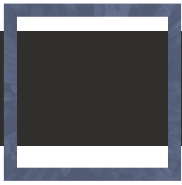




**Taskforce on Nature-related
Financial Disclosures**

Guidance on value chains

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1. Introduction

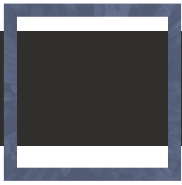
The TNFD framework aims to help organisations assess, manage and disclose their nature-related dependencies, impacts, risks and opportunities. Many of these dependencies, impacts, risks and opportunities may arise in the organisation's upstream and downstream value chains. For financial institutions and large consumer goods companies, for example, most of their most significant and potentially material nature-related issues will be upstream and downstream and not in their direct operations. This is also the case for many organisations' greenhouse gas emissions footprints.

The [TNFD Recommendations](#) are clear that organisations should identify, assess and disclose the material nature-related issues in their upstream and downstream value chains, as and when possible, recognising that this might take some time, given data and capacity limitations.

The TNFD also recognises that the analysis of dependencies, impacts, risks and opportunities upstream and downstream is not always straightforward. Nature-related dependencies and impacts arise in specific locations, and the TNFD Recommendations and guidance ask organisations to undertake location-specific analysis to the greatest extent possible. However, the characteristics of an organisation's business and its value chains can make it difficult to identify the ultimate upstream source or downstream point of consumption and disposal. There are additional complications for financial institutions when assessing value chain impacts, particularly those deploying capital across highly diversified portfolios and/or on a thematic basis (such as an index fund).

This TNFD additional guidance is intended to support organisations with analysis of their value chains. Full tracing upstream and downstream might be considered the ultimate goal to allow direct measurement of dependencies and impacts, but the TNFD recognises that this is not always feasible in the short to medium term. The guidance includes discussion of when the use of secondary data may be an acceptable alternative.

This document does not provide prescriptive guidance on organisational or value chain boundaries, but provides a principles-based approach. Nor does it cover how organisations might seek to address issues upstream and downstream once identified. There are a significant number of international and domestic initiatives under way, within and across sectors, looking at ways to improve traceability across supply chains, including through the use of new technologies. The TNFD is monitoring these initiatives and developments and is exploring potential solutions, including an initiative to address data issues in the value chain.



2. Value chain challenges

An organisation's nature-related dependencies, impacts, risks and opportunities can occur anywhere in its value chains.

For example:

- An ecotourism business will depend on the ecosystem services protecting its electricity supplier from floods and fires;
- A consumer goods company may be exposed to nature-related dependencies in its supply chain, such as the biological control ecosystem service preventing pests damaging production of a key ingredient;
- A semiconductor manufacturer depends on the supply of water to the local water utility to be able to maintain a consistent flow of high-quality water into the manufacturing facility;
- A seafood retail company depends on its suppliers' effective management of their impacts on fish populations, fishing only at a sustainable rate so that populations continue to replenish;
- An agrichemical company's impacts on nature – e.g. pesticides' impact on pollinator populations, or nitrogen fertilisers' impacts on eutrophication of local water bodies – vary with the way farmers downstream use their products; and
- A bottled water company's plastic packaging leads to plastic pollution downstream if not effectively recycled or otherwise disposed of.

These value chain dependencies and impacts can create both physical and transition risks for the organisation. They can also be a source of new approaches, in collaboration with value chain partners, improving nature, reducing risks and creating new commercial opportunities.

The expectation that organisations will undertake analysis of their value chains upstream and downstream is therefore embedded throughout the TNFD framework.

This expectation appears in two forms:

- Analysis and qualitative disclosure of material dependencies, impacts, risks and opportunities; and
- Disclosure of metrics, quantifying the reported material dependencies, impacts, risks and opportunities.

In an ideal world, organisations would have a full and comprehensive view of their upstream and downstream value chains, or at least the elements where material issues occur. However, both the qualitative and quantitative analysis can pose challenges for organisations. Table 1 summarises some of the issues and why these may pose challenges to organisations looking to analyse nature-related dependencies, impacts, risks and opportunities upstream and downstream.

