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WHEN FINANCE TALKS NATURE

Creating a common language for ambitious and nature-positive sustainable finance taxonomies by aligning common design features and integrating nature-related scenario analysis

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WHEN FINANCE TALKS NATURE

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FOREWORD

We need more money for nature. Adopting an ambitious Global Biodiversity Framework (GBF), in line with the biodiversity emergency, will prompt the world to consider how better to leverage the necessary finance. Sustainable finance taxonomies that take nature into account can create the "common language" that we need to shift trillions into nature-positive investments, and away from harmful activities.

We are losing nature at an alarming rate. As the latest edition of WWF's Living Planet Report has shown we are witnessing a decline in the average population sizes of mammals, birds, fish, reptiles and amphibians of an alarming 69% since 1970. Addressing these challenges will require money to flow in a direction more aligned with the outcomes we need: finance and investment need to help halt and reverse the catastrophic loss of biodiversity and ensure a nature positive world by 2030.

The Convention on Biological Diversity's meeting this year in Canada represents a historic opportunity to kick-start transformative change and reverse biodiversity loss this decade. However, for any global plan for nature to succeed it must be matched with well-aligned finance.

Government leaders of G20 countries have recently acknowledged "*the need to strengthen policies and mobilise financing, from all sources in a predictable, adequate and timely manner to address biodiversity loss and environmental degradation including significantly increasing support for developing countries*". But there is still much work to be done to close the global biodiversity gap. Indeed, as recent research by the United Nations Environment Programme shows, money is still flowing in the wrong direction: nature negative flows from public sources are currently three to seven times larger than investments in nature-based solutions. Climate, biodiversity and land degradation goals will be out of reach unless nature-positive investment quickly ramps up to USD 384 billion/year by 2025 - more than double the current USD 154 billion/year. This is why WWF is calling for a comprehensive finance and resource mobilisation strategy to align with nature-positive outcomes. Only with enough money in the right places can transformative action really take effect.

The majority of G20 leaders understand the important role that government-led sustainable finance investment frameworks (also called "taxonomies"*) can play to make this shift: 14 sustainable finance taxonomies are currently being developed across G20 countries.

*Green taxonomies are dictionary-type classification systems that define criteria to identify assets, projects and activities with environmental benefits or costs. They support the private sector, specifically financial and business actors, in determining which activities bring us closer to a sustainable future, rather than deterring our chances to halt nature loss

Taxonomies can help increase cross-border capital flows to environmentally sustainable projects that are key to decarbonising global economies and preventing nature loss, provided that those taxonomies use the same language, as highlighted in the G20 Sustainable Finance Roadmap. This will require voluntary use of reference or common taxonomies, as well as regional and multilateral collaboration.

Climate change is clearly a crisis that needs immediate attention. However, the latest science clearly shows us we cannot solve the climate crisis without nature. Focusing narrowly on climate without recognizing the critical interlinkages with nature loss, also misses a critical ally in our fight to address climate. Even in mega-diverse G20 countries, where nature's richness can still be experienced, the main focus in taxonomy development remains narrowly on climate.

This report argues that creating a "common language" for nature-related criteria, based on common design features and robust scenarios, can provide a unique opportunity to align private and public financial flows with biodiversity objectives.

We hope that the G20 will seize this opportunity and kick-start work on nature-related criteria in taxonomies under the G20 Sustainable Finance Working Group to deliver the commitment to shift financial flows.

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Sustainable finance taxonomies can create a common language to shift the trillions towards nature-positive investments and away from environmentally harmful activities

Over half the world's GDP – $44 trillion – is moderately or highly dependent on nature and its services. Without rapid and substantial shifts in capital flows, the loss of ecosystem services and biodiversity will be irreversible, potentially resulting in a destabilisation of our financial system and devastating impacts on the global economy and on humanity. To accelerate this shift, a conducive framework is needed. Sustainable finance taxonomies emerged as one critical tool to provide a framework that defines "what counts as green or environmentally harmful finance", classifying investments based on environmental performance criteria. Now, for them to inform global financial markets and to facilitate investment in the "green transformation", national policy action, international alignment and a strong forward-looking perspective of biodiversity finance taxonomies are crucial.

1. For detailed information, see Figure 3.

2. G20 Bali Leaders' declaration, Bali, Indonesia, 15-16 November 2022.

Key finding #1: A growing number of countries are developing sustainable finance taxonomies, but only few of them address nature loss. Among the 29 sustainable finance taxonomies that are in an initiation phase, have started developing or have already been adopted around the world, only twelve consider nature-relevant aspects. These aspects are usually integrated by focusing on nature-relevant environmental objectives and by developing environmental performance criteria for nature-relevant priority sectors[1]. Nevertheless, by November 2022, only six out of the twelve taxonomies that consider nature-related aspects are from G20 jurisdictions.

Recommendation for policymakers: G20 countries acknowledge the need to strengthen policies and mobilise financing, from all sources in a predictable, adequate, and timely manner to address climate change, biodiversity loss, and environmental degradation[2]. Urgent action is now required in all G20 jurisdictions to (further) include nature-relevant aspects into their existing and developing taxonomies, or to take advanced taxonomies such as the EU Taxonomy as orientation to include nature loss from the start. To achieve that goal, regulators need to define nature-relevant environmental objectives and nature-related environmental performance criteria, including criteria avoiding negative impacts, especially for nature-relevant priority sectors and economic activities.

AMONG THE 29 SUSTAINABLE FINANCE TAXONOMIES
ONLY 12
CONSIDER NATURE-RELEVANT ASPECTS

Key finding #2: In megadiverse countries, taxonomies with nature-related environmental performance criteria are still the exception[3]. Out of the 17 countries hosting more than 70% of the planet's terrestrial biological diversity (megadiverse countries), only Brazil, China, Colombia, Malaysia, and South Africa have adopted a sustainable finance taxonomy in 2022. Out of the remaining megadiverse countries, India, Indonesia, and Mexico are currently developing taxonomies and Australia, Peru and the Philippines have initiated similar processes.

Recommendation for policymakers: G20 countries must develop comprehensive financing strategies aligned with nature-positive outcomes[4]. Integrating nature-relevant economic activities to sustainable finance taxonomies offers opportunities to promote investments for the conservation and preservation of nature, especially in megadiverse G20 countries (Australia, Brazil, China, India, Indonesia, Mexico, South Africa, and the United States). This can be done by including supply chain criteria in the taxonomies of countries that import commodities that have negative impacts on nature. Additionally, policymakers from megadiverse countries should consider introducing taxonomies that can be formally recognised by their important trade partners.

Key finding #3: Critical supply chain considerations are still lacking in existing sustainable finance taxonomies. The environmental impact of G20 jurisdictions reach beyond their borders, for example, by importing commodities that have negative impacts on nature from megadiverse countries. As of November 2022, the EU is the only jurisdiction considering supply chain aspects in its taxonomy's environmental performance criteria – and even so only to a limited extent[5].

Recommendation for policy makers: All G20 jurisdictions have shared responsibility for biodiversity destruction through indirect impacts of imported goods and services and need to better address supply- and value-chain aspects in their taxonomies. This requires going beyond direct impacts in defining what counts as green or environmentally harmful by including supply and value-chain impacts explicitly in their environmental performance criteria, based on international voluntary sustainability standards[6].

Key finding #4: With the increasing trend in the development of sustainable finance taxonomies across the globe, alignment is key to avoid confusion and reduce transaction costs for companies and investors. Without alignment, taxonomies will not live up to the ambition to provide a common language for sustainable finance, will fail to eliminate confusion in international markets, and will fail to tackle greenwashing.

Recommendation for policymakers: An ambitious G20 mandate and roadmap is needed to facilitate policy dialogue on taxonomies, covering taxonomies for both 'green', for 'transition activities'(i.e., intermediate environmental performance), and for 'significant harm' aligned with the Convention on Biological Diversity's (CBD) Post-2020 Global Biodiversity Framework. The time to align global taxonomies is now, and G20 governments should give clear mandate to the G20 Sustainable Finance Working Group (G20 SFWG) to apply tools for International Regulatory Cooperation (IRC) to drive the convergence of sustainable finance taxonomies, building upon and accelerating the existing momentum within the International Platform on Sustainable Finance (IPSF). Possible tools can include bilateral or multilateral agreements on 'Common Ground Taxonomies' (CGT) (in part or in full), convergence of agreements on joint principles for taxonomy developments to promote common design features[7] and recognition of equivalence (in part or in full)[8].

3. See chapter 1.2.

4. See: WWF CBD COP-15 expectations paper (WWF, 2022f).

5. See Chapter 1.2.

6. Voluntary Sustainability Standards (VSS) are private standards that require products to meet specific economic, social, and environmental sustainability metrics. The requirements can refer to product quality or attributes, but also to production and processing methods, as well as transportation (UNCTAD, 2022).

7. Common design features include (1) environmental objectives; (2) international classification systems that define the scope of a given economic activity; (3) environmental performance metrics and threshold; and (4) overarching principles, such as science-based criteria, dynamic and forward-looking perspectives as well as technology-neutral application (see Table 2 for further details).

8. Recommendation 14 by the G20 Sustainable Finance Working Group to gradually enhance accountability of voluntary net-zero commitments (SFWG, 2022).

ONLY 5
'MEGADIVERSE COUNTRIES' HAVE ADOPTED A SUSTAINABLE FINANCE TAXONOMY IN 2022

Key finding #5: Taxonomy convergence and international alignment can best be achieved by focusing on the alignment of common design features, step-by-step. Alignment is easier and more tangible when working concretely on each common design feature. The mutual recognition of taxonomies across countries that apply the common design features (as identified in this report) and hence can be deemed equivalent – at least to a certain extent – can help reduce transaction costs. The lack of understanding of multiple layers of existing taxonomies, especially in the case of complex value or supply chains, can result in technical barriers to trade, which can be addressed by a more wide-spread use of international standards.

Recommendation for policy makers: Jurisdictions should use an "adopt-or-adapt" approach[9], to drive the convergence of critical taxonomy design features. Jurisdictions developing a taxonomy should consider adopting as many common design features from existing advanced taxonomies as possible and, if needed, adapt some of them to local circumstances. Jurisdictions with existing taxonomies should develop processes and procedures to recognise taxonomies that can be deemed equivalent with respect to the common design features, environmental performance criteria, and overarching principles, and potentially involving an independent body to facilitate the process. In the specific case of the European Union, decisions about the equivalence of specific technical screening criteria may require adjustment of the legislative framework[10], and should be informed by advice from the EU Platform on Sustainable Finance, established under Article 20 of the EU Taxonomy Regulation (2020/852), to ensure equivalent levels of environmental protection.

9. For example, as recommended by the UK Green Taxonomy Advisory Group (GTAG) in its advice to the UK government (GTAG 2022).

10. Full regulatory equivalence would require a revision of the EU Taxonomy regulation (2020/852). Article 26 requires the European Commission to review the implementation of the regulation every three years and to report on possible need to revise it.

11. Throughout this report, the term "nature-positive" follows the definition outlined by WWF and the World Economic Forum (WEF), indicating that there needs to be more nature in 2030 than in 2020, that at least 30 % of land and oceans are protected, the footprint of our production and consumption is halved by 2030, and that there cannot be any offsetting (WEF, 2020; WWF, 2022a).

For taxonomies to inform the transition of the entire economy and to go beyond the green niche, they need to adopt a scenario-based, forward-looking perspective

For taxonomies to be relevant for financial institutions, they need to inform environmental risk and impact assessments across entire portfolios, covering all relevant sectors. Besides defining the green status quo and what currently already qualifies as "green", it is important to include a forward-looking, dynamic perspective on the required transitions in - and of - companies that are not there yet. This perspective requires a definition of the corresponding pathways, and key targets on the way to a nature-positive economy[11]. Using scenarios within sustainable finance taxonomies will be critical to define more ambitious high-level and sectoral targets, to support the required transition to "nature-positive" and to help companies show that – while not yet green – they are on a credible transition path.

TAXONOMY CONVERGENCE
AND INTERNATIONAL ALIGNMENT
CAN BEST BE ACHIEVED
BY FOCUSING
ON THE ALIGNMENT OF
COMMON DESIGN FEATURES

Key finding #6: Scenario analyses play an increasingly important role to help companies, as well as policymakers understand plausible future possibilities and describe transition pathways. Sustainable finance taxonomies need to be science-based, dynamic and forward-looking to incentivise and guide the corporate transition to sustainable activities and apply technologies to stay within the planetary boundaries. Scenarios can be used to develop forward-looking transition criteria, including targets, thresholds, and projections.

Recommendation for policymakers: Jurisdictions should develop authoritative, science-based scenarios and apply them to establish forward-looking targets to ensure economic transition to a net zero carbon and a nature positive economy. These scenarios can guide companies towards their own forward-looking transition plans and related disclosures to ensure that they are on track to reach nature-relevant, global targets that support and enhance governments nature-related policy priorities.

Key finding #7: Scenarios as an essential common design feature of sustainable finance taxonomies can help to set ambitious, science-based targets at various level. Scenario analysis can be applied not only at global, regional, or country level, but also at ecosystems, sector, and company level.

Recommendation for policymakers: Jurisdictions should formally recognise that sustainable finance taxonomies can be strengthened through scenario analysis and use all existing levels of scenario analysis to set ambitious targets in the process of taxonomy development. Additionally, policymakers should use and expand the lessons learned from climate scenarios to push a more standardised approach for including nature into scenarios.

Key finding #8: Most taxonomies currently do not use scenarios; and only five jurisdictions (EU, Colombia, South Africa, ASEAN, and Singapore)[12] mention them as part of their taxonomies' climate objectives to a certain extent. These countries reference international climate trajectories such as the Intergovernmental Panel on Climate Change (IPCC)[13]. However, while some of them implicitly refer to underlying scenarios none of the jurisdictions has explicitly used scenarios analysis to define ambition levels for climate or nature-related objectives, despite their growing importance for international corporate disclosure standards (such as the Task Force on Climate-Related Financial Disclosures (TCFD) and the Taskforce on Nature-related Financial Disclosures (TNFD)).

Recommendation for policymakers: Jurisdictions should adopt a comprehensive approach to addressing climate and nature for the benefit of people together to ensure the transition towards a net zero carbon and a nature positive economy. Governments should promote standardised and systematic approach to nature-related scenario analysis in sustainable finance taxonomies, considering and building on three critical lessons learned from the climate field. These are (1) develop normative policy target, (2) define sectoral benchmark, and (3) allocate targets to individual companies, building on approaches pioneered by the Science-Based Targets Network (SBTN) to enable companies and cities to set targets for climate and nature.

12. Although Singapore is a part of the ASEAN union, the jurisdiction is counted separately to highlight Singapore's own national initiative.

13. The IPCC develops climate scenarios, which can then be used as a basis for transition pathways and climate trajectories (IPCC, 2000).

SCENARIOS AS AN ESSENTIAL COMMON DESIGN FEATURE OF SUSTAINABLE FINANCE TAXONOMIES CAN HELP TO SET AMBITIOUS, SCIENCE-BASED TARGETS AT VARIOUS LEVEL

INTRODUCTION

The financial sector and the political sphere increasingly recognise the urgency of themes regarding the loss of biodiversity and ecosystems. As over half the world's GDP - $44 trillion – is moderately or highly dependent on nature and its services (WEF 2020), **nature-related risk** associated with the loss of biodiversity is identified as having significant macroeconomic implications; and failing to account for, mitigate, and adapt to these risks can affect financial stability. As a result, there is growing pressure on policy makers, central bankers, financial regulators, and supervisors to further integrate nature-related consideration into policy decision to safeguard biodiversity and ecosystems and, at the same time, guarantee the stability of the financial system. This report aims to provide insights and recommendations on how to address nature-related environmental objectives in government-driven sustainable investment and financial risk management frameworks.

