirectly affect the management of ecosystems, biomes, natural commodities, and ecosystem services in support of reduction of nature GHG emissions or increasing nature GHG sinks.

(This paper)

Natural climate mitigation
Includes the protection, conservation, restoration, and improved use and management of ecosystems that focus on climate mitigation services, i.e., reducing or avoiding greenhouse gas emissions and/or increasing carbon storage, tied to a specific place. This paper considers it to be a subset of natural climate solutions which are location specific activities.

(This paper)

NCS (Natural climate solutions)
A subset of nature-based solutions, natural climate solutions include protection, conservation, restoration, and improved use and management of ecosystems that increase carbon storage and/or avoid greenhouse gas emissions, enhance resilience, and assist climate adaptation.

Compare NbS (Nature-based solutions)

(Adapted from TNFD; Girardin, C et al. (2021) Nature Based Solutions Can Help Cool the Planet — If We Act Now, Griscom, B et al. (2017) Natural Climate Solutions)

Natural commodities (resources)
Natural assets (raw materials) occurring in nature that can be used for economic production or consumption.

(TNFD; Organisation for Economic Co-operation and Development (2008) OECD Glossary of Statistical Terms)

NbS (Nature-based solutions)
Actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems that address societal, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits.

(TNFD; Adapted from International Union for Conservation of Nature (2020) The IUCN Global Standard for Nature-based Solutions)

Nature-related levers
Collective term for Natural climate mitigation and Natural climate enablers.

(This paper)

Nature transition plan
A nature transition plan is an aspect of an organisation's overall strategy that lays out the organisation's goals, targets, actions, accountability mechanisms or resources to respond and/or contribute to the transition towards 2030 where biodiversity loss is halted and reversed to put nature on a path to recovery and 2050 where the world is living in harmony with nature, prioritising real economy changes.

Actions in such a plan include:

- avoiding and reducing negative impacts on nature;
- protecting, conserving, regenerating and restoring nature;
- developing solutions and transforming underlying systems to address drivers of nature loss; and
- collaborating with governments, Indigenous Peoples and Local Communities, and other stakeholders.

(TNFD)

NBSAPs
National Biodiversity Strategies and Action Plans

NDCs
Nationally Determined Contributions

Net zero
A state when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals. Organizations are considered to have reached a state of net zero when they reduce their GHG emissions following science-based Pathway, with any remaining GHG emissions attributable to that organization being fully neutralized by like-for-like removals exclusively claimed by that organization, either within its value chain or through purchase of valid offset credits.

(GFANZ. Financial Institution Net-zero Transition Plans Supplemental Information, November 2022.)

Net-zero transition plan (NZTP)
As defined in the 2022 Net-zero Transition Planning framework, an NZTP is a set of goals, actions, and accountability mechanisms to align an organization's business activities with a pathway to net-zero GHG emissions that delivers real-economy emissions reduction in line with achieving global net zero. For GFANZ sector-specific alliance members, a transition plan should be consistent with achieving net zero by 2050, at the latest, in line with commitments and global efforts to limit warming to 1.5 degrees C, above pre-industrial levels, with low or no overshoot.

(GFANZ. Financial Institution Net-zero Transition Plans Supplemental Information, November 2022.)

NGFS
Network for Greening the Financial System

NGOs
Nongovernmental organizations. Type of organization that is generally formed independent from government and are typically nonprofit entities focused on humanitarianism.

(GFANZ. Financial Institution Net-zero Transition Plans Supplemental Information, November 2022.)

NZAM
Net Zero Asset Managers initiative

NZAOA
Net-Zero Asset Owner Alliance

NZBA
Net-Zero Banking Alliance

NZECA
Net-Zero Export Credit Agencies Alliance

NZFSPA
Net Zero Financial Service Providers Alliance

NZICI
Net Zero Investment Consultants Initiative

Ocean
All connected saline ocean waters characterised by waves, tides and currents.

Compare Land, Freshwater, Atmosphere

(TNFD)

Ocean use change
The change from one ocean use category to another.

Compare Land use change, Freshwater use change

(TNFD; Adapted from the definitions for Land use change from Science Based Targets Initiative (2022) Forest, Land and Agriculture Guidance Science Based Target-Setting Guidance)

PAAO
Paris Aligned Asset Owners

Paris Agreement
Also known as the Paris Accords or the Paris Climate Accords; refers to an international treaty on climate change adopted in 2015. It covers climate change mitigation, adaptation, and finance.

(GFANZ. Financial Institution Net-zero Transition Plans Supplemental Information, November 2022.)

Pathway
A goal-oriented scenario or combination of scenarios answering the question: "What needs to happen?" to accomplish a specific objective (e.g., what are the steps needed to reach net zero by 2050, limit global warming to 1.5 degrees C, with low or no overshoot?).

(GFANZ. Guidance on Use of Sectoral Pathways for Financial Institutions, 2022.)

PCAF
Partnership for Carbon Accounting Financials

PRI
Principles for Responsible Investment

"Prior and informed consent" or "free, prior, and informed consent" or "approval and involvement"
Free implies that indigenous peoples and local communities are not pressured, intimidated, manipulated or unduly influenced and that their consent is given, without coercion; Prior implies seeking consent or approval sufficiently in advance of any authorization to access traditional knowledge respecting the customary decision-making processes in accordance with national legislation and time requirements of indigenous peoples and local communities; Informed implies that information is provided that covers relevant aspects, such as: the intended purpose of the access; its duration and scope; a preliminary assessment of the likely economic, social, cultural and environmental impacts, including potential risks; personnel likely to be involved in the execution of the access; procedures the access may entail and benefit-sharing arrangements; Consent or approval is the agreement of the indigenous peoples and local communities who are holders of traditional knowledge or the competent authorities of those indigenous peoples and local communities, as appropriate, to grant access to their traditional knowledge to a potential user and includes the right not to grant consent or approval; Involvement refers to the full and effective participation of indigenous peoples and local communities, in decision-making processes related to access to their traditional knowledge. Consultation and full and effective participation of indigenous peoples and local communities are crucial components of a consent or approval process.

(TNFD; Convention on Biological Diversity (2018) Glossary of Relevant Terms)

Priority locations
Priority locations are locations that are:

- Material locations: Locations where an organization has identified material nature-related dependencies, impacts, risks and opportunities in its direct operations and upstream and downstream value chain(s); and/or
- Sensitive locations

(TNFD)

Protected area
A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values.