Table 1: Summary of value chain characteristics that can create challenges for the analysis of nature-related issues upstream and downstream

Characteristic of the value chain	Issue created	Examples of issue
Large numbers of suppliers and customers	The larger the number of suppliers and customers, the greater the number of locations that need to be analysed.	A mass market consumer product may have many thousands of consumers across many markets.
Transformation, aggregation and creation of composite products	Aggregation and creation of composite products can make it difficult to identify exactly where the product comes from or where and how it is finally used. Raw materials and feedstocks may be combined with other raw materials and feedstocks many times and transformed into new products and sub-products along supply chains. This can make the various components, raw materials and feedstocks hard to identify along value chains.	Generic fertilisers from different producers may be aggregated at various stages of the distribution chain. This can make it hard to identify which producers' fertilisers a farmer is using.
Long supply and distribution chains	A product may change hands many times before reaching the report-preparing organisation. Downstream, the product might pass through many companies before reaching the final consumer.	A construction company buying aggregate directly from a quarry will know exactly where it comes from, but if it buys from an intermediary, who also buys from a further intermediary up the value chain, this increases the number of organisations and locations that must be identified and analysed.
Large numbers of products and end uses	An individual company may have many products, each with many different potential uses, increasing the number of potential impacts and dependencies and the uncertainty around these.	An upstream manufacturer producing tens of thousands of products, each with hundreds of uses would have a very large number of potential downstream locations to analyse.

Characteristic of the value chain	Issue created	Examples of issue
Large numbers of locations per supplier or customer	The greater the number of suppliers and customers, the more locations need to be identified for prioritisation and analysis.	The customers of a mining company with many mines all over the world, could have many different locations to consider.
Dependencies and impacts relating to supplier and consumer behaviour	In many cases, the dependencies and impacts may depend on supplier or customer behaviour. This can be difficult to observe directly and on a regular basis.	<p>The environmental impact of plastic packaging hinges on consumer behaviour—whether it's recycled, sent to landfill, incinerated or littered.</p> <p>The precise impacts of a supplier's operations may in part depend on their management practices.</p>
Variable value chain actors	<p>The suppliers providing inputs to an organisation may change frequently. Some commodity markets are built on mass-balance and futures markets, rather than segregation.</p> <p>Similarly, customers may change continuously. This means that the list of upstream and downstream locations is not static, making precise analysis of nature-related dependencies, impacts, risks and opportunities challenging.</p>	If a company purchases tuna from wholesale markets, the suppliers of tuna may change frequently based on various factors such as changes in fishing quotas, migration patterns, or shifts in global demand for tuna. Similarly, the end customers of the canned seafood company, such as the customers of grocery stores or restaurants, may also change continuously due to factors like changes in consumer preferences, economic conditions, or shifts in marketing strategies.
Confidentiality issues	Suppliers may not be willing to disclose manufacturing sites in order to protect confidential and/or commercially sensitive information. This could also apply to disclosure of downstream customers.	Such data could be commercially sensitive, where a business's competitive advantage depends on its supply chain networks (e.g. traders).



3. How organisations can approach these challenges

Organisations can use the [TNFD LEAP approach](#) to identify the highest priority issues – dependencies, impacts, risks and opportunities, which of the challenges above might be present, and how to obtain the information needed in order to be able to understand the dependencies, impacts, risks and opportunities.

In particular, organisations should:

- Clarify the aims of the analysis, the intended users and their needs;
- Examine the nature of the upstream and downstream value chains and what barriers the organisation might face to analysis;

- Prioritise issues for investigation and quantification (for example, by prioritising particular sectors, geographies and supply chains frequently associated with high nature-related impacts, dependencies, risks and opportunities);
- Work out what data are needed to meet the needs of the users of the analysis and to determine what action is needed; and
- Identify what data are already held, what needs to be obtained and what can be covered adequately using secondary data.

Table 2 sets out how these approaches to value chain analysis apply to the LEAP approach.