Sustainable finance taxonomies[14] were first introduced in 2015 and are government- or market-driven investment frameworks[15] to promote sustainable investment. These instruments are currently high on the G20 policy agenda for their potential to define a common language as to what economic activities are considered sustainable. Since the emergence of these taxonomies, environment-related financial risks, including both climate and nature-related risks, have also become a priority for central banks, finance ministries, regulators, supervisors in G20 countries and others. Similarly, forward-looking assessment such as scenario analysis are high on the international policy agenda. Defined as a process for identifying a potential range of outcomes under conditions of uncertainty (TCFD, 2017), it is increasingly being used as tool to assess financial sector exposure to these risks.

The initial focus of investment- and risk management frameworks has been on activities that can contribute to mitigation of, or adaptation to, climate change. Nevertheless, our planet is facing further environmental crises, with **biodiversity and ecosystem loss** being particularly alarming, with a devastating 69% decline in wildlife populations on average since 1970 (WWF, 2022a). Climate change and biodiversity loss are interconnected and as such should be tackled with concerted actions. WWF is working with a broad range of stakeholders to promote a net zero carbon, nature positive economy and financial systems as drivers to "halt and reverse the destruction of nature by 2030 with full recovery of a resilient biosphere by 2050" (Locke et al., 2021).

To reflect this goal, **governments need to develop a more comprehensive approach to sustainable finance taxonomies.** Policymakers need to define and include the concept of nature-positive economic activities in their existing and developing taxonomies. This step is key to track economic activities that contribute to halting or significantly slowing down the loss of biodiversity and ecosystems. Several regional international governments and institutions have already started developing taxonomy-based sustainable investment frameworks to address nature-related environmental objectives beyond climate. Nevertheless, much more needs to be done. For example, the European Union and China have invested considerable resources in these efforts, inspiring other jurisdictions to develop similar taxonomies. Local circumstances are an important factor for nature loss, and humanity is now facing a global challenge. Therefore, it is also crucial to **internationally coordinate the integration of nature-related risks to financial decision-making** to ensure a joint understanding and reduce transaction costs for financial sector participants and policy makers. Convergence is then key to prevent fragmentation into several different approaches.

14. In this report, sustainable finance taxonomies and taxonomies are used interchangeably.

15. While the focus of this report is on government-led taxonomies, the report also includes industry-led taxonomies in certain discussions to highlight efforts made by non-governmental bodies.
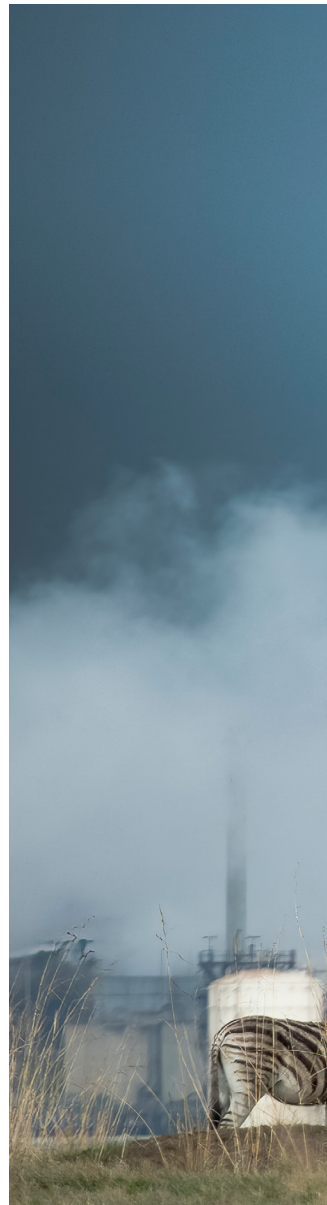
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POLICYMAKERS NEED TO DEFINE AND INCLUDE THE CONCEPT OF NATURE-POSITIVE ECONOMIC ACTIVITIES IN THEIR EXISTING AND DEVELOPING TAXONOMIES

Proper nature-related risk management should include a forward-looking, dynamic perspective to the required transition, corresponding pathways, and important milestones on the way to a nature-positive economy. This means that a truly ambitious taxonomy needs to consider future trajectories in its criteria to ensure that ambitious policy targets can be achieved. The definition of a **transition pathway towards a nature-positive environment is what interconnects** sustainable finance taxonomies and scenario analysis. Although often viewed separately, these two instruments need to be discussed together. **Using scenarios in taxonomies is key to defining more ambitious targets – both general and sector-specific.** This report identified three levels at which the usage of scenarios can enhance target setting within sustainable finance taxonomies. **However, the incorporation of nature-related aspects to scenario analysis has progressed slowly**, to the extent that there are currently no internationally recognised scenarios designed to address the resilience of corporations and financial institutions (or the wider financial system) to nature-related physical and/or transition risks.

This report focuses on these two major building blocks of the G20 sustainable finance agenda, namely (1) taxonomy-based investment frameworks (focus area 1, action 2, 2022-25) and (2) scenario analysis for forward looking financial risk management frameworks (focus area 3, action 12, 2021-2023) (SFWG, 2022). **Chapter 1** introduces the status of taxonomies regarding nature and highlights the importance of international alignment. **Chapter 2** adds the roles scenarios in the context of ambitious target setting in taxonomies and sets out next steps to include more nature consideration within scenario analysis.

1. CLASSIFYING SUSTAINABLE INVESTMENT: USING TAXONOMIES TO SHIFT THE TRILLIONS TO GREEN SECTORS

Without rapid and substantial shifts in capital flows, the loss of ecosystem services and biodiversity will be irreversible, potentially resulting in a destabilisation of our financial system and devastating impacts not only to the global economy but to humanity as a whole. A conducive framework is necessary to accelerate this shift; and sustainable finance taxonomies emerged as a critical tool to define what counts as "green" or "environmentally harmful" finance by classifying investments based on environmental performance criteria. Now, for them to inform global financial markets and to facilitate investment in the green transformation, national policy action, international alignment, and a strong forward-looking perspective of biodiversity finance taxonomies are crucial.

1.1. Taxonomies as a common language to identify sustainable investments

Climate change and nature loss are the major environmental challenges of our generation. The financial sector has a crucial role in tackling these challenges and creating a nature-positive and climate-neutral economy. In fact, to increase the volume of nature-positive investments, governments, and financial markets around the world have been increasingly focusing on shifting private and public capital flows to investments that support environmental goals. As a result

of these efforts, **sustainable finance taxonomies** have emerged as a critical tool to classify investments using environmental performance criteria; and have since become an important part of the international investment landscape and are high on the G20 policy agenda.

Sustainable finance taxonomies are classification systems that identify which economic activities are considered environmentally friendly by providing detailed guidance and specific environmental performance metrics and thresholds for each activity. The purpose of sustainable finance taxonomies is to create a **common language** that helps the market to make informed decisions on sustainable investments, increase financial transparency and reduce information asymmetries through accompanying disclosure requirements for its users, aiming to reduce the risks of greenwashing in the financial market (Xu et al., 2022).

Since the COVID-19 pandemic has shifted the focus to a more sustainable economic recovery[16], sustainable finance taxonomies have been increasingly introduced around the world, amounting to a total of **eleven government-led and three industry-led taxonomies in the G20**[17], as well as 15 taxonomy developments in other jurisdictions, that are either in an initiation phase, a developing phase or have already been adopted through national regulations.

Initiation phase, developing phase, adopted, and paused
What do these terms mean?

The 29 sustainable finance taxonomies, that have been introduced around the world (as of November 2022), can be categorized into different process maturities, i.e., development phases. During the research stage of this report, the following taxonomy development phases have been identified:

1. **Initiation phase:** governments have expressed interest in developing their own taxonomies, and/or have established a working group on sustainable finance taxonomies;

2. **Developing phase:** governments have shared first drafts of their taxonomies, which are available to the public;

3. **Adopted:** governments have adopted their sustainable finance taxonomies through national/regional regulation;

4. **Paused:** governments have stopped the development of their taxonomies due to various reasons.

In **Table 1**, sustainable finance taxonomies from the G20 and other jurisdictions have been categorised according to their development phase. Due to the fast-moving developments within the field, it is important to mention that this list is non-exhaustive. Furthermore, it highlights taxonomies that already include or plan to include nature-related aspects next to working on climate change objectives (as of November 2022).

TABLE 1 | The 29 sustainable finance taxonomies introduced around the world have different levels of process maturity, yet 12 of them already include or plan to include nature-related aspects

Jurisdictions	Process maturity			
	● Initiation phase	● Developing phase	● Adopted	⦸ Paused
G20	Argentina Australia* Turkey	India Indonesia Mexico United Kingdom	Brazil* China European Union (including France, Germany, Italy) Russia South Africa South Korea	Canada
Others	Chile Dominican Republic Georgia Hong Kong SAR Kazakhstan Peru Philippines Thailand	ASEAN Bangladesh Singapore	Colombia Malaysia Mongolia Sri Lanka	

*Industry-led taxonomies.

Include (or plan to include) nature-related aspects.

THE THREE ELEMENTS THAT MAKE UP THE COMMON DESIGN FEATURES OF A TAXONOMY ARE SCOPE, ENVIRONMENTAL PERFORMANCE CRITERIA, AND OVERARCHING PRINCIPLES

As more and more sustainable finance taxonomies are emerging, some **common design features** can be identified in them that help to compare these investment frameworks. **Table 2** shows the three different elements in which taxonomies can be broken down. First, the scope determines which (environmental) objectives and economic activities are covered under the taxonomy. Second, detailed environmental performance criteria establish which metrics and thresholds these activities must meet to qualify as sustainable. Third, the overarching principles build the foundation of the taxonomy, as they guide the design of the scope and ensure the development of thorough and ambitious environmental performance criteria.

TABLE 2 | Common design features of sustainable finance taxonomies

Scope – What is covered by the taxonomy?

(Environmental) objectives

The (environmental) objectives determine which overarching sustainability goals are supported by the taxonomy. These targets usually align with high-level policy goals as stated in international agreements, such as the Paris Agreement and the UN Sustainable Development Goals as well as regional or national regulations (Ehlers et al., 2021). Common objectives across sustainable finance taxonomies are:

❶ climate change mitigation (i.e., reduction of greenhouse gas emissions)

❷ climate change adaptation

❸ sustainable use and protection of water and marine resources

❹ transition to a circular economy

❺ pollution prevention and control

❻ protection and restoration of biodiversity and ecosystems[18]

Scope of economic activities

The scope defines the industrial sectors and economic activities for which environmental performance criteria have been developed and are therefore covered by the taxonomy. To classify economic activities, it is common to use internationally adopted industry classification systems, such as the United Nations' International Standard Industrial Classification of All Economic Activities (ISIC).

Environmental performance criteria – How to determine what qualifies as 'sustainable'?

These criteria determine which performance metrics and thresholds economic activities must meet to be considered environmentally sustainable according to the respective taxonomy. It is common for them to consist of activity-specific (technical) screening criteria[19] that are complemented by 'do-no-significant-harm' (DNSH)[20] and social safeguard criteria[21].

Performance metrics

These are activity-specific indicators that an economic activity needs to fulfil to be considered environmentally sustainable.

Performance thresholds

Thresholds define the maximum limit of magnitude or intensity[22] (measured by respective metric) an economic activity may not exceed to be considered environmentally sustainable.

Overarching principles

Dynamic and forward-looking

Taxonomies must be dynamic in nature and should include forward-looking elements that clearly indicate a transition pathway to carbon neutrality and ecosystem restoration. Environmental performance criteria should be linked to **forward-looking scenarios** that help define performance thresholds over time in line with international or national targets. For greenhouse gas emissions, the emission scenarios of the Intergovernmental Panel on Climate Change (IPCC) can be taken as reference points. For nature-related aspects, national or international targets and strategies can be good starting points, like the National Biodiversity Strategies and Action Plans (NBSAPs) that are linked to the Convention on Biological Diversity (CBD)'s Post-2020 Global Biodiversity Framework.

Science-based

Environmental performance criteria must be based on scientific evidence to effectively prevent greenwashing and to ensure that taxonomy-aligned economic activities contribute to nature-positive

Technology-neutral

It is vital that environmental performance criteria can be reached with available technology by defining technology-neutral metrics. This ensures that market mechanisms can determine which technologies achieve a broader take-up – which can vary from jurisdiction to jurisdiction.

18. Throughout this report, the relevant definitions by the Taskforce on Nature-related Financial Disclosures (TNFD) are used. Nature is defined as "a construct of four realms – Land, Ocean, Freshwater, and Atmosphere" (TNFD, 2022), while "Ecosystem services provide benefits (the goods and services that are ultimately used and enjoyed by people and society) to business" (TNFD, 2022). It is important to emphasise that the term "biodiversity" does not include ecosystems but describes the "variability among living organisms from all sources" (TNFD, 2022).

19. The EU Taxonomy describes 'technical screening criteria' as activity-specific criteria that can be used to determine whether an economic activity provides a substantial contribution to a certain environmental objective (EU Technical Expert Group on Sustainable Finance, 2020).

20. The term 'do-no-significant-harm' (DNSH) was coined by the EU Taxonomy and refers to the criteria that an economic activity may not negatively impact any of the mentioned environmental objectives to be eligible for inclusion into and alignment with the EU Taxonomy.

21. The term 'social safeguard criteria' also originated with the EU Taxonomy and refers to the criteria that an economic activity must comply with international guidelines on business and human rights to be taxonomy-aligned (EU Technical Expert Group on Sustainable Finance, 2020).

22. For example, this can be an absolute threshold (e.g., maximum of installed power of hydrogen plants in megawatt) or an intensity-based limitation (e.g., g CO_2eq/kWh life cycle greenhouse gas emission).

1.2. Nature loss as a major gap in most sustainable finance taxonomies

In recent years, tackling climate change have been high on the policy agenda of many countries. In fact, most sustainable finance taxonomies around the world focus their environmental objectives on climate change mitigation (i.e., the reduction of greenhouse gas emissions) and climate change adaptation (CCAP, 2022). These efforts, however, have neglected tackling the impacts of economic growth on biodiversity loss and ecosystem degradation. Looking at the population sizes of mammals, birds, fish, amphibians, and reptiles illustrates these devastating effects. Between 1970 and 2020, these species have seen an alarming average drop of 69% due to human economic activities, particularly land-use change and overexploitation (WWF, 2022a). This stresses the need for swift intervention and a reallocation of capital to greener sectors and economic activities with focus on biodiversity protection and ecosystem restoration.

To tackle these challenges and facilitate change, monetary policy and financial regulation need to be adapted (WWF, 2022b). Sustainable finance taxonomies must not only focus on climate change objectives, but also integrate nature-related aspects in their scope. After all, climate change and biodiversity loss are interconnected, and neither will be solved on its own.