(TNFD; International Union for Conservation of Nature (2018) Guidelines for Applying Protected Area Management Categories)

Real economy
Economic activity outside of the financial sector.

Realm
Major components of the living, natural world that differ fundamentally in ecosystem organization and function: terrestrial (land), freshwater, marine (ocean), subterranean and atmospheric. The TNFD's framework is based on four realms - land, freshwater, ocean and atmosphere. The subterranean realm is included within the land, freshwater and ocean realms.

Compare Land, Freshwater, Atmosphere, Ocean

(TNFD; Adapted from Keith, D. et al (2020) IUCN Global Ecosystem Typology 2.0: Descriptive Profiles for Biomes and Ecosystem Functional Groups)

Reduce—AR3T framework
Minimize impacts, but without necessarily eliminating them.

(SBTN (2020) Science-Based Targets for Nature — Initial Guidance for Business)

Reforestation
The re-growth of forests after a temporary (< 10 years.) condition with less than 10% canopy cover due to human-induced or natural perturbations.

Compare Afforestation, Deforestation

(TNFD; Food and Agriculture Organization (2000) On Definitions of Forest and Forest Change)

Regenerate—AR3T framework
Take actions designed within existing land uses to increase the biophysical function and/ or ecological productivity of an ecosystem or its components, often with a focus on a few specific nature's contributions to people (e.g., regenerative agriculture often focuses on carbon sequestration, food production, and nitrogen and phosphorus retention).

(SBTN (2020) Science-Based Targets for Nature — Initial Guidance for Business; adapted from Burgess PJ, Harris J, Graves AR, Deeks LK (2019) Regenerative Agriculture: Identifying the Impact; Enabling the Potential.)

Resilience
The ability of systems to cope with or bounce back from a hazardous event, trend, or disturbance while maintaining their essential functions, identities, and structures. Increasing resilience to acute and chronic climate impacts requires adaptation measures.

(GFANZ. Financial Institution Net-zero Transition Plans Supplemental Information, November 2022.)

Restore—AR3T framework
Initiate or accelerate the recovery of an ecosystem with respect to its health, integrity, and sustainability, with a focus on permanent changes in state

(SBTN (2020) Science-Based Targets for Nature — Initial Guidance for Business; adapted from Gann et al. (2019) International principles and standards for the practice of ecological restoration. Second edition summary. Restoration Ecology)

Rights-holders
Under the Universal Declaration of Human Rights, all human beings are 'rights-holders'. However, not all individuals will have their human rights put at risk or impacted by a project or its associated activities. It is important to identify human rights risks related to project activities among stakeholders and recognise such stakeholders as 'rights-holders' in the context of engagement.

(TNFD (2023) Guidance on engagement with Indigenous Peoples, Local Communities and affected stakeholders (V1.0))

SBTi
Science Based Targets initiative

SBTN
Science Based Targets Network

Scenario
A scenario is a logically consistent story that describes a plausible future. It identifies some significant events, the main actors and their motivations, and how the world functions in this plausible future. It is intended to challenge thinking about what the future might be like and how they might respond under circumstances different from those they face today.

Projections of what can happen by creating plausible, coherent, and internally consistent descriptions of possible climate change futures. Scenarios are not predictions of the future.

(TNFD; Adapted from Task Force on Climate-related Financial Disclosures (2020) Guidance on Scenario Analysis for Non-Financial Companies: GFANZ (2022) Guidance on Use of Sectoral Pathways for Financial Institutions.)

Scenario pathways
Refer to the political, technological and economic developments and associated risk drivers (e.g. which sectors and regions bear the most emissions reductions, or which energy technologies win out in different economies) that lead to a particular scenario outcome. Distinctively different pathways can lead to the same outcome.

A goal-oriented scenario or combination of scenarios answering the question, "What needs to happen?", to accomplish a specific objective (e.g., what are the steps needed to reach net zero by 2050, limit global warming to 1.5 degrees C, with low or no overshoot)

(TNFD; Office of the Vice President for Research, Cambridge, Massachusetts Institute of Technology (2019) Climate-related Financial Disclosures: Use of Scenarios; GFANZ (2022) Guidance on Use of Sectoral Pathways for Financial Institutions.)

Scope 1 emissions
Direct emissions from owned or controlled sources.

(GFANZ. Financial Institution Net-zero Transition Plans Supplemental Information, November 2022.)

Scope 2 emissions
Indirect emissions from the generation of purchased energy.

(GFANZ. Financial Institution Net-zero Transition Plans Supplemental Information, November 2022.)

Scope 3 emissions
All indirect emissions (not included in Scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions. Scope 3 financed emissions consistent with the net-zero, sector-specific alliance commitments include those emissions associated with a financial institution's investment, lending, and underwriting portfolios, or from clients of investment consultants or financial service providers, whereas Scope 3 emissions from a financial institution's own operations pertain to business travel, supply chain, etc. Note that this paper uses "financed emissions" and "portfolio emissions" interchangeably.

(GFANZ. Financial Institution Net-zero Transition Plans Supplemental Information, November 2022.)

Sensitive locations
Locations where the assets and/or activities in an organisation's direct operations — and, where possible upstream and downstream value chain(s) — interface with nature in:

- Areas important for biodiversity; and/or
- Areas of high ecosystem integrity; and/or
- Areas of high ecosystem integrity; and/or
- Areas of rapid decline in ecosystem integrity; and/or
- Areas of high physical water risks; and/or

Areas of importance for ecosystem service provision, including benefits to Indigenous Peoples, Local Communities and other stakeholders.

(TNFD)

Species
A fundamental category for the classification and description of organisms, defined in various ways but typically on the basis of reproductive capacity; i.e. the members of a species can reproduce with each other to produce fertile offspring but cannot do so with individuals outside the species.

(TNFD; Levin, S. A. ed. (2009) The Princeton Guide to Ecology (Princeton, NJ: Princeton University Press))

Species composition
The array of species in a specific sample, community, or area.

(TNFD; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (2019) The Global Assessment Report on Biodiversity and Ecosystem Services)

Species richness
The number of species within a given sample, community or area.

(TNFD; Hassan R, Scholes R, Ash N (eds) (2005) Millenium Ecosystem Assessment: Ecosystems and Human Wellbeing, Volume 1, Current State and Trends. Island Press, Washington)

Sustainable use and management
The use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.

(TNFD; Convention on Biological Diversity (1992) Article 2)

TCFD
Task Force on Climate-Related Financial Disclosures

Threatened ecosystem
Ecosystem assessed as facing a high risk of collapse in the medium-term.