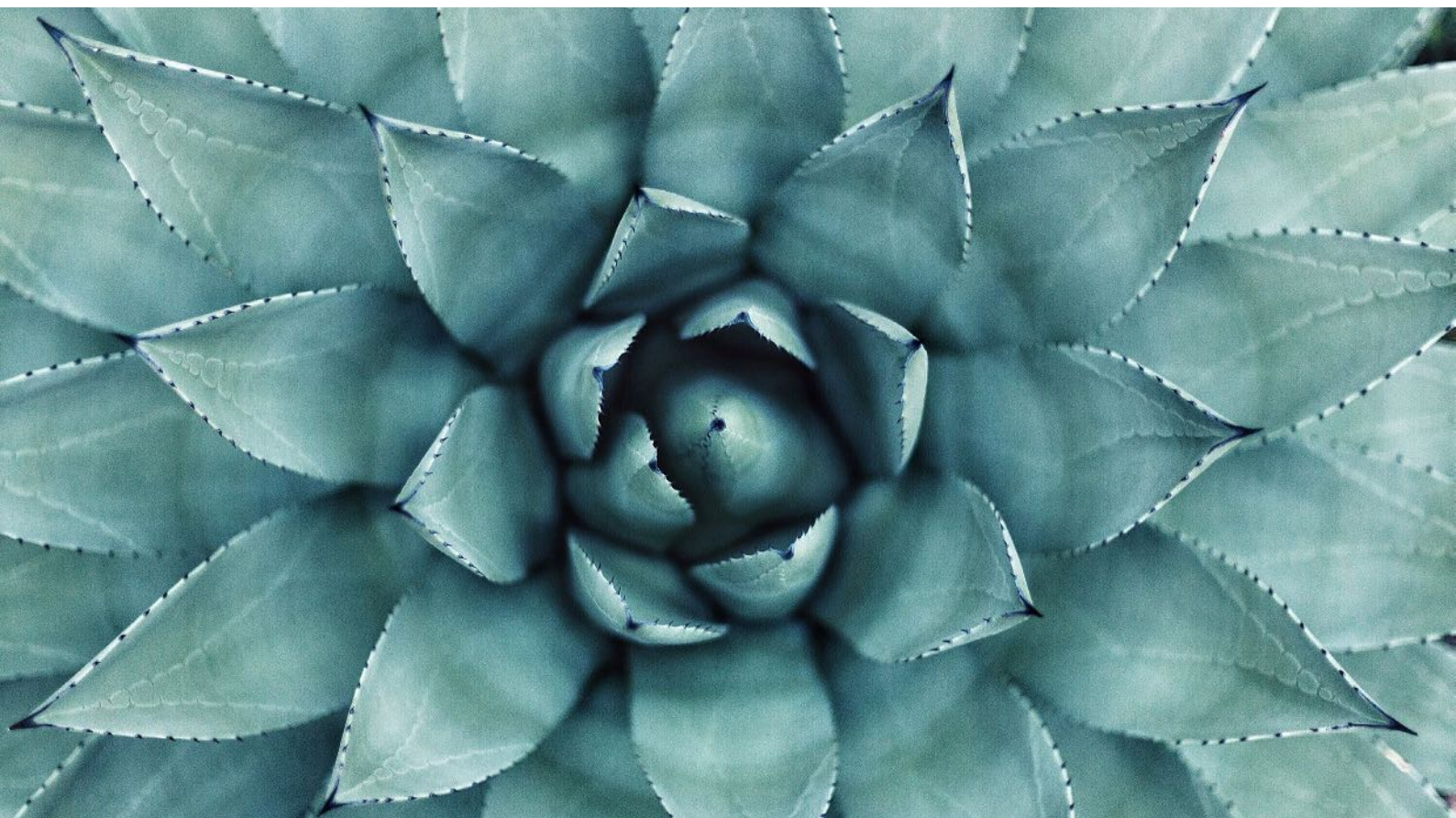


Table 2: Approaches to value chain analysis and where they can support application of the LEAP approach

Value chain considerations	LEAP Approach				
	Scoping	Locate	Evaluate	Assess	Prepare
Clarify the aims of the analysis, the intended users and their needs.	Generate a working hypothesis				
Examine the nature of the upstream and downstream value chains and what barriers the organisation might face to analysis.		L1: Span of the business model and value chain			
Prioritise issues for investigation and quantification.		L2: Dependency and impact screening	E1: Identification of environmental assets, ecosystem services and impact drivers E2: Identification of dependencies and impacts		
Work out what data are needed to meet the needs of the users of the analysis and to determine what action is needed.			E3: Dependency and impact measurement	A3: Risk and opportunity measurement and prioritisation	
Identify what data are already held, what needs to be obtained and what can be covered adequately using secondary data.			E3: Dependency and impact measurement	A3: Risk and opportunity measurement and prioritisation	



The organisation's approach to materiality will have a significant bearing on the breadth and depth of analysis required and the information that will need to be assembled and disclosed to report users.

As set out in the [TNFD's LEAP guidance](#), the Taskforce recommends that report preparers use sector, geography and supply chain filters, including a number of tools such as the Science Based Targets Network (SBTN) High Impact Commodity List and other filters, to help focus their assessment. These prioritisation approaches and reference tools are outlined in more detail in the Locate and Evaluate sections of the TNFD's [guidance on the LEAP approach](#).

Further guidance, case studies and worked examples on how to approach value chain analysis can be found in the Align project's [Measuring and Valuing Biodiversity Across Supply Chains](#) supplement, and the [Accountability Framework Initiative](#).

Assessing value chain issues

The LEAP approach also encourages organisations to consider both the magnitude and likelihood of dependencies and impacts emerging over the short, medium and long term across their value chains.