It can be argued that sustainable finance taxonomies that prioritise nature-related aspects in their scope should be developed especially in countries that are particularly rich in biodiversity. These megadiverse countries are the world's top biodiversity-rich nations and account for at least two thirds of the global non-fish vertebrate species, as well as for three quarters of higher plant species (UNEP-WCMC, 2020). However, the concept of megadiverse countries demonstrates that global biodiversity is unequally distributed as it defines 17 countries that arguably have a disproportionate political responsibility for biodiversity conservation. These 17 megadiverse countries represent only 10% of the Earth's surface (or 33.5% of the world's landmass) but house at least 70% of the global terrestrial biodiversity (IUCN, 2013). **Figure 1** provides an overview of the overlaps between megadiverse countries, G20 jurisdictions, and their taxonomy developments. **It is important to highlight that eight out of the 17 megadiverse countries are from the G20, hence providing ample incentives for the intergovernmental forum to put biodiversity and ecosystem protection high on the political agenda.**

FIGURE 1 | Overlaps between megadiverse countries, G20 jurisdictions, and their taxonomy developments
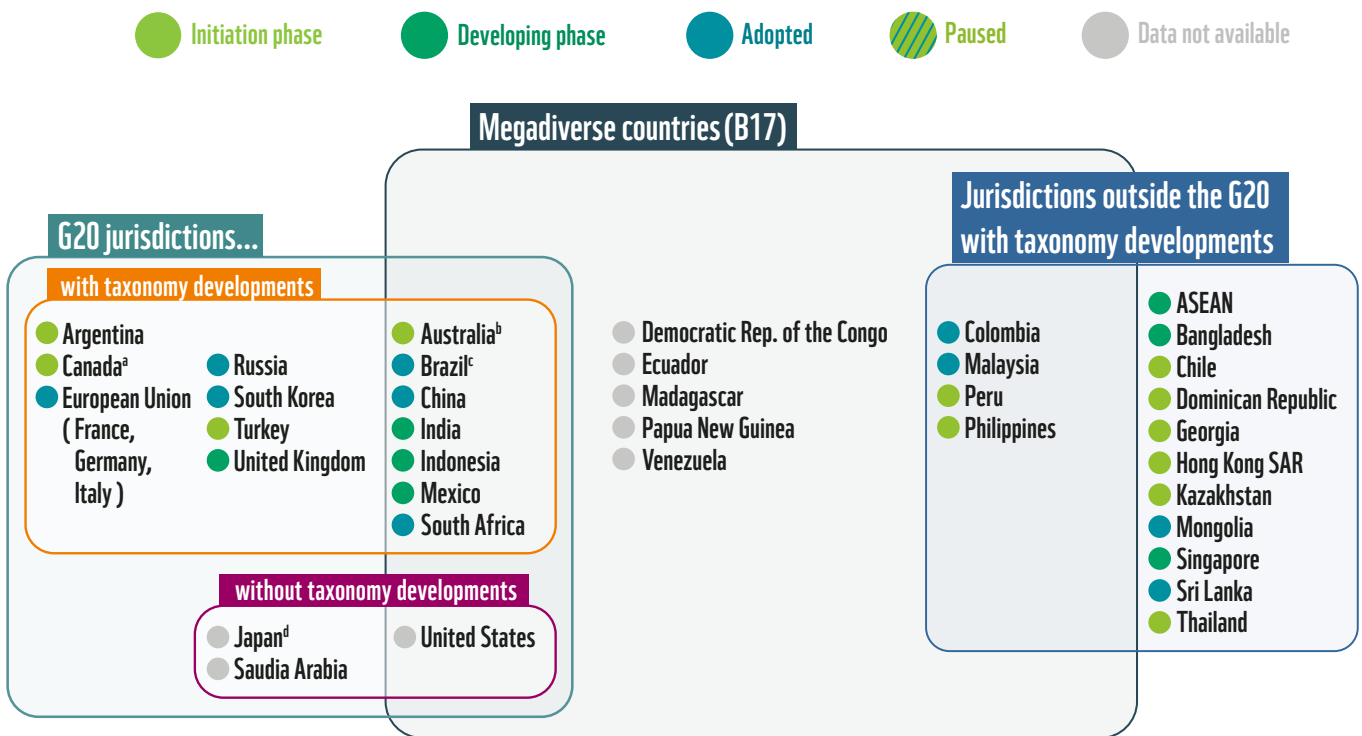
a. Work on Canada's sustainable finance taxonomy has been paused due to "fundamental differences of opinion" in April 2022 (Responsible Investor, 2022).

b. The Australian Sustainable Finance Institute's (ASFI) Taxonomy Project is an industry-led initiative, working closely with government and regulators (ASFI, n.d.).

c. The Brazilian Federation of Banks (FEBRABAN) has published an industry-led sustainable finance taxonomy in January 2021 (FEBRABAN, 2021). No government-led initiatives have been identified yet.

d. Basic Guidelines on Climate Transition Finance were released in May 2021 (METI, 2021). However, among sustainable finance experts, it is debated whether these guidelines can be classified as a sustainable finance taxonomy.

32% of the
UNESCO Natural and Mixed World
Heritage Sites are in locations
where taxonomies are still not in place.

Initiation phase

Developing phase

Adopted

Paused

Data not available

UNESCO Natural and Mixed World
Heritage Sites as of June 2019

Natural Sites

Mixed Sites

*Industry-led process

Canada*

Mexico

Dominican Republic

Colombia

Perú

Chile

Argentina

Brazil*

UK

EU

Russia

Kazakhstan

Georgia

Turkey

Mongolia

China

India

Bangladesh

South Korea

Hong Kong SAR

Thailand

Philippines

Malaysia

Singapore

Sri Lanka

Indonesia

ASEAN

Australia*

South Africa

Since G20 jurisdictions represent around 90% of the global GDP and 80% of international trade (G20 Foundation, n.d.), it is crucial that they prioritise the shift of capital flows to green sectors and biodiversity protection, as these countries have the resources to develop ambitious sustainable finance taxonomies. Jurisdictions outside the G20 that are also rich in biodiversity, such as countries under the Association of Southeast Asian Nations (ASEAN), Colombia, and Singapore, have made biodiversity protection an integral part of the scope of their taxonomies and (developing) environmental performance criteria.

Another concept to illustrate the coverage of nature in taxonomies is the overlap of global taxonomy developments with the geographical distribution of UNESCO's Natural and Mixed World Heritage Sites[23] (see **Figure 2**). These sites are explicitly included in the EU Taxonomy's DNSH criteria and are therefore an important indicator for environmental performance criteria. At the time of writing of this report, over **32% of UNESCO's Natural and Mixed World Heritage Sites are in locations where sustainable finance taxonomies are still not in place.**

Integration of nature through environmental objectives and environmental performance criteria

Nature-related aspects are currently either incorporated in sustainable finance taxonomies by determining **nature-relevant environmental objectives**, mostly water conservation, pollution prevention, and the protection of biodiversity and ecosystems, or by developing nature-relevant **environmental performance criteria**.

In the European Union, the EU Platform on Sustainable Finance published the first technical screening criteria for the two nature-related environmental objectives in March 2022[24]. The report includes detailed criteria for the circumstances under which economic activities like animal and crop production, fishing or manufacturing of food and beverages substantially contribute to "the protection and restoration of biodiversity and ecosystems". Furthermore, the DNSH criteria for the remaining environmental objectives complement these criteria. Another good practice example comes from Colombia, where the first environmental performance criteria for activities in the livestock industry, agriculture and forestry were released in March 2022 (Gobierno de Colombia, 2022).

EXAMPLE FROM THE EUROPEAN UNION

Defining sustainable fisheries with science-based performance thresholds for a substantial contribution to the biodiversity and ecosystems objective

The proposal by the (independent) Platform on Sustainable Finance (which is supposed to inform the final criteria prepared by the European Commission) contains science-based criteria for commercial fishing in ocean, coastal or inland waters. Fishing is an extractive activity with major impact on marine resources, which are shared, and therefore needs to be addressed at the collective/ ecosystem level. According to the proposal by the EU Platform on Sustainable Finance, an operator makes a substantial contribution to the protection and restoration of biodiversity and ecosystems when:

- Its fishery complies with established catch limits (linking it to the scientific concept of Maximum Sustainable Yield, which includes requirements for spawning biomass, fishing mortality and fish by-catch);

- It complies with best practices to avoid and minimise other by-catch;

- It conducts fishing in an area with an established 10% no take zone;

- It complies with a longer list of additional criteria linked to minimising litter, transparent reporting, practices to not harm marine or freshwater habitats, among others.

The criteria bundle enables the recovery and restoration of fish stocks and other marine species at the ecosystem level; and each operator and fishery can contribute to this objective by aligning with the criteria. In addition, DNSH criteria are defined for all other environmental objectives, except circular economy.

Source: EU Platform on Sustainable Finance: Technical Working Group, PART B – Annex: Technical Screening Criteria, March 2022, Chapter 1.3, pages 115-131.

23. Natural World Heritage (UNESCO, n.d.).

24. EU Platform on Sustainable Finance (2022b).

How to define sustainable activities for the livestock industry

Five environmental objectives were considered to define sustainable activities for the livestock industry (same approach for agriculture and forestry): climate change mitigation, climate change adaptation, soil management, water management and the conservation of ecosystems and biodiversity. However, in contrast to the EU Taxonomy, the activities that meet the requirements of the taxonomy are not defined for each environmental objective. Rather, they have a list and description of each eligible activity in the sector, also to acknowledge the connections between the environmental challenges. To recognise the local context and different transition pathways, they are classified into **three categories:** basic, intermediate, and advanced or transformational. Besides falling under this list, activities need to comply with Colombian environmental regulation and incorporate environmental management practices.

Sustainable livestock was defined after an exchange with experts and internal discussions. On this basis, eligibility criteria and compliance requirements were determined. Activities have been designed with the intention to ensure carbon footprint reduction, the consideration of all ecosystems and the adaptation to climate change for the benefit of livestock and society in general. The taxonomy also focuses on primary activities and does not consider supply chain aspects comprehensively. Activities covered by the taxonomy include:

- Under the basic category: division and rotation of paddocks, physical soil protection;

- Under the intermediate category: pasture management and fodder, animal welfare;

- Under the advanced or transformational category: living fences, fodder hedges

Technical assistance, knowledge generation and transfer, etc. are eligible without specific criteria.

Source: Gobierno de Colombia (2022). A more detailed comparison of the EU and the Colombian Taxonomy is provided in a forthcoming report by WWF and Ecofact (WWF, 2022e).

68%
OF ECONOMIC ACTIVITIES COVERED IN THE EU TAXONOMY INCLUDE
DNSH CRITERIA COVERING BIODIVERSITY-SENSITIVE AREAS

Comprehensive incorporation of nature across sectors

Next to sector-specific criteria for positive impacts on biodiversity and ecosystems, the EU Taxonomy also includes DNSH criteria, which aim to avoid negative side effects on critical ecosystems such as Key Biodiversity Areas (KBA) or the Natural World Heritage Sites recognised by UNESCO. The EU Taxonomy's delegated act on climate change mitigation and adaptation already became EU law in December 2021, defining sector-specific criteria for 88 economic activities (EU 2021/2139 of 4 June 2021). 58 out of 88 activities (68%) already include generic DNSH criteria with ecosystem-related criteria for sites/operations located in or near biodiversity-sensitive areas (including the Natura 2000 network of protected areas, UNESCO World Heritage sites and Key Biodiversity Areas).

Through mandatory disclosure requirements, almost 50 000 major companies will have to report to what extent their green revenues – as well as their green operational and capital expenditure – meet these DNSH criteria (EU Council, 2022). Once implemented, more detailed and reliable data on the greenness of European companies will be available to the public and investors. While much of the EU Taxonomy can be improved and is still a work in progress, DNSH criteria incorporate nature-related impacts holistically and will trigger more comprehensive investor due diligence on biodiversity/ecosystems across the financial services value chain.

Source: WWF (2022c, forthcoming). Impact story #1: Do-no-significant-harm (DNSH) criteria to avoid unintended side-effects of finance on nature.

FIGURE 3 | 12 jurisdictions around the world already include or plan to include nature-related aspects in their taxonomies by focusing on nature-relevant environmental objectives and priority sectors*

Jurisdictions

		G20						Others					
How are nature-related aspects integrated into sustainable finance taxonomies?		● Developing phase	● Adopted					● Developing phase			● Adopted		
		United Kingdom	China	EU	Russia	South Africa	South Korea	ASEAN	Bangladesh	Singapore	Colombia	Mongolia	Sri Lanka
1. By focusing on nature-relevant environmental objectives:	Water conservation	Water (3)	Water (3)	Water (3)	Water (3)	Water (3)	Water (3)		Water (3)	Water (3)	Water (3)	Water (3)	
	Pollution prevention	Pollution (5)	Pollution (5)	Pollution (5)	Pollution (5)	Pollution (5)	Pollution (5)		Pollution (5)	Pollution (5)		Pollution (5)	Pollution (5)
	Biodiversity and ecosystem protection	Biodiversity (6)	Biodiversity (6)	Biodiversity (6)	Biodiversity (6)	Biodiversity (6)	Biodiversity (6)	Biodiversity (6)	Biodiversity (6)	Biodiversity (6)	Biodiversity (6)		Biodiversity (6)
2. By developing environmental performance metrics and thresholds for:	Priority sectors* substantially contributing to the nature-relevant environmental objectives	*No information available yet.*	• Agriculture • Alternative energy • Construction materials • Food and beverages • Forestry • Marine transportation • Water and electricity utilities	• Agriculture • Chemicals • Construction materials • Food and beverages • Forestry • Marine transportation • Pharmaceuticals • Textiles • Water utilities	• Agriculture • Alternative energy • Construction materials • Gas • Marine transportation • Metals and mining • Water and electricity utilities	*No criteria for economic activities contributing to the nature-relevant environmental objectives published yet.*	• Water utilities	*No criteria for economic activities contributing to the nature-relevant environmental objectives published yet*	*No criteria for economic activities contributing to the nature-relevant environmental objectives published yet*	*No criteria for economic activities contributing to the nature-relevant environmental objectives published yet*	• Agriculture • Forestry • Livestock	• Agriculture • Alternative energy • Construction materials • Forestry • Infrastructure • Water utilities	• Agriculture • Construction materials • Food and Beverages • Paper • Textiles • Water utilities
	Other sectors contributing to the nature-relevant environmental objectives		• Fishery • Land transportation • Product manufacturing • Restoration & remediation • Waste management	• Air and land transportation • Disaster risk management • Fishery • Product manufacturing • Forestry • Restoration and remediation • Waste management	• Air and land transportation • Packaging manufacturing • Restoration and remediation		• Restoration and remediation				*No other sectors contributing to the nature-relevant environmental objectives included.*	• Tourism	• Fishery • ICT • Product manufacturing
	Nature-relevant DNSH criteria		*Not applicable*	*Nature-relevant DNSH criteria developed for included economic activities.*	*Included economic activities must comply with Russia's environmental protection laws.*	*Nature-relevant DNSH criteria developed for some economic activities contributing to the climate change objectives.*	*Nature-relevant DNSH criteria developed for included economic activities.*	*No nature-relevant DNSH criteria published yet.*	*No nature-relevant DNSH criteria published yet.*	*No nature-relevant DNSH criteria published yet.*	*Economic activities included in the three priority sectors must adopt an environmental management plan and comply with applicable Colombian laws.*	*Not applicable*	*No nature-relevant DNSH criteria published yet.*

* The TNFD has identified 13 nature-relevant priority sectors: agriculture; food and beverage retail; forestry and paper; alternative energy; infrastructure; water and electricity utilities; construction materials; metals and mining; oil and gas; biotechnology and pharmaceuticals; chemicals; apparel and textiles; and marine transportation (TNFD, 2022a).

Including nature in taxonomies by identifying high-impact sectors

To address the most nature-relevant sectors and minimise reporting costs for entities, sectors or economic activities need to be carefully identified by considering impacts on nature through primary activities and supply chains. While the sectoral scope is still unclear for most jurisdictions that have only initiated their taxonomy developments (like Argentina, Australia, or Turkey), the European Union took four steps to identify the scope of nature-relevant sectors. These steps were: 1.) analysing data on environmental impact and improvement potential; 2.) considering the value chain; 3.) prioritising activities from the mining sector due to commitments by the European Commission; and 4.) identifying enabling activities[25].