(TNFD; International Union for Conservation of Nature (2017) Guidelines for the application of IUCN Red List of Ecosystems Categories and Criteria)

Threatened species
Species assessed as facing a high risk of extinction in the wild in the medium-term. This includes flora and fauna listed in the IUCN Red List.

(TNFD; International Union for Conservation of Nature (2012) IUCN Red List categories and criteria)

Tipping point
A level of change in system properties beyond which a system reorganises, often abruptly, and does not return to the initial state even if the drivers of the change are abated.

(TNFD; IPCC (2019) IPCC Special Report on the Ocean and Cryosphere in a Changing Climate; Pörtner et al. (2021) Scientific outcome of the IPBES-IPCC co-sponsored workshop on biodiversity and climate change

TNFD
The Taskforce on Nature-related Financial Disclosures

TPT
Transition Plan Taskforce

Transform—AR3T framework
Take actions contributing to system-wide change, notably to alter the drivers of nature loss, e.g. through technological, economic, institutional, and social factors and changes in underlying values and behaviours.

Note that "transform" can happen before, during, and after other types of action; it is not a final consideration but it is additive to the other elements of the framework.

(SBTN (2020) Science-Based Targets for Nature-Initial Guidance for Business; adapted from IPCC (2012) Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation and IPBES (2019) Initial scoping report for Deliverable 1 (c))

Transition finance
Investment, financing, insurance, and related products and services that are necessary to support an orderly, real-economy transition to net zero as described by the four key financing strategies, which finance or enable: 1) entities and activities that develop and scale climate solutions; 2) entities that are already aligned to a 1.5 degrees C pathway; 3) entities committed to transitioning in line with 1.5 degrees C-aligned pathways; or 4) the accelerated managed phaseout of high-emitting physical assets.

(GFANZ. Financial Institution Net-zero Transition Plans Supplemental Information, November 2022.)

UNEP-FI
United Nations Environment Programme – Finance Initiative

UNEP-WCMC
United Nations Environment Programme – World Conservation Monitoring Centre

Value chain
The full range of interactions, resources and relationships related to a reporting entity's business model and the external environment in which it operates.

A value chain encompasses the interactions, resources and relationships an entity uses and depends on to create its products or services from conception to delivery, consumption and end-of-life, including interactions, resources and relationships in the entity's operations, such as human resources; those along its supply, marketing and distribution channels, such as materials and service sourcing, and product and service sale and delivery; and the financing, geographical, geopolitical and regulatory environments in which the entity operates.

(TNFD; International Financial Reporting Standard (2023) S1 General Requirements for Disclosure of Sustainability-related Financial Information)

VCA
The Venture Climate Alliance

VCMI
Voluntary Carbon Markets Integrity Initiative

WEF
World Economic Forum

Wild species
Refers to populations of any native species that have not been domesticated through multigenerational selection for particular traits, and which can survive independently of human intervention that may occur in any environment. This does not imply a complete absence of human management and recognises various intermediate states between wild and domesticated.

(TNFD; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (2022) IPBES Sustainable Use of Wild Species Assessment, Chapter 1)

Appendix C: GFANZ Net-zero Transition Plan Frameworks

Financial Institution Net-zero Transition Plan Framework

Recommendations and Guidance on Financial Institution Net-zero Transition Plans

Net-zero Transition Plans (NZTPs)

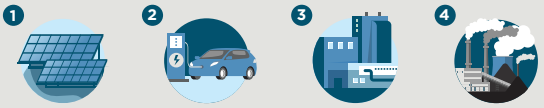
NZ Commitment 〉 **Develop and implement an NZTP**

A net-zero transition plan (NZTP) is a set of goals, actions, and accountability mechanisms to align an organization's business activities with a pathway to net-zero GHG emissions that delivers real-economy emissions reductions in line with achieving global net zero.

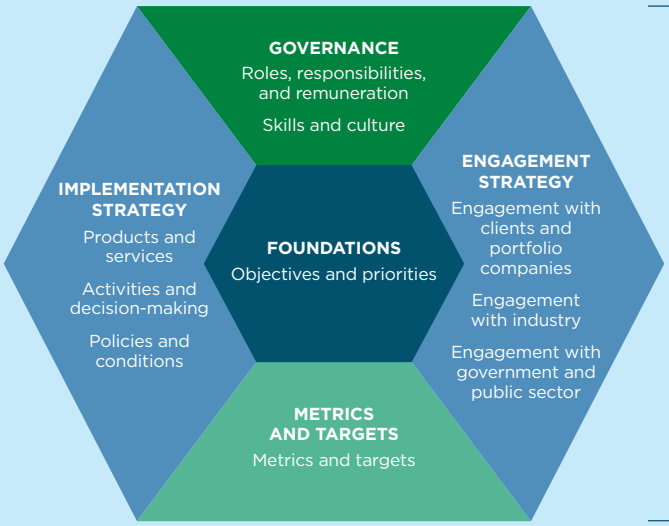
Aligning the financial sector with the net-zero transition

Increase transition finance 〉 **Achieve NZ by 2050 and support global NZ transition**

Four key financing strategies to reduce real-economy emissions



GFANZ recommendations and guidance

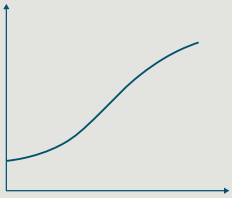


The framework provides globally applicable voluntary recommendations and guidance across the financial sector.

It can be used by any financial institution working to turn their climate commitments into action alongside guidance from net-zero alliances and civil society.