When approaching the value chain and considering how far up and down the chain to analyse, the key guiding principle should be where the material dependencies, impacts, risks and opportunities are likely to arise (Box 1). While some issues may originate within an organisation's direct operations or Tier 1 suppliers and customers, others may arise further along the value chain. For example, material risks could stem from the sourcing of high-impact commodities or raw materials cultivated in water-scarce areas and bought via intermediaries, or material downstream impacts might come from microplastics entering the ocean as a result of poor packaging disposal practices by consumers who buy the products from a retailer, who in turn buys them from a wholesaler.

Similar principles apply to the determination of which parts of the organisation are in scope, whether that is just the core, or whether that includes the parent company, subsidiaries, joint ventures and other partner organisations. The scope of reporting will depend on the report preparer's approach to materiality and the scope of information deemed necessary to meet the needs of report users. The degree of control is not the primary criterion for inclusion, nor is the availability of data.

For example:

- A construction company may have strong relations with the supplier of a commodity considered to be low impact and be able to gather data and influence the behaviour of that supplier. However, the organisation also uses another commodity that is flagged by the [SBTN High Impact Commodity List](#) as often being associated with tropical deforestation. The supply chain of this commodity is more opaque, and the organisation is a small buyer in a large industry. However, this supply chain should be prioritised for investigation, even though the organisation may not have a strong influence over it, as it may be a source of material impacts on nature.
- A company may have a non-controlling share in a joint venture with another organisation. The joint venture may be involved in the disposal of waste products, with a high potential for material impacts and transition risks, such as new regulation. This could affect the future flow of revenues to the report-preparing organisation, so the joint venture should be included in the scope of the report, even though it is not in the direct control of the report preparer.

In general, the TNFD expects that organisations will need to adopt a deep and narrow approach at first, focusing on a small number of highly material issues during the early years of disclosure. This strategy allows for an in-depth exploration of key nature-related issues within the value chain. Organisations should broaden the scope of their analysis over time to develop a comprehensive picture.



This deep and narrow starting point will depend on the organisation's assessment of where dependencies and impacts are most likely to be material and/or feed through into material risks and opportunities. Some organisations may identify that material nature-related dependencies, impacts, risks and opportunities are most likely to arise among their Tier 1 suppliers and immediate customers. In this case, the organisation may choose to take a shallower, broader approach.

Organisations may refer to the [TNFD guidance on the LEAP approach](#) and sector guidance when considering where issues are likely to be, noting that some issues may arise in sectors outside the organisation's direct operations. For example, a construction company may need to consider the forestry sector guidance if they are a user of timber.

The TNFD guidance on the LEAP approach identifies tools that can help such as ENCORE, Trase, the WWF Biodiversity Risk Filter and EXIOBASE, and lists of high impact or high-risk commodities, such as that developed by SBTN.¹

Box 1: Materiality

Organisations should prioritise their analysis of the value chain based on where material issues are most likely to arise. The approach to materiality will vary by organisation, and the [TNFD recommendations](#) have been designed to accommodate the different preferences and requirements of a range of report preparers across jurisdictions. The TNFD recommends that organisations apply the approach in the International Sustainability Standards Board (ISSB) IFRS Standards to identifying information that is material for users of general purpose financial reports as a baseline. Report preparers who want or need to report to a different materiality approach may apply an impact materiality approach to identify information in addition to the ISSB's baseline. Report preparers should use the definitional guidance regarding materiality provided by the regulatory authorities for their reporting jurisdiction(s). Organisations seeking to align with Target 15 of the Kunming-Montreal Global Biodiversity Framework (GBF) will want to consider the application of an impact materiality lens to identify information that is incremental to the global baseline.

1. ENCORE Partners (Global Canopy, UNEP FI, and UNEP-WCMC) (2018) [ENCORE: Exploring Natural Capital Opportunities, Risks and Exposure](#), SEI and Global Canopy (2023) [Trase](#), EXIOBASE Consortium (2015) [EXIOBASE](#), Science Based Targets Network (2023) [High Impact Commodity List v1](#), WWF. [Biodiversity Risk Filter](#)

Disclosing value chain issues – data needs

Once the priority issues are identified and assessed, organisations need to determine what data are required in order to be able to meet their own and their report users' decision-making needs. In some cases, this will require detailed tracing of products along the value chain. In others, at least in the initial phase, tracing may be done at the landscape, regional or country level, with sample data, industry or commodity averages being used to estimate dependencies and impacts.

The level of tracing required will depend on how much detail users of the disclosures need in order to make capital allocations and other decisions, and how much information the organisation itself requires in order to take action.