Identifying sectors with high impact on nature: Primary business activities

Taxonomies should prioritise economic activities from sectors with the largest environmental impact, both in positive and negative terms, to increase transparency on economic activities that are most harmful to the environment, have the highest potential to protect and preserve nature. Additionally, they must also consider the resources and institutional capacities needed in their development. Addressing climate change mitigation is comparatively straightforward, with greenhouse gas emissions being the primary indicator. For instance, the sectors prioritised for the EU Taxonomy cover over 93% of the EU's direct greenhouse gas emissions[26]. Nature is unique in its complex processes, interrelations between ecosystems, its variation depending on location and the lack of one single indicator. Therefore, **a more comprehensive impact assessment to identify the most relevant sectors is necessary.** As sectoral impacts on nature can be both positive and negative, it is important to address high impact sectors and ensure the sectoral coverage of sustainable finance taxonomies is adequate.

Since taxonomies are impact-based, identifying what constitutes a high impact sector can help investors to prioritise or deprioritise certain economic activities. Several tools and methods of different metrics and scopes have been developed in recent years to measure impact (and, to a certain degree, dependencies) of economic activities[27]. The proposed technical scope outlined by the Taskforce on Nature-related Financial Disclosures (TNFD) encourages entities seeking to disclose on their nature-related risks and opportunities to adopt a prioritised approach (TNFD, 2021) and elaborates on its proposed priority sectors based on exposure to nature through their impacts and dependencies (TNFD, 2022a). **Figure 3** summarises the findings on how 12 jurisdictions have already included nature-relevant aspects into their taxonomies.

Beyond primary business activities: Considering supply chain aspects

One of the biggest challenges in addressing nature loss via sustainable finance is considering nature-relevant impacts in the supply and value chain. **On average, supply chain activities account for 80% of the natural capital costs across sectors** (SBTN, 2020). Among the sectors with the highest ratio of natural capital costs in the supply chain and primary business activities are food, beverages, and tobacco as well as food and staples retailing (SBTN, 2020). These sectors rely on agricultural products in their production processes which are usually imported from countries that are rich in nature and biodiversity. **Figure 4** below shows sectors and industries with partially low direct impact on nature, but high indirect impacts on deforestation through their supply chain.

EU TAXONOMY COVERS
OVER 93%
OF THE EU'S DIRECT GREENHOUSE GAS EMISSIONS

25. EU Platform on Sustainable Finance (2022a).

26. EU Technical Expert Group on Sustainable Finance (2020).

27. For instance, the ENCORE tool by UNEP-WCMC has derived an impact materiality assessment for 86 distinct production processes ranging from 'low' to 'very high' (UNEP-WCMC, 2022).

FIGURE 4 | Sectors and their connections to commodities that have high impact on deforestation
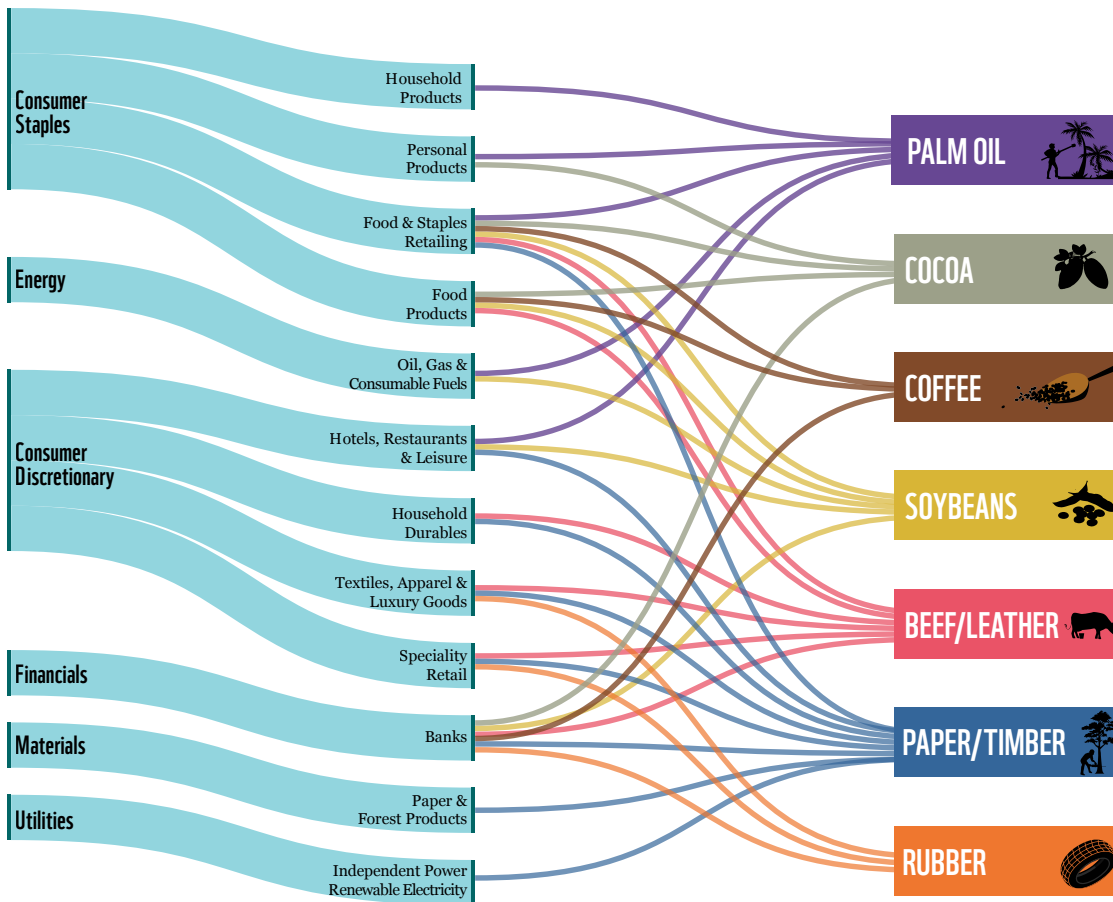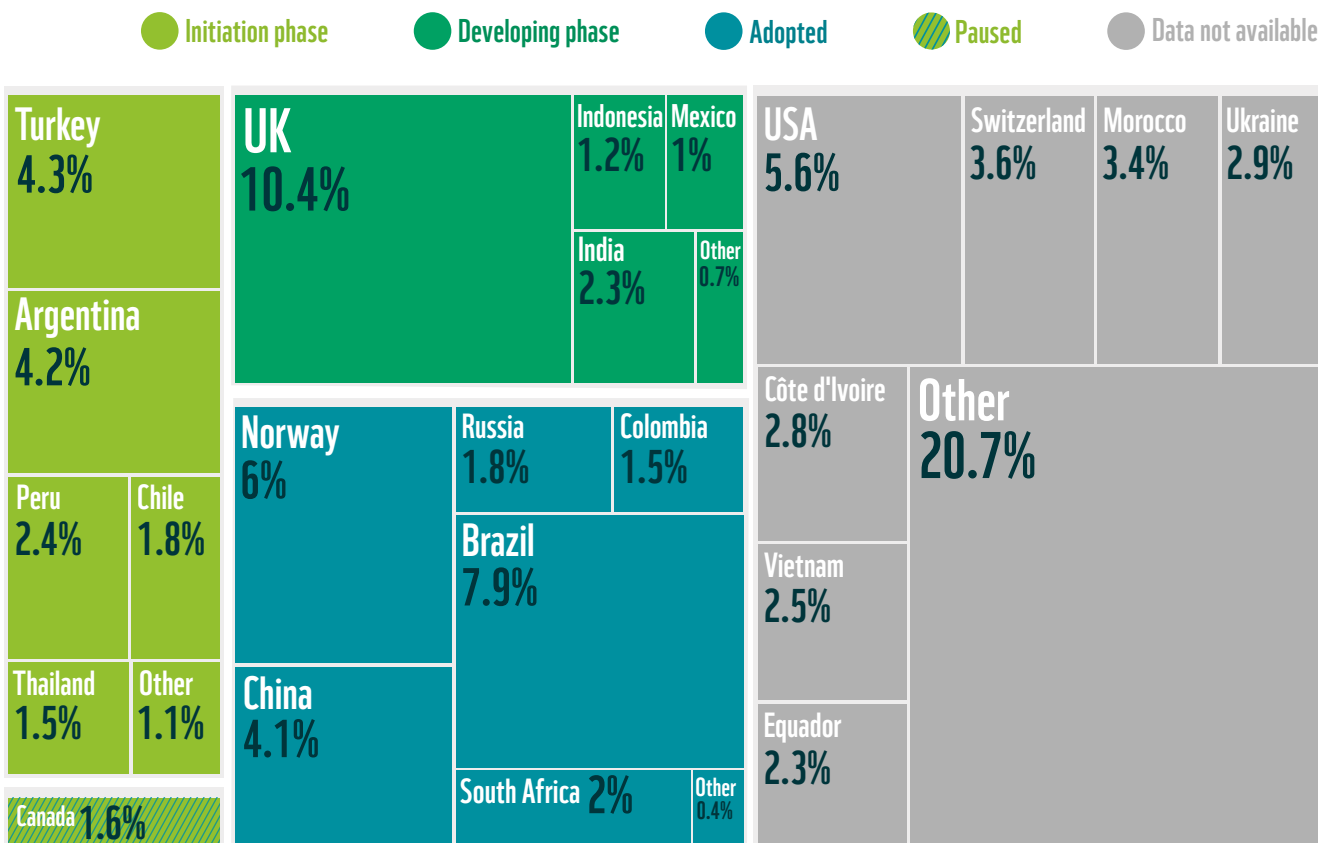

Source: The Investor Guide to Deforestation and Climate Change, Ceres, June 2020

There is a geographic discrepancy between regions that are rich in nature and biodiversity (largely the Global South) and regions from which most financial resources are allocated (largely the Global North), in what is called the biodiversity paradox (Rodríguez et al., 2022). In general, the Global South exports nature-relevant products to the Global North. If existing taxonomies fail to recognise the impact of exports on nature and biodiversity from rich countries, and supply chain aspects are not taken into account in the environmental performance criteria of taxonomies of importing countries, **major impacts on the environment are excluded from sustainable finance regulations for certain sectors.**

Figure 5 shows the share of imported agricultural products of the EU27 in 2021 (Eurostat, 2022) by country and taxonomy development in the exporting country. **More than 43% of EU agricultural imports comes from countries without any taxonomy developments**, while only 15.8% of all agricultural imports comes from countries where a government-led taxonomy has already been adopted.

The same argument can be made from a financial sector perspective: finance and tech industries, for example, dominate stock markets but most of the impact on nature is caused by agriculture, forestry, and fishing (NABU,2020). These sectors are traditionally dominated by small- and medium-sized enterprises (SMEs), playing an almost negligible role on the global capital markets, but are indirectly included in the supply chain of large publicly listed firms (Bossut et al., 2021). By **explicitly addressing the supply chain component** in the taxonomies of importing countries (e.g., considering the supply chain of a European food manufacturer who heavily depends on agricultural products; or a company in the construction industry heavily depending on raw materials input across supply chains), investors and other taxonomy users could assess nature-related impacts and dependencies in a more holistic way. This also has the potential to incentivise large industries in 'consuming' countries to incorporate supply chain aspects systematically.

FIGURE 5 | Only 15.8% of the EU27 agricultural imports comes from countries where a government-led taxonomy has been adopted

Legend: Initiation phase | Developing phase | Adopted | Paused | Data not available

Turkey 4.3%
Argentina 4.2%
Peru 2.4%
Chile 1.8%
Thailand 1.5%
Other 1.1%
Canada 1.6%

UK 10.4%
Indonesia 1.2%
Mexico 1%
India 2.3%
Other 0.7%

Norway 6%
Russia 1.8%
Colombia 1.5%
Brazil 7.9%
China 4.1%
South Africa 2%
Other 0.4%

USA 5.6%
Switzerland 3.6%
Morocco 3.4%
Ukraine 2.9%
Côte d'Ivoire 2.8%
Other 20.7%
Vietnam 2.5%
Equador 2.3%

Source: Eurostat 2021 data

TABLE 3 | Supply chain considerations in the EU Taxonomy draft criteria for selected economic activities contributing to the nature-relevant environmental objectives

Activities with large impact on land-use and deforestation via the impacts in the upstream supply chains	How supply chain impacts are addressed in the proposed EU Taxonomy developed by the EU Platform on Sustainable Finance
Manufacture of food products and beverages	Activities must comply with a list of "Minimum Sourcing Requirements" (see EU Platform on Sustainable Finance, 2022a, Table 2, p. 179). For example: "The ingredient production activity has not led to the conversion or fragmentation of high-nature-value land, forests, or other lands of high-biodiversity value excluding wetlands since 2008, or any future date."
Furniture (manufacture, repairing, sale)	DNSH criteria to biodiversity include the following: "Sourcing (cellulose-based fibres) meets the requirements in Regulation (EU) 995/2010 to prevent products derived from illegally harvested timber" (see EU Platform on Sustainable Finance, 2022a, p.144).
Wearing apparel	DNSH criteria to biodiversity include the following: "Hides and skins do not originate from biodiversity-sensitive areas. Near such areas (such as the Amazon in Brazil and the Chaco in Paraguay) with appropriate assessment" (EU Platform on Sustainable Finance, 2022a, p.168).

Example from the EU Taxonomy: Considering deforestation throughout supply chains

Since detailed (proposed) criteria are already publicly available[28], the EU Taxonomy draft criteria for economic activities contributing to the nature-relevant environmental objectives serve well to illustrate how supply chain aspects are considered and where there is improvement potential. A recent analysis (Hoch et al., 2022, forthcoming) screened to what extent the current draft on technical screening criteria, proposed by the EU Platform on Sustainable Finance, provides safeguards against deforestation both directly and through supply chains. **Table 3** presents how the draft considers supply chain impacts for selected economic activities.

While the current EU Taxonomy draft contains ambitious elements for certain specific activities, supply chain aspects are not systematically included or vary in levels of ambition. Scenario analysis is not used to develop these criteria and a variation of ambition levels and verification requirements hinders uniformity and consistency across the technical screening criteria of the EU Taxonomy. It can also be problematic that there is a risk of spatial leakages, as some DNSH criteria only focus on regional levels. To ensure a policy framework with low transaction costs for all participants, coherence with other supply-chain related policy files should also be ensured, as done by the proposed EU Deforestation-free Product Regulation (DfPR) or the Corporate Sustainability Due Diligence Directive (CSDDD).

ALIGNMENT OF TAXONOMIES' COMMON DESIGN FEATURES IS KEY TO FACILITATE COMPARABILITY AND INTEROPERABILITY AT THE REGIONAL AND INTERNATIONAL LEVEL

1.3. The international challenge of aligning taxonomies to foster nature-positive sustainable investment

Sustainable finance taxonomies are still evolving all over the world, integrating nature to variable degrees. **However, without an agreement on an interoperable common design features for sustainable finance taxonomies worldwide, market fragmentation is likely to increase.** Higher transaction costs for investors, consumers, and policy makers will result from a lack of understanding of these taxonomies. With several existing standards in place, the reporting burden for businesses and financial institutions will increase, thus hampering cross-border capital flows into sustainable finance. Businesses and financial institutions would need to apply and simultaneously report against several taxonomies, while the disclosed information would be difficult to compare and analyse for market participants, including issuers of securities, underwriters, or financial intermediaries, investors, or consumers. This makes it more challenging to identify sustainable investments and might enable greenwashing.