Further refinements and ongoing considerations

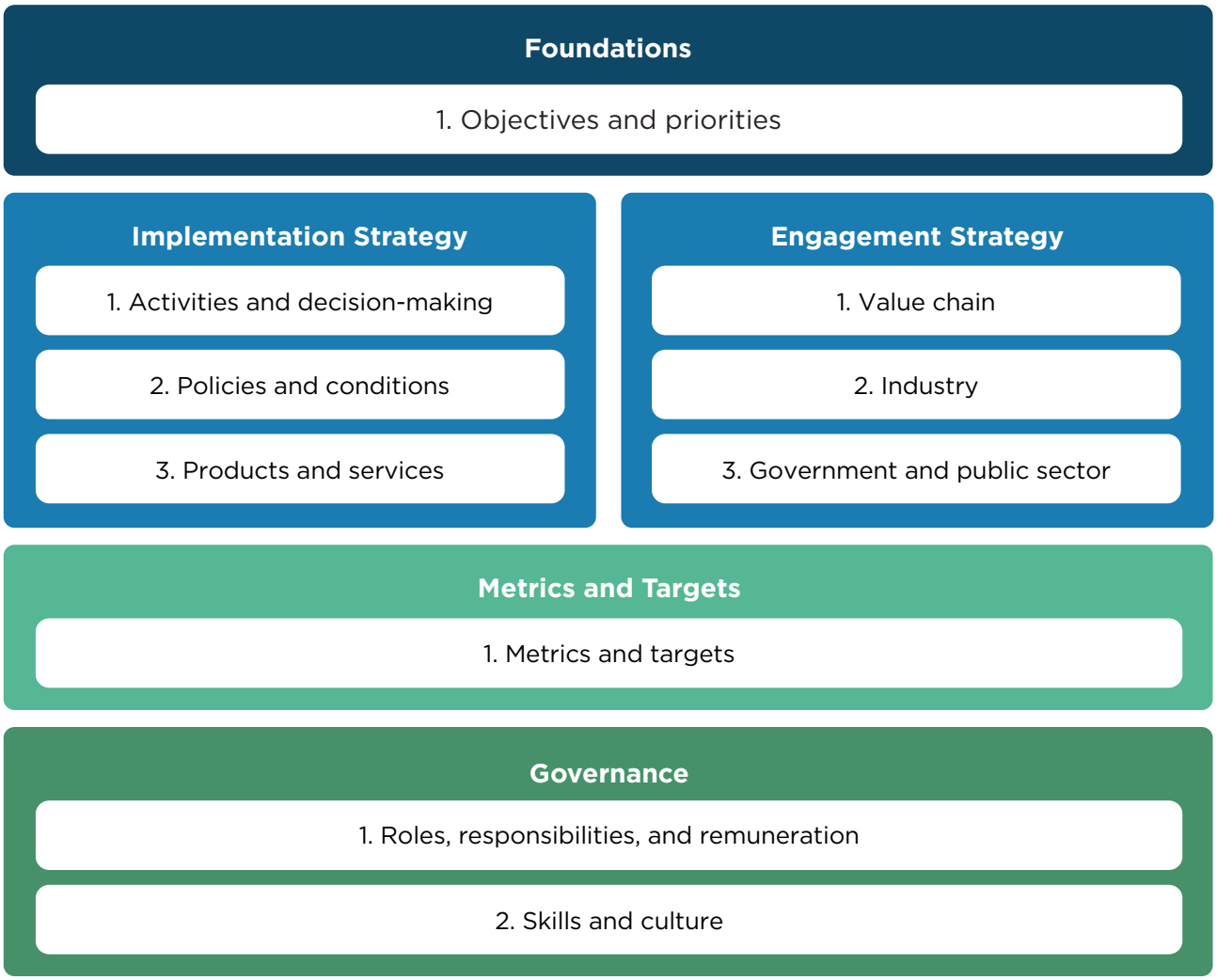
Look ahead



- Widespread adoption of NZTPs
- Increased capital allocation and services to four key financing strategies
- Cooperation between finance, real-economy and policymakers

Expectations for Real-Economy Transition Plans

The GFANZ Financial Institution Net-zero Transition Plans report introduced ten components divided into five themes. The same themes and components are mirrored in the GFANZ Expectations for Real-economy Transition Plans report, except within the Engagement Strategy theme, where the Clients and portfolio companies component is replaced with the Value chain component.



Appendix D: GFANZ Secretariat Technical Review Note — Scaling Transition Finance and Real-economy Decarbonization: Supplement to the 2022 Net-zero Transition Plans report

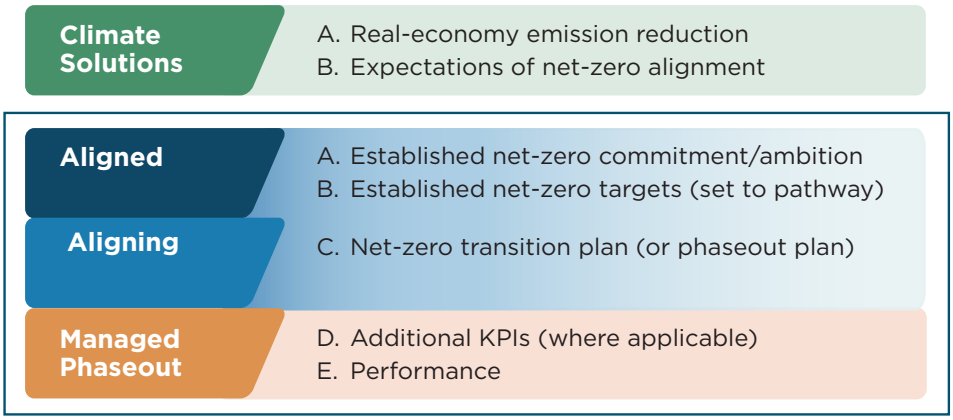
Transition Finance must be scaled rapidly — consistent definitions of Transition Finance and well-developed mechanisms to capture decarbonization potential may help to close the funding gap.

Transition Finance

Four key transition financing strategies allow financial institutions to reduce real-economy emissions.

Currently used metrics may not always be sufficient to identify the opportunities with the greatest decarbonization potential across the four strategies.

Part I – Refines attributes for identification of the four key transition financing strategies



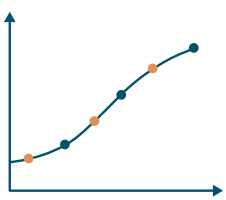
Part II – Outlines quantification methods for decarbonization contribution

Introduces the concept of Expected Emission Reductions (EER) which are calculated using different methodologies, depending on the transition financing strategy.

Avoided Emissions based on Life Cycle Analysis

Emissions Reduction Potential

Look ahead



Early adoption and piloting of the nascent approaches is expected to lead to refinements over time.

- Relationship to other frameworks
- Data availability, consistency, and quality
- Methodology issues and concepts

Appendix E: Kunming-Montreal Global Biodiversity Framework

The following is cited from the 2021 Kunming-Montreal Global Biodiversity Framework.

The Kunming-Montreal Global Biodiversity Framework, building on the Strategic Plan for Biodiversity 2011–2020, its achievements, gaps, and lessons learned, and the experience and achievements of other relevant multilateral environmental agreements, sets out an ambitious plan to implement broad-based action to bring about a transformation in our societies' relationship with biodiversity by 2030, in line with the 2030 Agenda for Sustainable Development and its Sustainable Development Goals, and ensure that, by 2050, the shared vision of living in harmony with nature is fulfilled.