For example, an organisation may decide that it is sufficient to know that its palm oil comes from a region known to have a high risk of tropical deforestation to understand in broad terms the risks and opportunities it faces, and the impacts and dependencies its processes are likely to be having. This level of information may enable it to decide that it wants to review its sourcing procedures and ensure its palm oil from the region is certified to a high standard.

Alternatively, it may want further reassurance about the sustainability of production on its supplier farms, particularly if it knows there is substantial variation in the sourcing region. It may also decide that an

absence of traceability carries unacceptable risks to the organisation. This could mean tracing all the way to the originating farmer to allow farm-level performance assessment and support the organisation's management of risks and opportunities. The appropriate level of detail will depend on the organisation's materiality approach, its strategy and the purpose of the analysis.

This tracing will take time, and organisations may need to start with a small number of highly material issues identified from the Locate and Evaluate phases of LEAP and expand the scope of their disclosures across all material issues over time.

Secondary data

In some cases, organisations may judge that secondary data (Table 3) might be an appropriate way to gain initial information on the likely nature-related issues in the value chain. Organisations should view the use of secondary data as a transitional measure until higher traceability can be achieved.

Secondary data are data that are gathered by an entity other than the data user. The data may not apply directly to the user's activities or locations but are representative of them, providing information on dependencies and impacts at a lower level of specificity. The data may include modelled data or data originally collected for an alternative purpose.



Table 3: Types of sources for nature-related data

Data type	Example
Primary data Data collected for the assessment being undertaken and collected to measure a specific impact driver, ecosystem service or change in the state of nature.	Internal business data, such as measured raw material consumption or revenue/site level data collected through surveys or sampling. Data collected from suppliers or customers. Land cover change derived from satellite imagery.
Secondary data Data generated by an entity other than the data users, which may include modelled or third-party data.	Published, peer-reviewed and grey literature (for example, life cycle impact assessment databases, industry, government or internal reports).
Proxy data (a type of secondary data) Data collected for an alternative purpose to its specific use case.	An organisation could use the volume of manufactured product output and the estimated machinery water efficiency to estimate water consumption.

For example, an organisation may be sourcing soya from Brazil, but buying through a wholesaler, so the beans the organisation uses may come from an ever-changing set of farms. It may therefore choose to use data on the average environmental impacts of soya cultivation in Brazil – or better, the region, biome or landscape they source from – in order to assess the likely nature-related impacts of its supply chain.

Using secondary data comes with a number of advantages. It makes the analysis more tractable, with the organisation able to get a sense of the likely nature-related issues without investing in full traceability. This may provide the organisation with enough information to be able to start to disclose and address these likely issues. It can also support decisions on where to focus traceability efforts, and on product formulation choice, helping organisations to choose lower impact materials or to identify where certification can support sustainability efforts.

At the same time, adopting this approach means that the organisation's understanding of its nature-related issues will not be as precise as if it uses primary data.

It can also make it difficult for organisations to demonstrate their progress on improving production processes in the value chain. If they are only a relatively small part of the total market for a product in the country, their efforts to reduce nature-related impacts and risks are unlikely to show up in the market average data. Nevertheless, if the chosen response is, for example, to switch to certified inputs, then secondary data can support their estimation of the effect of that change. An organisation buying Marine Stewardship Council-certified (MSC) tuna would be able to estimate the reduction in their impacts by comparing market average data with catch report and monitoring data for the certified product.

At the market level, it also means that strong and weak performers cannot easily be distinguished. Financial institutions that want to aggregate data across clients, or compare risk profiles for different companies, cannot do so reliably if some companies are using data directly from suppliers and others are using secondary data. The use of secondary data means that financial institutions need to understand the limitations of the reporting and that the data do not demonstrate progress at the location level.

Organisations should only consider secondary data where:

- In the organisation's view, it gives them sufficient information to assess and address nature-related dependencies, impacts, risks and opportunities to the organisation;
- The secondary data gives investors and other users of the report sufficient information to be able to assess the organisation's nature-related dependency, impact, risk and opportunity management; and
- It is not within the capacity of the organisation and its value chain partners, or unreasonably expensive, to trace items along the supply chain.

The organisation should put in place a strategy to improve the data quality over time to mitigate the possibility of under or overstating the degree of nature-related dependency, impact, risk and opportunity in the value chain and to enable it to take action to improve its performance.

Consistent with the TNFD's recommended disclosures, organisations are encouraged to describe the efforts they are making to improve their visibility of nature-related issues across their value chains. Organisations should also disclose their use of secondary data, an assessment of the data quality and degree of location-specificity, and their strategy to move to higher traceability as part of their reporting under TNFD recommended disclosure Risk & Impact Management A(ii).