To prevent confusion and burden with sustainable finance taxonomies worldwide, and to ensure an easy and clear way to identify sustainable investments, **interoperability and convergence** can reduce high transaction costs. In an ideal world for the financial market, one globally accepted taxonomy would lead the way to more transparency. However, this is neither politically realistic nor consensual in the medium term. At the same time, national or regional taxonomies help to assure the inclusion of country- and region-specific conditions. The fact that efforts to develop nature-related taxonomies are still in their infancy and limited provides ample opportunity for international coordination and convergence to foster alignment for this environmental objective and sustainable finance taxonomies in general. **An overview of existing efforts between G20 jurisdictions to foster alignment through co-operation can be found in the Annex (Table I).**

Action 2 of Focus Area 1 of the G20 sustainable finance roadmap

calls to "improve coordination at the regional and international level to facilitate the comparability, interoperability, and, as appropriate, the consistency of different alignment approaches [...] by encouraging jurisdictions which intend to pursue a taxonomy-based approach to consider developing sustainable finance taxonomies using the same language (e.g., international standard industry classification and other internationally recognized classification systems), voluntary use of reference or common taxonomies, and regional collaboration on taxonomies".

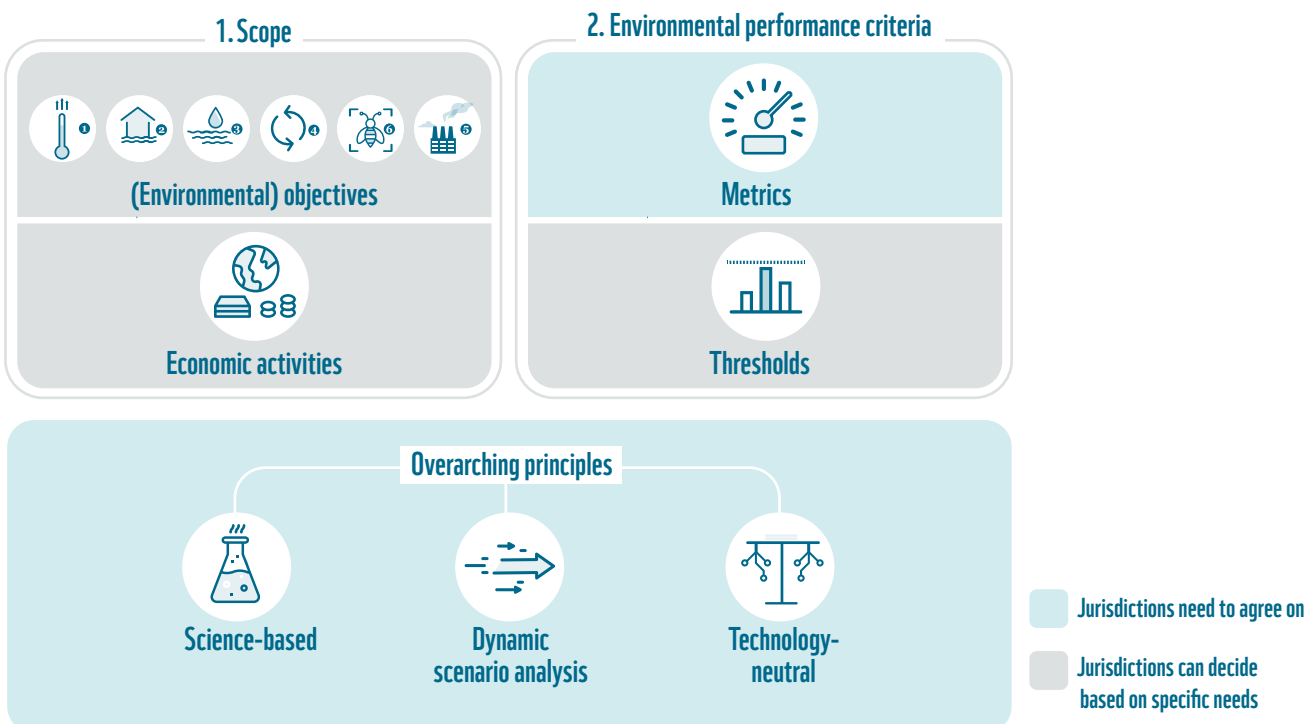28. EU Platform on Sustainable Finance (2022a).

A matter of detail: Which common taxonomy design features need to be aligned?

Sustainable finance taxonomies can only be interoperable if their common design features are comparable. Alignment is a process that can be broken down to these common features – and start on a small scale. The features of all taxonomies do not have to be identical, as emphasized by the Network of Greening the Financial System (NGFS, 2022), but that there is consensus where it is critical. **Figure 6** illustrates this: the agreement on overarching principles – e.g., that taxonomies should be science-based, dynamic and technology-neutral – is the basis for all other elements to be interoperable. Interoperability is then achieved by agreeing on the specific metrics. Jurisdictions should choose the (environmental) objectives and the sectoral scope of their taxonomies considering their economic circumstances and the environmental impact – there is no reason to have only taxonomies with the same scope. However, where there is overlap with other taxonomies, jurisdictions should **agree on the same metrics** to create comparability and interoperability. As long as the overarching principles are followed (e.g., dynamic taxonomy through applying scenario analysis), different thresholds can be set up – for example to respect different transition pathways or targets, such as the Nationally Determined Contributions (NDCs). With the agreement on the metrics, "a common language" is spoken. Irrespective of the exact definition of the thresholds, taxonomies can then also set a baseline on the safeguards needed on nature and environment.

JURISDICTIONS SHOULD CHOOSE THE (ENVIRONMENTAL) OBJECTIVES AND THE SECTORAL SCOPE OF THEIR TAXONOMIES CONSIDERING THEIR ECONOMIC CIRCUMSTANCES AND THE ENVIRONMENTAL IMPACT

FIGURE 6 | Using common design features to foster interoperability between taxonomies

1. Scope
(Environmental) objectives
Economic activities

2. Environmental performance criteria
Metrics
Thresholds

Overarching principles
Science-based
Dynamic scenario analysis
Technology-neutral

Jurisdictions need to agree on
Jurisdictions can decide based on specific needs

The first steps towards an international coordination of taxonomies

Sustainable finance (taxonomies) is not the only policy area facing complex and internationally interconnected challenges. To facilitate navigating in global systems and creating common rules of globalisation, the Organisation for Economic Co-operation and Development (OECD) introduced an international regulatory cooperation toolkit with different categories of coordination mechanisms, for example (OECD, 2020). They vary in their degree of formality and range from dialogues, formal requirements when developing regulations, or the recognition of international standards. In the international sustainable finance taxonomy coordination, similar coordination developments have been taking place already.

In 2019, the European Union took the initiative to foster international cooperation and founded the International Platform on Sustainable Finance (IPSF). In collaboration with China, one of the other 17 member jurisdictions, a Common Ground Taxonomy (CGT) for climate change mitigation has been developed[29]. It compares the approaches of the EU Taxonomy and the Chinese Taxonomy and identifies commonalities and differences for economic activities under the scope of both frameworks. However, the comparison is complicated where different metrics are applied. Further cooperation is happening in ASEAN by designing **joint principles** for the development of taxonomies. As the discussion above shows, an agreement on the same metrics, too, could highly contribute to an even more interoperable framework of taxonomies.[30] This agreement could be achieved effectively with an ambitious mandate for the G20 for sustainable finance and taxonomy development (WWF, 2021).

An **"adopt-or-adapt"** approach to drive convergence is taken by South Africa and the UK. Using an existing taxonomy as orientation or benchmark, in this case the EU Taxonomy, they adopt the taxonomy features aligned with their taxonomy principles and adapt the remaining characteristics in accordance with local circumstances. For example, the UK does not follow the approach of the EU to include gas and nuclear in their taxonomy, because it is not aligned with their science-based principle (GTAG, 2022).

No need to reinvent the wheel: To dos in an "adopt-or-adapt" approach

Considering the effort already put into the development of advanced existing taxonomies, it is more efficient to use them as a basis for new taxonomy developments. Rather than a mere 'copy & paste' exercise, this consists of adopting useful characteristics and adapting the remaining ones to local circumstances, such as to the NDCs, the national strategies on biodiversity and ecosystems or specific other environmental challenges such as resource consumption or waste management. This way, while the environmental objectives and the scope can be different, ambition is still ensured by following the same principles. Where scopes overlap, jurisdictions should whenever possible, use the same metrics and only diverge if convergence is impossible. The UK is a good example of how the process can be designed and documented.

EXAMPLE 🇬🇧

"Adopt-or-adapt" approach to taxonomy development pioneered by the UK

The UK is currently developing its sustainable finance taxonomy with advice from the Green Technical Advisory Group (GTAG). GTAG has recommended to use an **"adopt-or-adapt"** approach to the EU Taxonomy, whereby most environmental performance criteria of the EU Taxonomy should be adopted without further revision. For some criteria, however, if and where necessary, criteria should be subject to a revision, applying common principles.

In this process, the GTAG comprehensively analysed options to achieve interoperability between the UK, EU, and other taxonomies and outlines costs and benefits of deviation. They advise:

- To always be as least as ambitious in scope and the environmental performance criteria as the EU and other relevant sustainable finance taxonomies to ensure an equivalent or higher level of environmental protection;

- To remain committed to science-based targets as a matter of principle.

It is further highlighted that environmental performance criteria should be internationally comparable. This requires metrics that are threshold- or processed-based and measurable. At the same time, deviations from existing taxonomies requiring different IT systems should be avoided (GTAG, 2022).

29. IPSF (June 2022).

30. More information on recent international developments regarding the CGT can be found in the Annex.

How international convergence and equivalence of nature-relevant DNSH criteria can work in practice

DNSH criteria are an essential design feature of the EU Taxonomy that aims to avoid unintended negative side-effects of sustainable finance and investments. The EU Taxonomy includes generic DNSH criteria for the protection and restoration of biodiversity and ecosystems, which apply to a large majority of sectors/activities covered by the EU-taxonomy to date.

One core feature of these process based DNSH criteria is to require an Environmental Impact Assessment (EIA) to be conducted and relevant mitigation and compensation measures to be implemented. The criteria also include explicit requirements for operations located in or near biodiversity-sensitive areas, including the European Natura 2000 network of protected areas, UNESCO World Heritage Sites, Key Biodiversity Areas, as well as other protected areas.

The Platform's recent analysis of Data and Usability of the EU-taxonomy concluded that these criteria would raise **substantial implementation challenges outside the EU,** since they refer to EU legislation only (classified as type D). The Platform therefore recommended the European Commission to "promote the development of a common ground framework by [...] mapping standards, metrics and labels included in taxonomies gradually developing equivalence mechanisms to assess and accept local laws/standards/labels [...]".

The easiest way for the EU to address this issue would be to develop guidance on the international application of this DNSH criteria for activities outside the EU. This can be done by referring to the international standards that are already explicitly referenced in the footnotes of the Delegated Act (i.e., IFC's performance standard PS6) clarifying which national legislation can be deem equivalent to the EC directive on Environmental impact assessment, in the same way the Equator Principles, refer to designated countries: "...Designated Countries are those countries deemed to have robust environmental and social governance, legislation systems and institutional capacity designed to protect their people and the natural environment".

Under this system, an EIA conducted in the USA, for instance, is considered equivalent to EU law, because the USA is on the list of designated countries. An EIA conducted under Chinese national regulatory standards would require additional assessments, and the EC would need to specify how and to which extent these additional assessments can build upon and expand Chinese legislation to meet the requirements of the EU-taxonomy regulation. This system of equivalence, promoted by the Equator Principles, has already been voluntarily adopted by 137 financial institutions in 38 countries and could provide a template for accelerated convergence to ensure international operability of this nature related DNSH criteria.

CHALLENGES IN IMPLEMENTING DNSH CRITERIA OUTSIDE THE EU CAN BE ADDRESSED BY A SYSTEM OF EQUIVALENCE

EXAMPLE

Taxonomy equivalence in the EU Green Bond Standard

The EU Green Bond Standard (EU GBS), based on the EU Taxonomy, is currently under development and reached the final phase of the trialogue negotiations between the European Parliament, the European Commission, and the Council. The position of the Parliament (A9-0156/2022) includes the proposal to **recognise a taxonomy from a third country as equivalent** if the environmental objectives, the environmental performance criteria, and the criteria for significant harm are seen as equivalent, following the advice from the Platform on Sustainable Finance, established under Article 20 of the EU regulation 2020/852. This implies that an EU green bond could be issued in accordance with the equivalent third-party taxonomy. This holds for the use of proceeds for projects in the country of this equivalent taxonomy but not for projects in other countries or the EU.

Existing standards: Recognition of taxonomy equivalence as powerful tool

In the current situation, in which several country-specific sustainable finance taxonomies coexist and many more are under development, transaction costs can also be significantly reduced by **jurisdictions formally recognising a third-country taxonomy as equivalent** to the domestic taxonomy, provided that it uses comparable design features and ensures at least an equivalent level of protection. The third-country taxonomy could be assessed to be fully equivalent, or equivalent for certain environmental objectives or sectors, and would especially facilitate large supply chain processes. A formal way to agree on this would be Mutual Recognition Agreements (MRA) which have been a common instrument to reduce trade barriers between two jurisdictions for more than 20 years. They facilitate mutual market access as they eliminate duplicate testing, inspection, or certification.

In practice, this is also closely linked to the recognition of **international standards** or policies as equivalent. For example, in its generic DNSH criteria for the protection and restauration of biodiversity and ecosystems, the EU Taxonomy refers to an EU Directive[31] that is difficult to apply in non-EU countries (see box below). However, the EU could decide to develop guidance on the application of this DNSH for activities outside the EU, clarifying which national legislation can be deem "equivalent" to the European Commission Directive on Environmental Impact Assessments (EIA), in the same way the Equator Principles refer to "designated countries".

The EU Platform on Sustainable Finance suggested the creation of equivalence tables of relevant EU legislation with equivalent international standards or criteria[32]. This would involve translating specific EU regulation criteria into quantitative and/or process-based criteria to facilitate their application outside of the EU, especially by non-EU actors, and have the role to assess the relevance of any proposed alternative. For example, this would involve providing guidance on how specific technical screening criteria could be complemented by separate, non-binding guidance that indicates technical, science-based criteria that are policy-neutral (e.g., international standards rather than regulatory standards)[33].

This **equivalence mapping** would enable the EU to refer to its own legislation in their taxonomy but also ensure interoperability. There have already been first steps to set the path towards the recognition of equivalence of taxonomies in the European Union, especially by an initiative from the European Parliament as part of the EU Green Bond Standard.
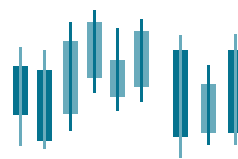
RECOGNISING A THIRD-COUNTRY TAXONOMY AS EQUIVALENT CAN SIGNIFICANTLY AVOID TECHNICAL BARRIERS TO TRADE

31. Requirement to make an Environmental Impact Assessment (EIA) in accordance with Directive 2011/92/EU. The EU could, for example, consider recognising the Performance Standard 6, used by all financial institutions that signed the Equator Principles.

32. EU Platform on Sustainable Finance (2022b).

33. See section 6.1.3 (EU Platform on Sustainable Finance, 2022c).

2. THE POWER OF THINKING AHEAD: SCENARIOS CAN PROMOTE MORE AMBITIOUS AND RELEVANT TAXONOMIES

For taxonomies to be relevant for financial institutions, they need to inform environmental risk and impact assessments across entire portfolios (and all relevant sectors). Besides defining the green status quo and what currently already qualifies as green, it is important to include a forward-looking, dynamic perspective on the required transitions in companies (or across asset classes more widely) that are not there yet. This perspective requires defining the corresponding pathways and key milestones on the way to a nature-positive economy. Using scenario analysis within sustainable finance taxonomies will be critical to define more ambitious high-level and sectoral targets to support the required transition to "nature-positive" and to help companies show that – while not yet green – they are on the right transition path.