The Kunming-Montreal Global Biodiversity Framework has four long-term goals for 2050 related to the 2050 Vision for biodiversity.

Section G: Global goals for 2050

GOAL A

The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050;

Human induced extinction of known threatened species is halted, and, by 2050, the extinction rate and risk of all species are reduced tenfold and the abundance of native wild species is increased to healthy and resilient levels;

The genetic diversity within populations of wild and domesticated species, is maintained, safeguarding their adaptive potential.

GOAL B

Biodiversity is sustainably used and managed and nature's contributions to people, including ecosystem functions and services, are valued, maintained and enhanced, with those currently in decline being restored, supporting the achievement of sustainable development for the benefit of present and future generations by 2050.

GOAL C

The monetary and non-monetary benefits from the utilization of genetic resources and digital sequence information on genetic resources, and of traditional knowledge associated with genetic resources, as applicable, are shared fairly and equitably, including, as appropriate with indigenous peoples and local communities, and substantially increased by 2050, while ensuring traditional knowledge associated with genetic resources is appropriately protected, thereby contributing to the conservation and sustainable use of biodiversity, in accordance with internationally agreed access and benefit-sharing instruments

GOAL D

Adequate means of implementation, including financial resources, capacity-building, technical and scientific cooperation, and access to and transfer of technology to fully implement the Kunming-Montreal Global Biodiversity Framework are secured and equitably accessible to all Parties, especially developing country Parties, in particular the least developed countries and small island developing States, as well as countries with economies in transition, progressively closing the biodiversity finance gap of $700 billion per year, and aligning financial flows with the Kunming-Montreal Global Biodiversity Framework and the 2050 Vision for biodiversity.

Section H: Global targets for 2030

The Kunming-Montreal Global Biodiversity Framework has 23 action-oriented global targets for urgent action over the decade to 2030. The actions set out in each target need to be initiated immediately and completed by 2030. Together, the results will enable achievement towards the outcome-oriented goals for 2050. Actions to reach these targets should be implemented consistently and in harmony with the Convention on Biological Diversity and its Protocols, and other relevant international obligations, taking into account national circumstances, priorities and socioeconomic conditions.

1. Reducing threats to biodiversity

TARGET 1

Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.

TARGET 2

Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.

TARGET 3

Ensure and enable that by 2030 at least 30 per cent of terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.

TARGET 4

Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence.

TARGET 5

Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover, applying the ecosystem approach, while respecting and protecting customary sustainable use by indigenous peoples and local communities.

TARGET 6

Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent by 2030, and eradicating or controlling invasive alien species, especially in priority sites, such as islands.

TARGET 7

Reduce pollution risks and the negative impact of pollution from all sources by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: (a) by reducing excess nutrients lost to the environment by at least half, including through more efficient nutrient cycling and use; (b) by reducing the overall risk from pesticides and highly hazardous chemicals by at least half, including through integrated pest management, based on science, taking into account food security and livelihoods; and (c) by preventing, reducing, and working towards eliminating plastic pollution.

TARGET 8

Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.

2. Meeting people's needs through sustainable use and benefit-sharing

TARGET 9

Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that enhance biodiversity, and protecting and encouraging customary sustainable use by indigenous peoples and local communities.

TARGET 10

Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.

TARGET 11

Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as the regulation of air, water and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.

TARGET 12

Significantly increase the area and quality, and connectivity of, access to, and benefits from green and blue spaces in urban and densely populated areas sustainably, by mainstreaming the conservation and sustainable use of biodiversity, and ensure biodiversity-inclusive urban planning, enhancing native biodiversity, ecological connectivity and integrity, and improving human health and well-being and connection to nature, and contributing to inclusive and sustainable urbanization and to the provision of ecosystem functions and services.

TARGET 13

Take effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources, and facilitating appropriate access to genetic resources, and by 2030, facilitating a significant increase of the benefits shared, in accordance with applicable international access and benefit-sharing instruments.

3. Tools and solutions for implementation and mainstreaming

TARGET 14

Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all *l*evels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, and fiscal and financial flows with the goals and targets of this framework.

TARGET 15

Take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companie*s and financial institutions:*

a. Regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity, including with requirements for all large as well as transnational companies and financial institutions along their operations, supply and value chains, and portfolios;
b. Provide information needed to consumers to promote sustainable consumption patterns;
c. Report on compliance with access and benefit-sharing regulations and measures, as applicable;

in order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production.

TARGET 16

Ensure that people are encouraged and enabled to make sustainable consumption choices, including by establishing supportive policy, legislative or regulatory frameworks, improving education and access to relevant and accurate information and alternatives, and by 2030, reduce the global footprint of consumption in an equitable manner, including through halving global food waste, significantly reducing overconsumption and substantially reducing waste generation, in order for all people to live well in harmony with Mother Earth.

TARGET 17

Establish, strengthen capacity for, and implement in all countries, biosafety measures as set out in Article 8(g) of the Convention on Biological Diversity and measures for the handling of biotechnology and distribution of its benefits as set out in Article 19 of the Convention.

TARGET 18

Identify by 2025, and eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity, in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by at least $500 billion per year by 2030, starting with the most harmful incentives, and scale up positive incentives for the conservation and sustainable use of biodiversity.

TARGET 19

Substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, mobilizing at least $200 billion per year by 2030, including by:

a. Increasing total biodiversity related international financial resources from developed countries, including official development assistance, and from countries that voluntarily assume obligations of developed country Parties, to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, to at least $20 billion per year by 2025, and to at least $30 billion per year by 2030;

b. Significantly increasing domestic resource mobilization, facilitated by the preparation and implementation of national biodiversity finance plans or similar instruments according to national needs, priorities and circumstances;

c. Leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds and other instruments;

d. Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, and benefit-sharing mechanisms, with environmental and social safeguards;

e. Optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises;

f. Enhancing the role of collective actions, including by indigenous peoples and local communities, Mother Earth centric actions[13] and non-market-based approaches including community based natural resource management and civil society cooperation and solidarity aimed at the conservation of biodiversity;

g. Enhancing the effectiveness, efficiency and transparency of resource provision and use.