Where organisations do use secondary data, they should assess data on the basis of the five SMART criteria, and weight these depending on how they intend to use the data:

- **Specific:** The data should be specific to the issue and location. For example, it should be specific to the type of pollution being investigated and, to the greatest extent possible, match the geography of the area of concern;
- **Measurable:** The organisation should look for variables that can be measured through the collection

of relevant data and information. For example, if assessing the impact of land use change on biodiversity, measurable indicators could include the number of species affected, changes in habitat quality, or alterations in ecological processes;

- **Ambitious:** The organisation should aim for a data source that is as ambitious as possible in its specificity to the issue;
- **Realistic:** Organisations should be realistic in the validity of their assessments based on the evidence, knowledge and understanding included, recognising practical constraints and limitations in data availability, analytical methods and the complexity of the systems being assessed; and
- **Time-bound:** The data should be relevant to the time period in question and regularly updated to allow the organisation to maintain an accurate understanding of the issue, with a clearly identified baseline.

For additional guidance on the use of secondary data and addressing data scarcity, organisations should refer to the Align project's [Measuring and Valuing Biodiversity Across Supply Chains](#) supplement. This resource provides examples of tools for various approaches, along with additional context on spatial scales and examples across different industries, particularly focusing on supply chains.

Links with other supply chain initiatives

In many cases, organisations are already undertaking substantial value chain mapping and analysis as part of existing efforts to measure and address scope 3 greenhouse gas emissions and/or to eliminate modern slavery and human rights abuses.

As part of the organisation's work to determine what data needs to be gathered to support decision-making on nature-related issues, the organisation should make sure it is fully drawing on the data it already has through these other initiatives and understand how to use these information gathering channels with supply chain partners to secure additional information on nature-related issues.



Annex 1: Value chains in other frameworks and standards

Disclosure frameworks

International Sustainability Standards Board

(ISSB): Organisations are required to disclose material information about sustainability-related risks and opportunities that could reasonably be expected to affect the organisation's prospects, including where in the value chain these sustainability risks and opportunities are concentrated. Organisations are also required to disclose greenhouse gas emissions for scopes 1, 2 and 3, and to measure these greenhouse gas emissions in line with the [Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard \(2004\)](#) (or using an alternative method if required by a jurisdictional authority or an exchange on which the entity is listed).

In identifying sustainability-related risks and opportunities, and in determining the scope of an organisation's value chain, the Standards require an organisation to use all reasonable and supportable information that is available to an entity at the reporting date without undue cost or effort. This means that an organisation is not required to undertake an exhaustive search for information to identify sustainability-related risks and opportunities or to determine the scope of its value chain.²

GRI: The GRI Standards recommend organisations identify impacts across all their activities and business relationships, including with all entities in its value chain. Entities in the value chain include entities beyond the first tier, both upstream and downstream.

GRI 3: Material Topics 2021 provides guidance to determine the organisation's material topics, including how business relationships (the value chain) should be considered in this process.

First, the organisation creates a high-level overview of its activities and business relationships, the sustainability context in which these occur, and an overview of its stakeholders. When identifying its stakeholders, the organisation should ensure it identifies any individuals or groups it does not have a direct relationship with (e.g. workers in the supply chain or local communities that live at a distance from the organisation's operations). This provides the organisation with critical information for identifying its impacts.

Then, the organisation identifies its impacts across its activities and business relationships. If the organisation cannot identify impacts across all its activities and business relationships, for instance, if the value chain includes many entities, it may carry out an initial assessment or scoping exercise to identify general areas across its activities and business relationships (e.g. product lines, suppliers located in specific geographic locations) where negative impacts are most likely to be present and significant. Once the organisation has conducted the initial assessment or scoping exercise, it can identify and assess actual and potential negative impacts for these general areas.

The organisation then assesses the significance of the impacts it has identified, based on the severity of the impact and its likelihood of occurring, and prioritises the

² International Financial Reporting Standards (2023) [IFRS-S1: General Requirements for Disclosure of Sustainability-related Financial Information](#); International Financial Reporting Standards (2023) [IFRS-S2: Climate-related Disclosures](#)



most significant impacts for reporting (material topics). Identifying negative impacts with which the organisation is involved or could be involved is the first step of due diligence. The organisation should consider impacts that it causes or contributes to through its activities, as well as impacts that are directly linked to its operations, products, or services by its business relationships. Even if an organisation does not cause or contribute to a negative impact, its operations, products, or services may be directly linked to a negative impact by its business relationships. For example, if the organisation uses cobalt in its products that is mined using child labour, the negative impact (i.e. child labour) is directly linked to the organisation's products through the tiers of business relationships in its supply chain (i.e. through the smelter and minerals trader, to the mining enterprise that uses child labour), even though the organisation has not caused or contributed to the negative impact itself. This approach is aligned with the *OECD Due Diligence Guidance for Responsible Business Conduct* and the *UN Guiding Principles on Business and Human Rights*.³