2.1. Taxonomies and scenario analysis: A duo that jointly supports the transition to sustainability

The whole economy needs to transition to create a sustainable future. It will not be enough to invest only in business activities that are already sustainable, **but currently unsustainable activities need to be transformed** as well. With respect to climate change, currently 60% of global greenhouse gas emissions result from 'brown', unsustainable sectors (Natixis, 2021). Activities that cannot be replaced with more sustainable alternatives need to be phased out (i.e., redirect financial flows away from unsustainable activities); and activities with low-carbon or nature-positive alternatives, more financial resources can lower the costs of capital for nature-friendly business models and activities.

Sustainable finance taxonomies can define, track, and incentivise this process. The transition is a long-term process that requires the definition of a **transition pathway** to inform what the environmental performance of an activity needs to be and by when this should be achieved. The G20 Sustainable Finance Working Group (SFWG) has recently presented its Transition Finance Framework consisting of five high-level pillars and a range of principles for jurisdictions or financial institutions. Although the focus is on climate, the G20 SFWG highlights the need to incorporate other environmental dimensions, such as biodiversity or pollution control (SFWG, 2022). In this context, sustainable finance taxonomies need to become dynamic and forward-looking to incentivise and guide the transition from (currently) unsustainable activities to (future) sustainable activities that meet ambitious environmental performance levels (see **Figure 7**). This component is crucial to incentivise financing and show that companies are on the right track to reach policy targets. By utilising scenarios, **forward-looking transition criteria** can be defined, using forward-looking data such as targets and projections to benchmark companies.

60%
OF GLOBAL GREENHOUSE GAS EMISSIONS RESULT FROM
'BROWN', UNSUSTAINABLE SECTORS

Action 12 of Focus Area 3 of the G20 sustainable finance roadmap

calls to "effectively identify, measure, and manage sustainability-related financial risks. This may include the development of consistent risk definitions, tools, and methodologies to assess financial sector exposure to sustainability risks, including for climate risks, and by making use on voluntary basis of the NGFS's reference scenarios. This may also include coordination on supervisory activities on the measurement, management, and reporting of sustainability risk exposures, including regulatory guidance and supervisory expectations".
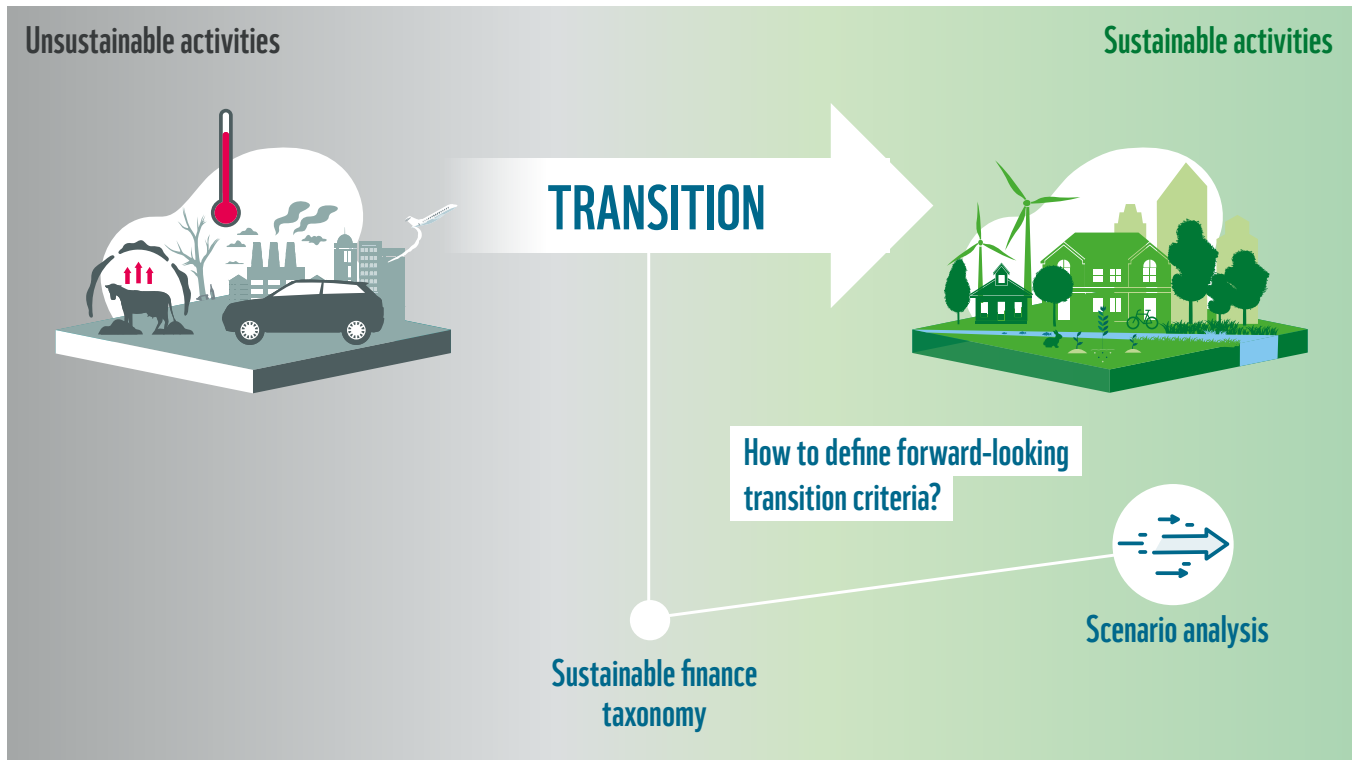
2.2 Role of scenarios: Ensuring ambitious and feasible target setting

One of the earliest works to project the effect of unsustainable economic growth on society was described in The Limits to Growth report, published in 1972[34]. Since then, future projections of plausible outcomes under different scenario options have been widely used. Scenarios are defined as a process for identifying a potential range of future outcomes under conditions of uncertainty (TCFD, 2017). They are a tool to help financial and non-financial entities as well as policy makers to understand certain future possibilities and to describe the development pathway. Using forward-looking data, companies or other entities can **benchmark** themselves against scenarios to assess if they are on the right track contributing to a high-level policy goal. Scenario analysis can therefore help to increase resilience of a financial/non-financial entity, (or a financial system, or a country) to different hypothetical futures (TCFD, 2017).

It is important to understand the role of scenarios in the context of sustainable finance, more broadly, and the functions for sustainable finance taxonomies, more specifically. The dynamic and forward-looking nature of a taxonomy is crucial to incentivise financing the transition of harmful economic activities into sustainable activities if technology options are available. For activities not yet sustainable, a clear and robust transition pathway needs to be defined in line with high-level policy targets to enable the identification of companies and activities that are in a

credible transition process. Scenarios can be broken down to different levels, for example the sectoral and the entity level, using different approaches, and can also integrate different technology options (Juergens et al., 2020). In the context of taxonomies, the applications of scenarios can be threefold.

1. **Scenarios for taxonomy's ecosystem-specific ambition level:** To define a normative overall global ambition level (i.e., the biodiversity equivalent of the climate related "greenhouse gas neutrality by 2050"), in the case of biodiversity differentiated by ecosystem and hence informed by ecosystem scenarios.

For the ambition statement of a taxonomy to become operational and inform the development of the technical criteria for biodiversity, ambition levels should draw on ecosystem-specific targets and be defined against a baseline. For example, modelling scenarios for understanding when degraded river ecosystems should be restored, or when degradation of a woodland ecosystem due to land conversion should be reduced or stopped completely. This is also coherent with the proposed disaggregation of headline indicators for the CBD Post-2020 Global Biodiversity Framework where certain targets are made to be more granular by disaggregating proposed goals into either by species group, by type of service, or type of ecosystems (CBD, 2021).

34. Meadows et al. (1972). The Limits to Growth.

2. Scenarios for activity-level performance benchmarks: To derive sector pathways and set benchmarks for taxonomy activities, authoritative sectoral transition scenarios are required, similar to those underpinning the International Energy Sector (IEA) sector pathways for greenhouse gas emission, in which a company's emission intensity pathway is compared to its corresponding sector.

The IEA described a global roadmap for the energy sector to reach Net Zero by 2050 (IEA, 2021). For nature, sectoral roadmaps are also needed because there is a growing gap between the ability for ecosystem services to continue providing for key economic sectors, as 14 out of 18 services assessed in the IPBES report have declined since 1970 (IPBES, 2019). To stabilise nature loss in line with the 2030 goal for biodiversity, future risks associated with nature loss across all sectors should be systematically accounted for. Deriving sector pathways towards a sustainable transition then requires a forward-looking assessment through scenario analysis, which can then be fed into environmental performance criteria in sustainable finance taxonomies. Here, an entrance point could be identifying pressures from sectors on nature, like pressures that bring about drivers or biodiversity loss that could lay the ground to set benchmark on activity level performance[35].

3. Scenarios for companies' transition to nature positive pathways: To make it possible for companies to understand, document, and report on their transition plans through corporate (bottom-up) transition scenarios. The scenarios are developed against science-based targets and illustrate how a company plans to reach relevant sector targets or benchmarks, as defined in the environmental performance criteria[36].

With limited government budgets and the high impacts and dependencies of companies on nature, stronger private sector involvement in nature-related risk management is needed to reduce the impact of business activity on nature. In that context, scenario analyses should be considered to evaluate the compatibility of companies with nature-positive transition paths (WWF, 2022d, forthcoming). What is relevant for potential financiers or investors would be the companies' ability and intention to comply with the evolving regulatory requirements and the corresponding global, national and/or sectoral nature positive pathways. Under the TCFD[37], companies and organisations must disclose their strategies to address climate -related risks and opportunities and disclose the resilience of their strategies to a range of plausible scenarios. There is also momentum within the Taskforce on Nature-related Financial Disclosures (TNFD) as it recently released its discussion paper on proposed approach to scenario, focusing scenario analysis around two uncertainties, 1.) Nature loss and ability of the company to adapt and 2.) Alignment of market and non-market driving forces (TNFD, 2022b). Although there is still a long road ahead to develop scenarios for nature, there is no excuse to delay the work on nature-related sustainable finance taxonomies, and hence development should already take place in parallel.
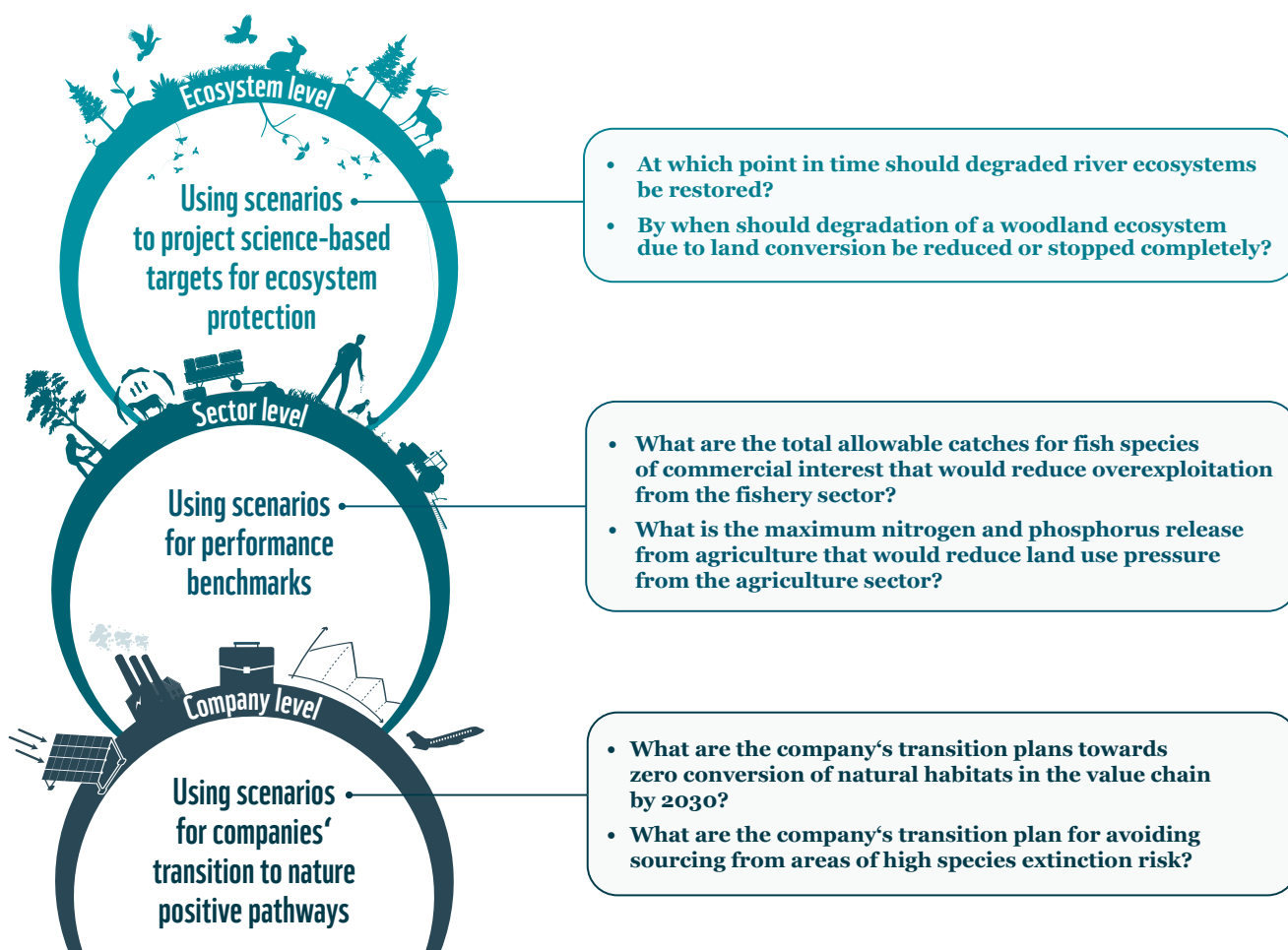
35. For example, the 2020 report by The Food, Agriculture, Biodiversity, Land-Use, and Energy Consortium (FABLE) for example provides pathways for a sustainable land-use and food systems that include actions by the agriculture, food, and land-use sector to reduce greenhouse gas emissions from crops and livestock by 2050 and zero net deforestation by 2030 (FABLE, 2020).

36. The methodology developed by SBTN currently does not require forward looking data, but subsequent versions of SBTN methodologies may include future projections of pressures and states of nature (incorporating climate and socio-economic scenarios, see: SBTN (2022), page 48.

37. Under TCFD Principle 2: "Any scenario analyses should be based on data or other information used by the organization for investment decision making and risk management. Where appropriate, the organization should also demonstrate the effect on selected risk metrics or exposures to changes in the key underlying methodologies and assumptions, both in qualitative and quantitative terms" (TCFD, 2017).

FIGURE 8 | Scenarios can help set nature targets at three levels

Ecosystem level

Using scenarios to project science-based targets for ecosystem protection

- At which point in time should degraded river ecosystems be restored?
- By when should degradation of a woodland ecosystem due to land conversion be reduced or stopped completely?

Sector level

Using scenarios for performance benchmarks

- What are the total allowable catches for fish species of commercial interest that would reduce overexploitation from the fishery sector?
- What is the maximum nitrogen and phosphorus release from agriculture that would reduce land use pressure from the agriculture sector?

Company level

Using scenarios for companies' transition to nature positive pathways

- What are the company's transition plans towards zero conversion of natural habitats in the value chain by 2030?
- What are the company's transition plan for avoiding sourcing from areas of high species extinction risk?

Scenarios and stress-testing in the sphere of central banks and financial supervision

While the elaborations above focus on scenarios and use case of deriving sectoral transition pathways, scenario analysis also has a special function for central banks and financial supervisors to identify systemic and macroeconomic risks. As a first learning exercise, the European Central Bank, for example, has applied a first climate stress test in 2022. According to the preliminary results with 41 participating banks and a short-term, three-year transition risk scenarios and two physical risk scenarios (flood risk and drought and heat risk), the combined credit and market risk losses would amount to around € 70 billion (Central Bank, 2022).