TARGET 20

Strengthen capacity-building and development, access to and transfer of technology, and promote development of and access to innovation and technical and scientific cooperation, including through South-South, North-South and triangular cooperation, to meet the needs for effective implementation, particularly in developing countries, fostering joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capacities, commensurate with the ambition of the goals and targets of the Framework.

TARGET 21

Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent,[14] in accordance with national legislation.

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13 Mother Earth Centric Actions: Ecocentric and rights-based approach enabling the implementation of actions towards harmonic and complementary relationships between peoples and nature, promoting the continuity of all living beings and their communities and ensuring the non-commodification of environmental functions of Mother Earth.

14 Free, prior and informed consent refers to the tripartite terminology of “prior and informed consent” or “free, prior and informed consent” or “approval and involvement.

TARGET 22

Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders.

TARGET 23

Ensure gender equality in the implementation of the Framework through a gender-responsive approach, where all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention, including by recognizing their equal rights and access to land and natural resources and their full, equitable, meaningful and informed participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity

Appendix F: Deep Dive — Policies on activities that contribute to deforestation

The following is an excerpt from the 2022 GFANZ NZTP Report-Supplemental Information, Section "Policy examples".

DEEP DIVE: POLICIES ON ACTIVITIES THAT CONTRIBUTE TO DEFORESTATION

Approximately 22% of global GHG emissions stem from land-use activity, including logging, deforestation, and farming and half of that from deforestation.[344] According to the WWF, 92% of Nationally Determined Contributions in October 2021 consider measures to address nature loss in their fight against climate change.[345]

Activities contributing to deforestation are becoming a priority for financial institutions to measure and manage, reflecting the important role natural systems play in capturing and sequestering carbon. There is growing consensus that the world will not reach net zero by 2050 unless deforestation is halted and reversed by 2025, and as described by IPCC, forest restoration would contribute substantially toward the goals of the Paris Agreement.[346] At COP26, many financial institutions signed the Financial Sector Commitment Letter on Eliminating Commodity-Driven Deforestation.[347] Additionally, SDG 13: Climate Action, integral to the Paris Agreement, urges companies to take urgent action to combat climate change and its impacts. Three of its five targets include building climate resilience, climate risk mitigation, and adaptation, all closely linked to the topic of deforestation.[348]

Financial institutions are taking varying approaches, including policies, in their efforts to contribute to halting deforestation. Industry guidance and disclosure frameworks to support these efforts, such as the work from the Taskforce on Nature-related Financial Disclosures (TNFD), are still in development.

Industry practices in use at the time of writing are summarized in Table 18.

Table 18. Policy elements for activities contributing to deforestation

ELEMENT	DESCRIPTION (from Policies and conditions component)	INDUSTRY PRACTICES
Objective	The overarching goal of the policy, and how it supports implementation of the institution's net-zero transition ambition and priorities, and how it is informed by science.	Policies express a clear ambition on deforestation. The Financial Sector Commitment Letter on Eliminating Commodity-Driven Deforestation is one example.[349]
Scope	The type of company, asset, project, and/or activity, as well as the consideration across the supply chain, to which the policy applies. Scope could include the types of business activities within the financial institution to which the policy applies, with the aim to cover the whole business where feasible over time.	Focus on activities or commodities with high deforestation risk (e.g., palm oil). Some policies focus only on companies that operate in regions where deforestation is common; others apply the policy to a company's supply chain.

344 IPCC. Climate Change 2022: Mitigation of Climate Change: Summary for Policymakers, 2022.

345 WWF. NDCs — A Force for Nature?, fourth edition, November 2021.

346 IPCC. Climate Change 2022: Impacts, Adaptation and Vulnerability: Summary for Policymakers, March 2022, p. 1–55.

347 Financial Sector Commitment Letter on Eliminating Commodity-Driven Deforestation, November 2, 2021.

348 UN Department of Economic and Social Affairs. SDG 13: Take urgent action to combat climate change and its impacts.

349 Financial Sector Commitment Letter on Eliminating Commodity-Driven Deforestation, November 2, 2021. An updated timeline for financial institutions joining post-COP26 is outlined in the addendum of this letter.

ELEMENT	DESCRIPTION (from Policies and conditions component)	INDUSTRY PRACTICES
Conditions	Criteria or conditions consistent with a science-based net-zero transition and under which the financial institution provides products and services within the activities, geographies, and sectors/business areas defined in the policy.	Policies specify activities and geographies that undergo heightened scrutiny due to association with deforestation (related to rare species, palm oil, soy, cattle, and timber production). The financial institution assesses the counterparty according to a set of criteria or requires third-party certification for sustainable forestry practices before agreeing to do business.
Exclusions	Specific prohibited companies, assets, projects, and/or activities that cannot be served or financed by the financial institution upon conditions not being met. Any exclusions which a financial institution chooses to apply should be informed by science-based pathways and determined unilaterally.	Policies typically include a list of prohibited activities, such as illegal logging, deforestation of a primary forest, and extraction from high conservation value forests.
Timelines	A roadmap for the transition to net zero in the context of the policy, outlining when and under what circumstances the new and existing conditions and exclusions will apply. These timelines should be consistent with the science-based pathways used to set net-zero targets.	Policies often allow for a grace period while counterparties work toward an independent certification or assessment. This defers the introduction of exclusions or restrictions, but still allows for exclusion timelines to be introduced.

Deforestation activities: Scope

The risk that a client or portfolio company's operations include activities contributing to deforestation can exist both directly and indirectly in its supply chains. This makes it complex to assess and identify which companies and activities would be governed by a deforestation policy. Financial institutions tend to first identify high-risk areas and activities and then require heightened diligence for the clients and portfolio companies active in these areas.

Activities deemed to be high risk in contributing to deforestation — which may be present in a company's supply chain — include:

- illegal logging;
- logging of primary forest (including tropical moist forests, temperate, and boreal forests);
- unsustainable harvesting/harvesting of rare species;
- extraction from officially protected areas, high conservation value forests, high carbon stock forests, or those deemed environmentally sensitive;
- land clearance by burning/fire;
- extraction and sale of native tropical wood species;
- palm oil, soy, cattle, and timber production that converts biodiverse forests into pasture or single-crop plantations; and
- clearance or extraction of, or new plantation development on, forested peatlands.

Deforestation activities: Conditions

Where a potentially high-risk activity is identified, financial institutions often impose greater scrutiny. Due diligence may involve desk research as well as interaction with the company, external experts, and non-governmental organizations.

Financial institutions compensate for the lack of transparency into their exposure to deforestation by using rigorous assessments, but currently, there is no common industry approach to such assessments.