The organisation is required to describe how it has identified impacts across its activities and business relationships under Disclosure 3-1 in GRI 3. The organisation is also recommended to describe any limitations or exclusions, for example, whether it has excluded business relationships from certain parts of its value chain when identifying the impacts. Under GRI 101: Biodiversity 2024, the organisation is required to report the products and services in its supply chain with the most significant impacts on biodiversity, and if available, the organisation can additionally report the information for entities downstream in its value chain with the most significant impacts on biodiversity.⁴

CDP: The 2024 CDP questionnaire asks organisations if they've mapped their value chain and the commodities they produce and/or source in the introduction module, to demonstrate the extent of visibility they have into their value chain. It then asks for the process for identifying environmental dependencies, impacts, risks and opportunities across the value chain, as well as the details of risks and opportunities identified across the value chain. The strategy module of the questionnaire asks more about how the organisation engages with stakeholders in their value chain, including suppliers and customers.

The modules on environmental performance cover value chain information in varying ways depending on the environmental issue – climate change, forests, water, plastics and biodiversity. The organisation is asked to provide the consolidation approach used to contextualise the data that they provide on their environmental performance. The climate change section covers all stages of the value chain, including scope 1, 2, and 3 emissions. It allows organisations to choose the external standard that it has used to calculate these emissions, but points to the GHGP as the most widely used. The forests section is primarily focused on removing deforestation and conversion of other natural ecosystems in commodity value chains, this will be in direct operations and/or upstream depending on whether the discloser is producing or sourcing the commodity. The water section focuses on direct operations, but asks for facility level water accounting data across direct operations and upstream value chain for facilities with substantive water-related dependencies, impacts, risks, and opportunities. The plastics section covers direct operations as well as the end-of-life management of waste generated, while the biodiversity section also focuses on direct operations.⁵

3 OECD (2018) [OECD Due Diligence Guidance for Responsible Business Conduct](#); United Nations (2011) [Guiding Principles on Business and Human Rights](#)

4 GRI (2021) [GRI 3: Material Topics 2021](#); and GRI (2024) [GRI 101: Biodiversity 2024](#)

5 CDP (2024) [CDP Full corporate questionnaire](#)

European Sustainability Reporting Standards (ESRS) and guidance EFRAG (formerly the European Financial Reporting Advisory Group):

The reporting undertaking should provide information on the material impacts, risks and opportunities (IROs) connected with the undertaking through its direct and indirect business relationships in the upstream and/or downstream value chain. Business relationships are not limited to direct contractual relationships, i.e. tier 1. The reporting undertaking should follow the outcome of its sustainability due diligence processes (where relevant) and its materiality assessment, and in accordance with the specific requirements of the topical ESRS guidance. The ESRS do not require information on each and every entity in the value chain, but the inclusion of material upstream and downstream value chain information.

The undertaking shall include material value chain information when this is necessary to:

- a. Allow users of sustainability statements to understand the undertaking's material impacts, risks and opportunities; and/or
- b. Produce a set of information that meets the qualitative characteristics of information.

When determining at which level (within its own operations and its upstream and downstream value chain) a material sustainability matter arises, the undertaking shall use its assessment of impacts, risks and opportunities following the double materiality principle.





The undertaking shall describe whether and how its biodiversity and ecosystems-related policies support traceability of products, components and raw materials with actual or potential material impacts on biodiversity and ecosystems along the value chain. ESRS Disclosure Requirements related to quantitative metrics cover only own operations, apart from Scope 3 in E1 (climate change) and for those entity-specific disclosures where the undertaking determines whether and, if so, what value chain information is required.

Definition and other background: The value chain is defined as the full range of activities, resources and relationships related to the undertaking's business model(s) and the external environment in which it operates. A value chain encompasses the activities, resources and relationships the undertaking uses and relies on to create its products or services from conception to delivery, consumption and end-of-life. Relevant activities, resources and relationships include: a) those in the undertaking's operations, such as human resources; b) those along its supply, marketing and distribution channels, such as materials and service sourcing and product and service sale and delivery; and c) the financing, geographical, geopolitical and regulatory environments in which the undertaking operates.