With a growing understanding of the transmission channels of nature-related risks into financial systems, scenario analyses will be applied more broadly to dynamically assess future nature-related risks. A report by NGFS and INSPIRE suggests that lessons learned in developing climate scenarios for stress-testing could and should be applied to nature-related stress tests. This includes 1.) defining a narrative regarding the specific environmental shock that might occur, 2.) modelling its micro and macroeconomic consequences, and 3.) modelling its impact on financial institutions (NGFS & INSPIRE, 2022).

Scenarios in practice: Integration in environmental objectives and environmental performance criteria

Scenario analyses can unveil the power of forward-looking information in several features of sustainable finance taxonomies. For example, criteria required to fulfil 'substantial contribution' or DNSH should be justified with a science-based assessment under various hypothetical pathways and time periods to check whether the ambition levels are enough to reach nationally or globally agreed targets.

However, the use of scenario analyses during the design of taxonomies, especially scenarios that are relevant for nature, is still critically missing in the international taxonomy landscape. The EU Taxonomy, for example, only refers to "business-as-usual" (BAU) scenarios to assess (relative) environmental performance compared to a given baseline (i.e., the likely alternative scenario) to set levels of ambition for substantial contribution if performed in a way that 'substantially' reduces the pressure on the environment. In the near future, utilising scenarios will also be essential for forward-looking reporting not just under the disclosure standards for climate developed by the TCFD, but also for the upcoming nature-related disclosure requirements such as the TNFD framework and other disclosure requirements at national or regional level. Figure 9 shows five jurisdictions that have included climate scenarios within their environmental performance criteria using IPCC reference scenarios.

EXAMPLE

The use of climate-related scenarios to set dynamic, forward-looking environmental performance targets and thresholds for the energy sector in the EU Taxonomy

In 2020, when the EC-mandated Technical Expert Group (TEG) on Sustainable Finance developed proposals for dynamic, forward-looking environmental performance targets for mitigation of climate change in the energy sector, the analysis was based on the International Energy Agency's 2 degrees scenario (2DS), which stipulates that "the average carbon intensity of new power capacity [...] needs to be at around 100 grammes of CO_2 per kilowatt hour (gCO_2/kWh) in 2025".

This threshold was deemed to be applicable to the production of electricity for a broad range of technologies, including geothermal energy. As a result, the TEG concluded that any geothermal source with life-cycle emissions below 100 gCO_2e/kWh could be considered to make a "substantial contribution" to climate change mitigation. Therefore, the possible environmental performance threshold for substantial contribution to climate change mitigation for electricity production from geothermal energy was recommended be set at "life cycle emissions are lower than 100gCO_2e/kWh". However, this performance threshold was designed to be dynamic, and intended to decline over time, as more recent performance data becomes available, and the underlying scenario evolves.

The final legal text, adopted by the European Union in 2021, retains this proposal and specifies the environmental performance metrics referring to EU and international standards (i.e., lifecycle greenhouse gas emission savings are calculated using Commission Recommendation 2013/179/EU or, alternatively, using ISO 14067:2018 or ISO 14064-1:2018).
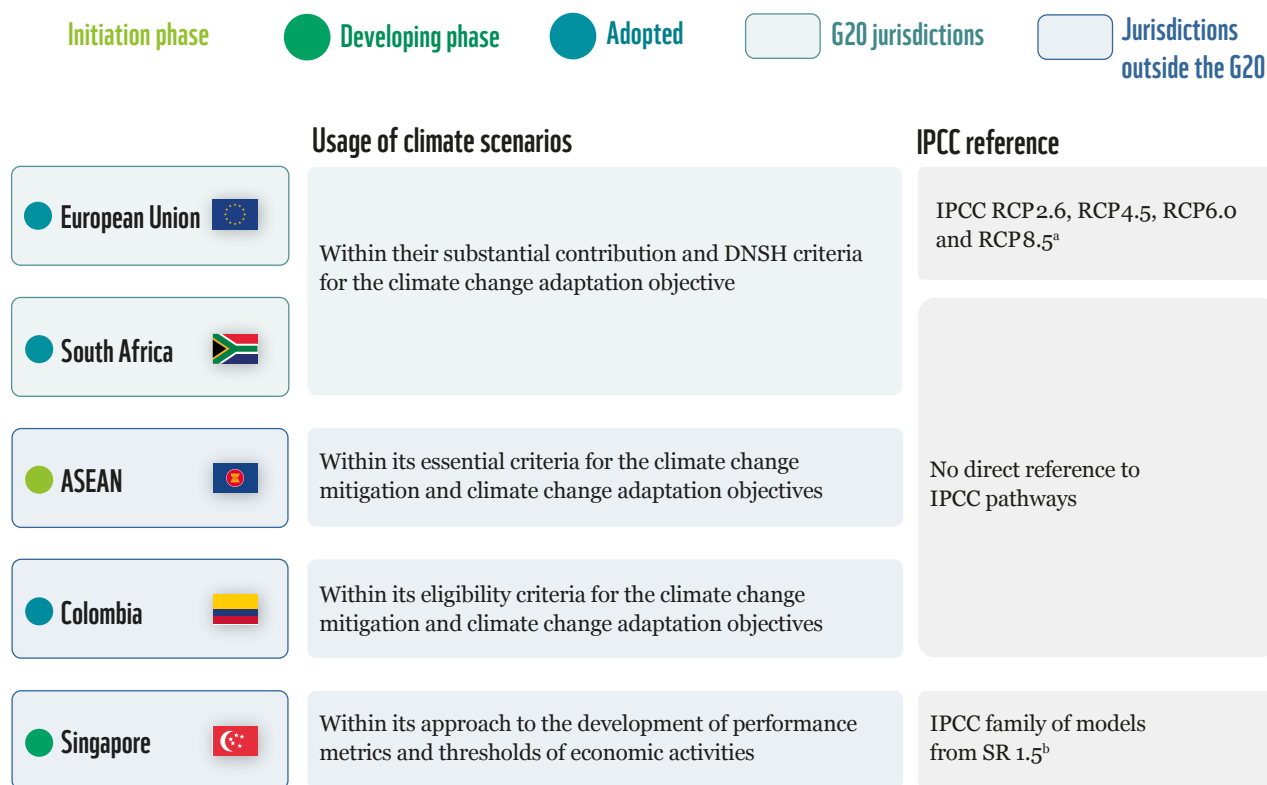
While there is a very explicit link between the (underlying) climate-related scenario and the level of ambition (and related sector pathways) for many of the sector-/activity-specific technical screening criteria of the EU Taxonomy, these scenarios are explicitly referenced only in a very few cases. As a result, the dynamic nature of taxonomies and the underlying scenarios is not well understood by market participants and other stakeholders.

Source: Canfora et al. (2021).

NATURE-RELEVANT SCENARIOS ARE STILL CRITICALLY MISSING IN THE INTERNATIONAL TAXONOMY LANDSCAPE

FIGURE 9 | Only 5 jurisdictions include IPCC climate scenarios within their environmental performance criteria

| Initiation phase | Developing phase | Adopted | G20 jurisdictions | Jurisdictions outside the G20 |

	Usage of climate scenarios	IPCC reference
European Union	Within their substantial contribution and DNSH criteria for the climate change adaptation objective	IPCC RCP 2.6, RCP 4.5, RCP 6.0 and RCP 8.5[a]
South Africa		
ASEAN	Within its essential criteria for the climate change mitigation and climate change adaptation objectives	No direct reference to IPCC pathways
Colombia	Within its eligibility criteria for the climate change mitigation and climate change adaptation objectives	
Singapore	Within its approach to the development of performance metrics and thresholds of economic activities	IPCC family of models from SR 1.5[b]

a.   The Representative Concentration Pathways (RCPs) describe four different 21st century pathways of greenhouse gas emissions, atmospheric concentrations, air pollutant emissions and land use. They include a stringent mitigation scenario (RCP 2.6), two intermediate scenarios (RCP 4.5 and RCP 6.0) as well as a high emission scenario (RCP 8.5) (IPCC, 2014)

b.   Contains four model pathways that limit global warming to 1.5°C (IPCC, 2018).

2.3 Next steps for a systematic and standardised use of nature-relevant scenarios in taxonomies

Whereas 'traditional' scenarios have mostly focused on financial and economic relationships, scenario analysis has slowly become a recognised and used instrument to identify climate-related risks. In the context of sustainable finance taxonomies however, nature-related criteria are relatively new and the **forward-looking perspective for nature is not well understood yet.** Incorporating a coherent set of nature-related scenario will be critical for both company-level disclosures under the forthcoming TNFD disclosure standards and for central banking micro- and macro-prudential supervisory mandates. Significant effects stemming from the climate crisis and nature loss are likely to emerge over the medium to longer term and present challenges for organisations to understand how their performance will be affected.

Despite the **lack of a standardised and comprehensive approach to derive scenarios for nature**, first steps have been taken. The World Bank assessed development policy pathways to demonstrate options for nature-smart policies that could help reverse nature loss, emphasising that a global coordinated policy response that incentivises the increase in public investment and agricultural research and development can prove to be the best (Johnson et al., 2021). Meanwhile, the Food, Agriculture, Biodiversity, Land-Use, and Energy (FABLE) Consortium took a specific sectoral approach by describing sustainable pathways for land-use and food systems that include both pathways to reduce greenhouse gas emissions and improve the conservation and restoration of biodiversity (FABLE, 2020). Other notable initiatives have been started by the TNFD, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and Bending the Curve Initiative (Leclère et al., 2020). **A non-exhaustive list of initiatives from key bodies to include nature scenarios within their risk frameworks can be found in the Annex (Table II).**

The lack of a global target for nature is still a barrier

Assessing potential scenarios for nature-related risks may present a challenge due to **non-linear ecosystem processes, and uncertain tipping points**. Additionally, the connection with the climate crisis needs to be considered, illustrated by the concern that terrestrial species are expected to shrink dramatically in 2°C global warming scenarios (Smith et al., 2018). Given the multidimensional nature and complexity of biodiversity, one further key challenge has been identifying specific **biodiversity targets**. At the end of the United Nation's Decade on Biodiversity in 2020, the organisation reported a disappointing result in which none one of the Aichi biodiversity targets had been reached and only six out of 20 goals had been partially achieved (Secretariat of the Convention on Biological Diversity, 2020). To strengthen the new goals of the Post-2020 Global Biodiversity Framework, the CBD aims to define more clearcut targets by proposing headline indicators for each of the goals, allowing for a regular monitoring of different aspects of nature, such as the extent of natural and modified ecosystem and the coverage of protected areas (UNEP, 2022a). WWF expects the Global Biodiversity Framework to conserve at least 30% of land, freshwater and oceans, restore degraded ecosystems globally by 2030 and to half the footprint of production and consumption (WWF, 2022f). These indicators can then be used as a benchmark to check when and under what circumstances the goals would be reached.

Lessons learned from the experience in addressing climate change

While the application of scenarios for nature-related aspects is clearly challenging, the underlying logic and purpose is not too different from the climate field, where policy interventions to unlock private finance is much further ahead than it is for nature (WWF & Aviva, 2022). Several organisations use scenario analysis to evaluate and track corporate performance compared with global climate targets. The Climate and Energy Benchmark of the **World Benchmarking Alliance**[38], for example, measures the progress of 450 influential companies in high-emitting sectors against the Paris Agreement building on the IEA scenarios. The **Transition Pathway Initiative**[39] does something similar by comparing the carbon performance of around 400 companies against three sectoral benchmarks (a national pledge scenario, a below 2 degrees scenario, 1.5 degrees scenario). Pioneer work has also been done by the **Science Based Target initiative (SBTi)**. The SBTi's method contains three components: a carbon budget, emission scenarios to define a pathway and an allocation approach to individual companies (SBTi, 2020). To avoid reinventing the wheel when it comes to nature, lessons-learned should be considered in the development of nature scenarios (Table 4). The IPCC has become the main authoritative source to contrast and compare climate scenarios (WWF, 2020; WWF, 2022a) and to draw policy conclusions related to climate from them. For nature, IPBES could potentially fill the role, either through a joint effort with IPCC (IPBES & IPCC, 2022) or with the development of its Nature Futures Framework[40].

TABLE 4 | Take-aways from climate scenarios

Lessons learned	Description
Develop normative policy target	The Science Based Targets Network (SBTN) methodology demonstrates the need for a normative target that define where companies need to be by when (SBTN, 2020). For climate, this has been the 1.5 / 2 degrees objective, which has been translated by the international scientific community into the target of carbon neutrality by 2050.
Define sectoral benchmark	A company's emission intensity pathway is compared to its sector's emission intensity pathway, depending on current emissions and emission targets. The most prominent sectoral emission scenarios are those provided by the IEA, in which estimated global economic growth and historic production shares of the sectors are used to determine the sectoral emission intensities (IEA 2021).
Allocate targets to individual companies	From the greenhouse gas emission scenarios (see above), individual carbon emission pathways are derived for individual companies for selected time periods. One way to compare the carbon performance of individual companies applied, among others, by the SBTi is via the Sectoral Decarbonization Approach (SDA), which builds on the idea that different sectors and regions are confronted with different challenges when facing low-carbon transitions. This approach allows for comparisons among companies' emission intensity pathways, even if the companies are of different sizes (Dietz et al., 2019).

38. See https://www.worldbenchmarkingalliance.org for more info.

39. See https://www.transitionpathwayinitiative.org for more info.

40. As of November 2022, IPBES has just closed its external review process for the draft methodological guidance of the Nature Futures Framework.

CONCLUSIONS

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The development of voluntary or regulated investment and risk management frameworks to promote sustainable finance and investments has been identified in G20 countries as a critical tool to encourage the financial sector to invest more in economic activities that are expected to contribute positively to a more sustainable economy. To reduce biodiversity and ecosystem loss, taxonomy-based approaches must be addressed jointly with meaningful and plausible scenarios for future policies.

- Urgent action is now required in all G20 jurisdictions to (further) include nature-relevant aspects into their existing and developing taxonomies, or to take advanced taxonomies, such as the EU Taxonomy, as orientation to include nature loss from the start.

- All jurisdictions must develop comprehensive financing strategies aligned with nature-positive outcomes. Integrating nature-relevant economic activities into sustainable finance taxonomies offers opportunities to promote investments for the conservation and preservation of biodiversity and ecosystems.

- G20 jurisdictions have a shared responsibility for biodiversity destruction through indirect impacts of imported goods and services. These impacts need to be addressed by including supply and value chain aspects into G20 taxonomies.

- An ambitious G20 mandate and roadmap is needed to facilitate policy dialogue on taxonomies, covering taxonomies for both 'green activities' and 'transition activities' (i.e., intermediate environmental performance) as well as for 'significant harm' in order to be aligned with the CBD Post-2020 Global Biodiversity Framework.

- All jurisdictions should use an "adopt-or-adapt" approach to drive the convergence of critical taxonomy design features.

- All jurisdictions should develop authoritative, science-based scenarios and apply them to establish forward-looking targets in order to ensure economic transition to a net-zero, carbon-neutral and nature-positive economy.

- All jurisdictions should formally recognise that sustainable finance taxonomies can be strengthened through scenario analysis and should use all existing levels of scenario analysis to set ambitious targets in the process of developing taxonomies.