Some conditions in forestry-focused policies include the following:

1. Requirement to be certified by an independent third-party. Certifications typically accepted include:
   - Roundtable on Sustainable Palm Oil (RSPO);
   - Round Table on Responsible Soy (RTRS);
   - Global Roundtable for Sustainable Beef (GRSB);
   - Forest Stewardship Council (FSC);
   - The Programme for the Endorsement of Forest Certification (PEFC);
   - The Soft Commodities Compact developed by the Banking Environment Initiative;
   - The Equator Principles;
   - Global Canopy Forest 500 ranking; and
   - Basel Criteria for Responsible Soy Production.

Example 29. MUFG's Environmental and Social Policy Framework

"When we consider providing financing for logging businesses, including management of forest plantations, we conduct an assessment of clients to ensure that developments and management are conducted in an environmentally and socially responsible manner. In addition to confirming that illegal logging and deforestation in high conservation value areas are not involved, we request our clients to certify the relevant operations according to internationally recognized certification organizations such as Forest Stewardship Council ("FSC") and Programme for the Endorsement of Forest Certification ("PEFC"), when providing finance to the subject business activities mentioned above, in countries other than High Income OECD countries. We will request our clients to submit action plans to achieve certification when relevant operations are not certified."[350]

When relying on a third-party assessment, financial institutions should carefully evaluate the assessment criteria to understand how it aligns to the objectives of the deforestation policy.

2. Greater due diligence around exposure and compliance with the policy, through assessment procedures that emphasize traceability of commodities.

Example 30. LGIM's Climate Impact Pledge Sector Guides

"Assess companies' net zero pathways including 'Level of traceability of "forest risk commodities" across supply chain' and 'Percentage of commodities purchased under no deforestation principles' and 'Does the company have comprehensive zero-deforestation and regenerative agriculture policies?' (food).

Assess companies' net zero pathways including 'Traceability of fibres and compliance with zero-deforestation principles?' and 'Does the company have a fully comprehensive zero-deforestation policy?' (apparel)"[351,352]

350 MUFG. MUFG Environmental and Social Policy Framework, May 2022.
351 LGIM. Climate Impact Pledge Sector Guide: Net zero: food, 2021.
352 LGIM. Climate Impact Pledge Sector Guide: Net zero: apparel, 2021.

Deforestation activities: Exclusions
Some deforestation policies list prohibited activities, which preclude a financial institution from doing business with any institution engaging in these activities.

The prohibited (or restricted) activities typically listed include illegal logging, deforestation of a primary forest, and extraction from high conservation value forests.

Deforestation activities: Timelines
Some policies defer prohibitions or restrictions for a grace period while counterparties work toward an independent certification or assessment of their activities. One example is the Financial Sector Commitment Letter on Eliminating Commodity-Driven Deforestation,[353] which commits financial institutions to a timebound series of measurable targets and actions:

By the end of 2022: Assess exposure to deforestation risk through financing or investment, with a focus on "forest-risk" agricultural commodities — palm oil, soy, cattle products, timber, and pulp and paper — that are understood to be tied to the most significant deforestation impacts. Establish lending, investment, and/or insurance policies addressing exposure to agricultural commodity-driven deforestation. Engage with the highest-risk clients and assets on deforestation in their supply chains, operations, and/or financing. Engage with governments/public-sector organizations on policies that help businesses to avoid deforestation risks and impacts.

By 2023: Disclose deforestation risk and mitigation activities in portfolios, including due diligence and engagement.

By 2025: Publicly report credible progress on the milestones to eliminate deforestation driven by "forest-risk" agricultural commodities in portfolios. Provide financial products/services only to clients that have met risk-reduction criteria. Increase investment in nature-based solutions.

353 Financial Sector Commitment Letter on Eliminating Commodity-Driven Deforestation, 2021. An updated timeline for financial institutions joining post-COP26 is outlined in the addendum of this letter.

Appendix G: Selected tools, frameworks, methodologies, and guides to support activities and decision-making and metric and target setting

The following were mentioned as an indicative, non-exhaustive list of recognized and specialized frameworks, tools, methodologies, and reports that may be relevant for evaluating nature-related mitigation actions and potential associated nature impacts, as well as for developing complementary metrics and targets. This is not a complete list, but it shows the diversity of available tools at the time of writing. Financial institutions may also consider using Geographic Information Systems (GIS) in conjunction with some of these tools where data and availability allow.

Finance for Biodiversity Foundation has published a number of documents on biodiversity financing. Please see their website for a full list. Some key documents include:

- Finance for Biodiversity Foundation. Nature Target Setting Framework for Asset Managers and Asset Owners, 2024.
- Finance for Biodiversity Foundation. Guide on biodiversity measurement approaches, 3rd edition, 2024.
- Finance for Biodiversity Foundation. Foundation Act now Guide on biodiversity integration, 2022.

Science Based Targets Network has published a number of documents on nature target-setting. Please see the SBTN website for a full list. Some key documents include:

- SBTN. Technical Guidance: Step 3 Land: Measure, Set & Disclose, 2024.
- SBTN. Technical Guidance: Step 3 Freshwater: Measure, Set & Disclose, 2024.
- SBTN. Biodiversity in the First Release of SBTs for Nature and an Approach for Future Methods, 2023.
- SBTN. SBTN High Impact Commodity List v1.xlsx download from website

The Taskforce on Nature-related Financial Disclosures (TNFD) has released final recommendations on reporting nature-related dependencies, impacts, risks, and opportunities.

TNFD continues to develop further work on specific topics, such as by sector. Please see the TNFD website for a full list. Some key documents include:

- TNFD. Recommendations of the Taskforce on Nature-related Financial Disclosures, 2023.
- TNFD. Additional guidance for financial institutions, 2024.
- TNFD. Guidance for corporates on science-based targets for nature, 2023.
- TNFD. Guidance on the identification and assessment of nature-related issues: the LEAP approach, V1.1, 2023.
- TNFD. Tools Catalogues. Available at: https://tnfd.global/guidance/tools-catalogue/
- TNFD. Guidance on engagement with Indigenous Peoples Local Communities and affected stakeholders v1, 2024.

PRB

- PRB. Nature Target Setting Guidance, 2023.

SBTi

- SBTi. Forest, Land and Agriculture (FLAG) Science-Based Target-Setting Guidance, 2023.