The value chain includes entities (or actors) upstream and downstream from the undertaking. Entities upstream from the undertaking (e.g. suppliers) provide products or services that are used in the development of the undertaking's products or services. Entities downstream from the undertaking (e.g. distributors and customers) receive products or services from the undertaking.⁶

Climate or nature footprints

Greenhouse Gas Protocol (GHGP): The GHGP provides minimum boundaries of each value chain (scope 3) emissions category. The minimum boundaries are intended to ensure that major activities are included in the scope 3 inventory, while clarifying that companies need not account for the value chain emissions of each entity in its value chain, ad infinitum. Companies may exclude activities within the minimum boundary of each category, provided that any exclusion is disclosed and justified.

For some scope 3 categories, such as purchased goods and services, capital goods and fuel- and energy-related activities, the minimum boundary includes all upstream (cradle-to-gate) emissions of purchased products to ensure that the inventory captures the GHG emissions of products wherever they occur in the life cycle, from raw material extraction through purchase by the reporting company. For other categories, such as transportation and distribution, waste generated in operations, business travel, employee commuting, leased assets, franchises and use of sold products, the minimum boundary includes the scope 1 and scope 2 emissions of the relevant value chain partner, such as the transportation provider, waste management company, transportation carrier, employee, lessor, franchisor or consumer. For these categories, the major emissions related to the scope 3 category result from scope 1 and scope 2 activities of the entity, such as the fuel consumed in an aeroplane for business travel, rather than the emissions associated with manufacturing capital goods or infrastructure, such as the construction of an aeroplane or airport for business travel. Companies may account for additional emissions beyond the minimum boundary where relevant.⁷

⁶ European Commission (2023) [Commission Delegated Regulation \(EU\) 2023/2772 of 31 July 2023, supplementing Directive 2013/34/EU of the European Parliament and of the Council as regards sustainability reporting standards](#), and EFRAG (2024) [IG 2: Value Chain Implementation Guidance](#)

⁷ World Resources Institute, World Business Council for Sustainable Development (2011) [Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard: Supplement to the GHG Protocol Corporate Accounting and Reporting Standard](#)



PCAF provides a framework for financial institutions to assess and disclose GHG emissions associated with financial activities. It lists three categories of emissions: financed, facilitated and insured.

Financed emissions are the emissions that banks and investors finance through their loans and investments.

Facilitated emissions are off-balance sheet, representing services rather than financing, and can take the form of a flow of activity rather than a stock. This reflects the difference between capital market instruments (facilitated transactions) and loans and investments.

Insurance-associated emissions are real economy emissions associated with specific re/insurance policies, aggregated in the re/insurance portfolio. This definition is for accounting purposes rather than to attribute liability for any emissions caused or contributed to by an insured entity or activity.⁸

Target setting standards

Science Based Targets Network (SBTN): The SBTN asks organisations to define a target boundary based on a materiality assessment process. The target boundary is the full spatial extent of activities to be managed through targets and is defined in Step 2 of the SBT-setting process.

Through the materiality screening (Step 1a) and assessment (Step 1b) companies gather the data they will use to define target boundaries. For their upstream activities, companies start with a comprehensive list of all goods and services purchased from Tier 1 suppliers (i.e. GHGP Scope 3 Category 1). Companies then complete an assessment (requiring specification or approximation of locations, pressure estimation and state data estimation) for at least 67% of environmentally material upstream activities flagged

in Step 1a, as well as all high impact commodity value chains (see SBTN High Impact Commodity List v1).

Location information used to estimate pressures and provide context for the impact to nature (states), should be obtained for the most impactful activity for all high impact commodities (e.g. extraction/growing/harvesting), or from Tier 1 suppliers for other upstream activities.⁹

Accountability Framework: The Accountability Framework serves as a comprehensive guide for companies engaged in the production, sourcing, or financing of agricultural or forestry commodities. Through its twelve Core Principles, the Framework directs organisations in establishing and executing ethical supply chains across various domains. These principles cover critical aspects such as protecting natural ecosystems, respecting human rights, establishing commitments, and implementing effective systems. From evaluating supply chains to ensuring compliance and promoting collaboration, the Framework offers clear directives for companies to follow. By using the Accountability Framework, organisations and stakeholders can set goals, implement proactive measures, and monitor progress toward establishing sustainable supply chains. The Framework aims to enhance transparency and sustainability in supply chain management by establishing effective company systems, driving implementation, and fostering collaboration with stakeholders.¹⁰

⁸ Partnership for Carbon Accounting Financials (PCAF) (2023). [The Global GHG Accounting and Reporting Standard for the Financial Industry](#)

⁹ Science Based Targets Network (2023) [Technical Guidance: Step 1: Assess](#)

¹⁰ Accountability Framework initiative (2023) [Accountability Framework core principles](#)