TABLE I | Overview of sustainable finance taxonomies in the G20

Jurisdiction	Who is leading the taxonomy development process?	What has been achieved so far?	What developments are planned for the future?	Are regional and/or international harmonisation and interoperability processes supported?
Argentina	**Ministry of Economy**	**May 2021:** Roadmap for the development of sustainable finance instruments, including a sustainable finance taxonomy, has been approved	*No further information available*	Joined the Working Group on Sustainable Finance Taxonomies in Latin America and the Caribbean (GTT- LAC) through the LAC Forum of Environment Ministers
Australia		COMMENT ***Industry-led initiative:*** *The Australian Sustainable Finance Institute's (ASFI) Taxonomy Project plans to build on the work done on sustainable finance taxonomies internationally, including by the EU and the Common Ground Taxonomy*		
Brazil		COMMENT ***Industry-led initiative:*** *The Brazilian Federation of Banks (FEBRABAN) has published a sustainable finance taxonomy in January 2021* ***In August 2022,*** *a proposal for a common ground taxonomy between Brazil and China, focusing on agricultural products, was annouced at the 2nd Brazil-China Dialogue on Sustainable Agriculture*		
Canada	**Canadian Standards Association (CSA)**	**June 2019:** The Government of Canada's Expert Panel on Sustainable Finance recommended to establish a Taxonomy Technical Committee (TTC) to develop a sustainable finance taxonomy **April 2022:** Work on the sustainable finance taxonomy has been paused	Paused	
China	**People's Bank of China**	**December 2015:** 1st edition of the Green Bond Endorsed Projects Catalogue was published **April 2021:** 2nd edition was developed to better align with international green bonds standards	*No further information available*	Under the IPSF, China and the EU initiated a Working Group on taxonomies with the objective to identify the commonalities and differences in their respective approaches and outcomes, resulting in the Common Ground Taxonomy (CGT) report
EU (Includes France, Germany, and Italy)	**European Commission (EC)**	**2018:** Technical expert group on sustainable finance was established, which develops technical screening criteriafor the EU Taxonomy **2020:** EU taxonomy regulation (2020/852) was adopted, which defines an EU-wide investment framework to promote sustainable finance, covering six environmental objectives ("EU Taxonomy"). The European Commission (EC) established expert groups, which are mandated to develop proposals for technical screening criteria for the EU Taxonomy **2021:** The first delegated act (DA) on two climate objectives was published, applicable since January 2022 **March 2022:** A complementary climate DA was adopted, which includes specific nuclear and gas energy activities in the EU Taxonomy. Both delegated acts include nature-relevant DNSH criteria designed to prevent unintended (negative) side effects on nature **March/November 2022:** The EC-mandated expert group has delivered detailed proposals for technical screening criteria for nature-related environmental objectives, which the EC will consider for an additional DA, scheduled for adoption in 2023	An additional DA on the remaining four environmental objectives is expected be adopted by the EC in 2023	
India	**Ministry of Finance**	**2021:** A task force to develop a sustainable finance taxonomy was established	*No further information available*	*No further information available*
Indonesia	**Indonesian Financial Services Authority (OJK)**	**2022:** The Indonesia Green Taxonomy Edition 1.0 was published, focusing on background and methodology information	*No further information available*	Since Indonesia is part of ASEAN, harmonisation with the ASEAN taxonomy's principles-based approach can be expected
Japan		COMMENT ***May 2021:*** *The "Basic Guidelines on Climate Transition Finance" was released, jointly by the Financial Services Agency (FSA), the Ministry of Economy, Trade and Industry (METI), and the Ministry of the Environment*		
Mexico	**Ministry of Finance and Public Credit**	**November 2020:** The Sustainable Finance Committee created a Taxonomy Working Group **October 2022:** Guiding principles for the green taxonomy were established by analysing sources from Mexico's environmental and climate commitments, international best practices and benchmarks (such as the EU and Chinese Taxonomy), and the Mexican regulatory systems, among others	*No further information available*	Joined the Working Group on Sustainable Finance Taxonomies in Latin America and the Caribbean (GTT- LAC) through the LAC Forum of Environment Ministers
Russia	**Ministry of Economic Development**	**March 2020:** Development of sustainable finance taxonomy started jointly with Russia's national economic development institution VEB.RF **21 September 2021:** Taxonomy officially signed into effect through Government Resolution No. 1587	*No further information available*	*No further information available*
Saudi Arabia		COMMENT ***September 2021:*** *Saudi Arabia's finance minister claims that efforts towards sustainability are on the forefront of Kingdom's Vision 2030 agenda*		
South Africa	**National Treasury of the Republic of South Africa**	As part of South Africa's Sustainable Finance Initiative, the Taxonomy Working Group developed the sustainable finance taxonomy for the two climate objectives between June 2020 and March 2022	Technical screening criteria for the remaining four environmental objectives are still under development	The South African Taxonomy heavily draws on the EU Taxonomy
South Korea	**Ministry of Environment**	**December 2021:** K-Taxonomy Guidelines published by the Korean Ministry of Environment	Revision of taxonomy to possibly include nuclear energy as environmentally sustainable activity	K-Taxonomy based on EU Taxonomy and other international standards
Turkey		COMMENT ***November 2021:*** *Turkey's Green Deal Action Plan states that a sustainable finance taxonomy, based on the EU Taxonomy and international standards, will be taken into consideration*		
United Kingdom	**His Majesty's Treasury**	**June 2021:** The government launched the Green Technical Advisory Group (GTAG) to provide independent advice on market, regulatory and scientific considerations around developing and implementing the Taxonomy **October 2022:** GTAG delivered advise focusing on four key themes: **(1)** How to approach onshoring the EU framework, on which the UK Green Taxonomy is based, at a time when the UK Government has set out a policy ambition to move further and faster than the EU in some areas of climate action; **(2)** Optimising the taxonomy's international interoperability; **(3)** Streamlining 'do no significant harm' (DNSH) to be usable and useful for reporting entities; **(4)** Setting out a wide range of potential taxonomy use cases	The first draft of the technical screening criteria for the two climate objectives is expected for 2022. The TSC for the remaining four environmental objectives are expected for 2023	The UK Taxonomy is largely based on the EU Taxonomy
United States		COMMENT *While a US taxonomy is off the cards, senior bankers say the definitions proposed in the SEC's climate disclosures and ESG guidelines could serve as a substitute for a sustainable finance taxonomy*		

Existing initiatives to foster convergence: More info and current developments of the Common Ground Taxonomy (CGT) and joint principles

1. Common Ground Taxonomy (CGT) for Climate Change Mitigation

The CGT, published in November 2021 by the International Platform on Sustainable Finance (IPSF), **compares the approaches of the EU Taxonomy and the Chinese Taxonomy for climate change mitigation** and identifies commonalities and differences. Interoperability can be ensured for some economic activities in the CGT. It is no coincidence that these taxonomies were chosen for this exercise, as they are the first regulated taxonomies worldwide and were partially developed simultaneously[41].

The CGT does not propose an international standard but can be useful for other jurisdictions in the taxonomy development process and can improve the comparability and interoperability of taxonomies around the world. After a public consultation, an updated version was published in June 2022. The CGT first maps the economic activities[42] against a common classification system, evaluates the criteria and identifies the overlap.

This reference point could provide a baseline building block that could be built on to allow for the inclusion of elements that relate to local markets and policy priorities. In addition to that, it could be the basis for financial products that can be marked as sustainable in several jurisdictions (E3G, 2022). Selected recent international developments are the following:

- Following the CGT, the Bank of China, China Construction Bank, China Merchants Bank, and Industrial Bank issued a green bond under the framework (Crédit Agricole, 2022). This shows that the mutual approach to sustainable finance can be put into practice;

- The Green and Sustainable Finance Cross-Agency Steering Group, co-chaired by the Hong Kong Monetary Authority and the Securities and Futures Commission (SFC) evaluated opportunities to apply the CGT. A report published in June 2022 outlines principles to help advance the adoption of the CGT (Mok & Du, 2022). The research process is structured in three phases, whereas the report presents discussions around Phase 1 and the leading question: "What opportunities does CGT-based taxonomy presents for Hong Kong and GBA?". In September 2022, a report about the second research phase was published, discussing the use cases of the CGT (Chan et al. 2022);

- The United Nations Development Programme (UNDP) is supporting Latin American countries to create taxonomies building on the CGT (E3G, 2022); see more info on the GTT-LAC below;

- Singapore, for example, has signalled its interest to become part of the CGT (E3G, 2022). As Singapore is also a member of the IPSF, coordination might proceed there.

Although the CGT gained lots of attention and the dialogue between the two jurisdictions facilitated by the IPSF works well, complexity and transaction costs increase significantly with a higher number of participating jurisdictions. A strong coordination at G20 level could reduce transaction costs and streamline international harmonisation efforts. Further limitations of the CGT, such as the narrow scope or the non-consideration of the DNSH criteria, might also be handled by coordination at G20 level.

2. Joint principles for taxonomy development: Promising approach but no international consensus

If taxonomies are developed based on commonly agreed principles, this can facilitate a comparison and enable interoperability, eventually leading to consistent elements. Several jurisdictions and other organisations have already proposed principles or used them to develop a joint taxonomy. The **ASEAN Taxonomy for Sustainable Finance** (ASEAN, 2021) takes this approach, and provide a common language across ASEAN jurisdictions to facilitate labelling for economic activities and financial products. Five high-level principles form the basis, which also ensure the consideration of different economic development stages and transition pathways in the region and allow for national taxonomies.

A STRONG COORDINATION AT G20 LEVEL COULD REDUCE TRANSACTION COSTS AND STREAMLINE INTERNATIONAL HARMONISATION EFFORTS

41. In parallel, China has also improved the consistency of their sustainable finance taxonomy. The currently regulated Green Bond Endorsed Project Catalogue (2021 Edition) heavily builds on the 2015 edition but is now endorsed by all three regulators (People's Bank of China, together with the National Development and Reform Commission and the China Securities Regulatory Commission) and for different domestic market segments.

42. In total, 79 economic activities across six sectors where covered – sectors with a large impact were prioritized. Activities that are not covered by the scope of both taxonomies, DNSH criteria, minimum social safeguards and criteria beyond climate change mitigation were not considered.

A similar approach has been followed in **Latin America and the Caribbean**, although efforts have only recently initiated (UNEP, 2022b). The **Working Group on Sustainable Finance Taxonomies (GTT-LAC)**, founded by the Interagency Technical Committee (ITC) of the Forum of Ministers of Environment of Latin America and the Caribbean, aims to develop a common framework through principles of sustainable finance taxonomies for the region.

Other institutions or organisations developing principles for taxonomy harmonisation are:

- The **Technical Expert Group** of the European Commission: four principles for international taxonomy harmonisation (EU Technical Expert Group on Sustainable Finance, 2020);

- The **IPSF**: seven high-level principles and ten recommendations as their input to the G20 Sustainable Finance Working Group (UN-DESA & IPSF, 2021)[43];

- The **World Bank**: guidance document for jurisdictions in the taxonomy development process (World Bank, 2020). Some jurisdictions have referred to this guidance in their taxonomy development process, such as Indonesia or Colombia;

- **Financial sector organisations**, such as the Global Investors for Sustainable Development (GISD) Alliance (Hoepner et al., 2021) or Global Financial Markets Association (GFMA) (Choudury et al., 2020). All remain theoretical considerations so far.

JOINT PRINCIPLES REQUIRE GLOBAL COORDINATION AND AGREEMENT

Although joint principles seem to be an approach to ensure interoperability, it requires (global) coordination and agreement. Joint principles could also be designed to establish a global baseline for sustainable finance taxonomies. This could be inspired by the efforts of the International Sustainability Standards Board (ISSB), which is currently developing a comprehensive global baseline for of sustainability disclosures.

Background

Situations of co-existence of different standards on the financial markets have happened before, for example, the co-existence of the rules-based general accepted accounting principles (GAAP), developed by the Financial Accounting Standards Board (FASB), and the International Financial Reporting Standards (IFRS). Although both standards have slowly converged over the years, this has not yet resulted in a uniform accounting standard in the US. Therefore, many companies in the US need to apply both standards to satisfy their investors' needs, resulting in a larger administrative burden. The rules-based GAAP standard offers more detailed requirement than the IFRS – a similar situation with detailed reporting requirements from, for example, the EU Taxonomy, and rather broad conditions from other taxonomies should be avoided.

However, the introduction and adoption of the IFRS is also an example of a **successful harmonisation process** of international accounting standards. From 2005 on, listed companies from the European Union have been required to follow the IFRS and most countries worldwide have also adopted the standards since then (as described, this does not include the US). Almost ten years later, in 2014, 144 jurisdictions required the IFRS standards for all or most companies (IFRS, 2018). To support the IFRS implementation in the individual jurisdictions, profile pages for 167 jurisdictions have been designed and are regularly updated (IFRS, 2022).

When it comes to **sustainability information**, some disorientation has also evolved among investors. ESG scores, often used to quickly identify company sustainability performance, are characterised by an aggregate confusion due to differences in and a lack of transparency about underlying methodologies and assumptions (Berg et al., 2019). There are also several examples in which environmental or climate reporting is unnecessarily complex: for instance, through the inclusion of gas and nuclear in the EU Taxonomy, this comes with additional disclosure requirements and increases the number of to be reported key performance indicators (KPIs).

43. However, both the principles of the EU TEG and the IPSF have not been considered as official reference points for other jurisdictions to develop a taxonomy yet.

TABLE II | **Non-exhaustive list of efforts from key bodies to include nature scenarios in their financial risk management frameworks**

Organisation	Initiative and purpose	Potential overlaps with other initiatives
Taskforce on Nature-related Financial Disclosure (TNFD)	**Nature-Related Risk & Opportunity Management and Disclosure Framework** • Framework to enable organisations to report and act on evolving nature-related risks • **Target audience:** Companies	• Working together with NGFS and other knowledge partners to release further guidance on the use of scenario to inform strategy and risk management decision • Aligns with TCFD approach on scenario's role for companies and financial institutions
Taskforce on Nature-related Financial Disclosure (TNFD) The Network for Greening the Financial System (NGFS)	**Biodiversity Loss and Nature-related Risks Taskforce** • Task force to help mainstream the consideration of nature-related risks across the NGFS • **Target audience:** Central bankers and financial supervisors	• Leveraging the work of NGFS- INSPIRE study group • Knowledge partner of TNFD
Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)	**Nature Futures Framework (NFF)** • Framework for the development of scenarios of nature and nature's contribution to people and address current shortcomings for the development and use of scenarios within the context of nature • **Target audience:** Policymakers	• Overlaps with CBD's Post-2020 Global Biodiversity Framework and its 2050 Vision for Biodiversity of "Living in Harmony with Nature"
Science Based Targets Network (SBTN)	**Action Framework (AR³T)** • Extrapolated business-as-usual and nature positive scenarios to form a basis for its Action Framework corporate targets that aims to help business avoid and reduce future impacts as well as regenerate and restore ecosystems • **Target audience:** Companies	• Potential overlaps with targets aimed at a company or project level
European Financial Reporting Advisory Group (EFRAG)	**European Sustainability Reporting Standard E4 Biodiversity and Ecosystems** • Draft standard to set out the Disclosure Requirements related to biodiversity and ecosystems • Postulates in its Disclosure Requirement 2 that companies should disclose their assessment on resilience and strategy in light of a range of biodiversity and ecosystem-related scenarios (EFRAG, 2022) • **Target audience:** Companies	• Overlaps with the European Green Deals, EU Biodiversity Strategy, SDG Goals 12,14, and 15, as well as the Post-2020 Global Biodiversity Framework
Climate Disclosure Standards Board (CDSB)	**CDSB Framework Application guidance for biodiversity-related disclosures** • Guidance to assist companies on disclosing material information on nature-related risks and opportunities, and supplement the CDSB Framework for reporting climate change information • Its sixth reporting requirement (REQ-06) requires managements to summarise the effects of nature-related impacts, risks, and opportunities on the organisation's future performance • **Target audience:** Investors and the financial market	• Aligns with TCFD's recommendations

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