PBAF

- PBAF. PBAF Standard v2022 Biodiversity impact assessment — Footprinting, 2022.
- PBAF. PBAF Standard v2022 Biodiversity impact assessment — Overview of approaches, 2022.

- PBAF. PBAF Q&A — Introduction to biodiversity impact assessment, 2022.
- PBAF. PBAF Standard v2023 Assessment of Dependencies on ecosystem services, 2023.

SEEA-EA

- United Nations. System of Environmental-Economic Accounting — Ecosystem Accounting (SEEA EA), 2021. White cover publication, pre-edited text subject to official editing. Available at: https://seea.un.org/ecosystem-accounting.

The Align Project

- UNEP-WCMC, Capitals Coalition, Arcadis, ICF, WCMC Europe. Measuring ecosystem condition — a primer for business, 2023.
- UNEP-WCMC, Arcadis, Capitals Coalition, ICF, WCMC Europe. Measuring and valuing biodiversity across supply chains, Aligning accounting approaches for nature, 2023
- UNEP-WCMC, Capitals Coalition, Arcadis, ICF, WCMC Europe. Recommendations for a standard on corporate biodiversity measurement and valuation, Aligning accounting approaches for nature, 2022.
- Arcadis, UNEP-WCMC, Capitals Coalition, ICF, WCMC Europe. Measuring and valuing biodiversity at site level, Aligning accounting approaches for nature, 2023

Business for Nature

- Business for Nature. Nature Strategy Handbook: a practical guide for business, 2023.

GHG Protocol

- Greenhouse Gas Protocol. Land Sector and Removals Guidance. Part 1: Accounting and Reporting Requirements and Guidance. Supplement to the GHG Protocol Corporate Standard and Scope 3 Standard. Draft for Pilot Testing and Review, September 2022.

EU Business and Biodiversity Platform

- EU Business @ Biodiversity Platform. Assessment Of Biodiversity Measurement Approaches For Businesses And Financial Institutions — Update Report 4, 2022.

ENCORE

- ENCORE Partners (Global Canopy, UNEP FI, and UNEP-WCMC). ENCORE: Exploring Natural Capital Opportunities, Risks and Exposure. [On-line], 2024, Cambridge, UK: the ENCORE Partners. Available at: https://encorenature.org. DOI: https:/doi.org/10.34892/dz3x-y059.

GLOBIO

- Schipper, A.M., Hilbers, J.P., Meijer, J.R., Antão, L.H., Benítez-López, A., de Jonge, M.M., Leemans, L.H., Scheper, E., Alkemade, R., Doelman, J.C. and Mylius, S., 2020. Projecting terrestrial biodiversity intactness with GLOBIO 4. Global Change Biology, 26(2), pp.760-771. Available at https:/www.globio.info/

EXIOBASE

- Stadler, K., Wood, R., Bulavskaya, T., Södersten, C.J., Simas, M., Schmidt, S., Usubiaga, A., Acosta-Fernández, J., Kuenen, J., Bruckner, M. and Giljum, S., 2021. EXIOBASE 3. Zenodo https://doi. org/10.5281/zenodo, 5589597. Available at https:/www.exiobase.eu/

Trase

- Stockholm Environment Institute, Global Canopy. Trase. Available at: https:/trase.earth/

UNEP

- UNEP. Nature Risk Profile: A Methodology for Profiling Nature Related Dependencies and Impacts, 2023.

UNEP FI

- UNEP FI. Indicator Library, February 2023.

Corporate Biodiversity Footprint

- Iceberg Data Lab. Corporate Biodiversity Footprint. Available at: https:/www.icebergdatalab.com/solutions/biodiversity/

IBAT

- The IUCN Red List of Threatened Species, Protected Area and Key Biodiversity Area data downloaded from the Integrated Biodiversity Assessment Tool (IBAT) (http://www.ibat-alliance.org). Provided by BirdLife International, Conservation International, IUCN and UNEP-WCMC. Please contact ibat@ibat-alliance.org for further information.

IUCN has published a number of reports and guidance on numerous biodiversity and nature topics. A sample of key reports include:

- IUCN. Industry guidance for early screening of biodiversity risk for offshore wind energy development, 2021.
- IUCN. Industry guidance for early screening of biodiversity risk for onshore wind energy development, 2021.
- IUCN. Industry guidance for early screening of biodiversity risk for solar energy development, 2021.
- IUCN. Mitigating biodiversity impacts associated with solar and wind energy development - Guidelines for project developers, 2021.
- IUCN. Guidance for using the IUCN global standard for nature-based solutions, 2020.

UN WCMC

- UNEP-WCMC. Global Critical Habitat screening layer (Version 1.0), 2017. Cambridge (UK): UN Environment World Conservation Monitoring Centre. DOI: https:/doi.org/10.34892/nc6d-0z73

WWF

- Among other reports, tools and thought leadership pieces, WWF offers the Biodiversity Risk Filter that is used by various institutions to screen corporates and portfolios as inputs to prioritize biodiversity action.

Nature Action 100

- Nature Action 100 (NA100) focuses on supporting greater corporate ambition and action to reverse nature and biodiversity loss. Their investor expectations and benchmark indicators outline indicators, sub-indicators, and metrics for assessing nature0-related ambition.

Nature Finance

- Nature Finance are developing the Nature Align App. This tool is intended to help private financial institutions assess their alignment to Global Biodiversity Framework. The first module of the tool is a web-based app that allow financial institutions to undertake a baseline assessment at the portfolio level to understand their exposure to nature including sensitive locations, and nature-related dependencies and impacts. This can provide a foundation for action and engagement. In development, release anticipated for October 2024

Nature and Climate Action Navigator

- Global Commons Alliance Accountability Accelerator, Climate Champions Team, AccountAbility. Nature and Climate Action Navigator, November 2023.

Natural Capital Coalition.

- Natural Capital Coalition. Natural Capital Protocol, 2016.

Capitals Coalition Natural Capital Toolkit

- Capitals Coalition. Natural Capital Toolkit. Available at: https:/shift.tools/contributors/551

TNFD and PBAF

- TNFD and PBAF. Biodiversity footprinting approaches for financial institutions, 2023.

Nature Positive Initiative

- Nature Positive Initiative. The Nature Positive Initiative convenes process to foster consensus on measuring nature positive outcomes (Press release), 2024. Available at: https:/www.nature positive.org/news/measuring- nature-positive/

CDP

- CDP. Assessing the Credibility of Disclosed Corporate Engagement in Landscape and Jurisdictional Approaches, 2023.

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