

TECHNICAL GUIDANCE



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Expected use. The first release of science-based targets for nature—namely Step 1: *Assess*, Step 2: *Interpret & Prioritize*, and Step 3: *Measure, Set & Disclose* (collectively, “the guidance documents”)—is intended for use to assist companies in preparing to set science-based targets for nature. Companies are expected to use the methods in succession (i.e., use Step 1, then Step 2, then Step 3).
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5.

Technical audience. The guidance documents are written in technical language; the primary audience of this document is assumed to have the technical knowledge necessary to engage with this content. A more corporate-friendly version of this guidance will be published as part of the first release of science-based targets for nature in 2023.

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Language used in SBTN publications. SBTN uses terms such as “*shall*,” “*must*,” “*should*,” and “*may*” in alignment with the Science Based Targets initiative (SBTi) and the International Organization for Standardization (ISO). These terms should be interpreted as indicating the following meanings:

 - The terms “*required*,” “*shall*,” or “*must*” are used throughout this document to indicate what is required for targets to conform with the criteria.
 - The terms “*recommended*” and “*should*” are used to indicate a recommendation, but not a requirement.
 - The related terms “*may*” or “*can*” are used to indicate an option that is permissible or allowable.



The five-step process for setting science-based targets for nature.

Letter from SBTN's Technical Director

Dear Reader,

The first release of science-based targets for nature marks a critical step forward for the Science Based Targets Network (SBTN) and for corporate action on the mounting environmental and social crises associated with nature and biodiversity loss.

SBTN is a unique collaboration of over 80 leading global non-profits and mission-driven organizations, working together to co-develop and test scientifically rigorous and actionable methodologies for setting science-based targets (SBTs). To complement existing science-based targets for climate through the Science Based Targets initiative, SBTN is developing science-based targets for nature.

With the release of the first science-based targets for nature in 2023, SBTN is making available a robust and integrated methodology that offers companies the methods, guidance and tools they need to set validatable targets to directly address their pressures on freshwater, land and biodiversity today. Future releases of methods from SBTN will increase coverage of corporate impacts.

SBTN is, by design, more detailed and prescriptive than other frameworks in the

sustainability space, providing thorough step-by-step guidance at each stage of the process. The purpose of our guidance is to empower companies to deploy a clear, analytical approach, tested and vetted by scientific experts, for assessing and addressing their environmental impacts. For this reason, the methodology builds on existing related frameworks, data and tools to increase efficiency for companies with more sustainability experience. It also aims to create a pathway for companies who are earlier on their sustainability journey, by providing tools, data and models to facilitate target-setting.

While applying these methods, it is important to note that SBTN methods will improve and increase in scope with advancements in science and technology and through the application of our methods by companies. Subsequent releases will include greater coverage of biodiversity, marine impacts, and additional sources of freshwater pollution, to name a few areas of current development. Additional planned content includes guidance on Step 4: Act and Step 5: Track, with validatable metrics associated with the Stakeholder Engagement Guidance.

With this novel release of science-based targets for nature, we aim to ensure that companies take measurable steps toward assessing, mitigating, and managing their impacts on nature and society. By taking enough of the right actions, in the right places, and at the right time through science-based targets, companies can contribute towards an environmentally safe and socially just future.



Thank you for your interest and support for our work.

Varsha Vijay, Ph.D.
Technical Director
Science Based Targets Network



By taking enough of the right actions, in the right places, and at the right time through science-based targets, companies can contribute towards an environmentally safe and socially just future.

Table of contents

	Method scope	10
	0.1 Organizational scope	12
	0.2 Value chain scope	14
	0.3 Conceptual framework and environmental topic scope	18
	0.4 Sector applicability	21
	0.5 Assessment timeframe	21
	Introduction	24
	1.1 Data requirements for Step 1	27
	Step 1a: Materiality Assessment	30
	2.1 Overview	32
	2.2 Define scope for materiality screening	33
	2.3 Prepare data for screening	38
	2.4 Select an approach to screen for material pressures	40
	2.5 Screen for Materiality	
	2.6 Refine sector-level estimates	49
	2.7 Interpret materiality screening outputs	52
	Step 1b: Value Chain Assessment	54
	3.1 Overview	56
	3.2 Scope for the value chain assessment	58
	3.3 Check for readiness	70
	3.4 Estimate contributions toward environmental pressures	72
	3.5 Estimate the state of nature	80
	3.6 Link pressure and state of nature data for the value chain assessment	86
	References	90
	Explanatory notes	93
	Table of acronyms	95
	Supplementary materials	96
	Links to other pages	104

Additional resources

RESOURCES TO ACCOMPANY STEP 1

- [Guide for readers](#)
- [Step 1 Toolbox](#)

OTHER METHODS

- [Step 2: Interpret & Prioritize](#)
- [Step 3: Measure, Set & Disclose—Freshwater](#)
- [Step 3: Measure, Set & Disclose—Land](#)

GENERAL RESOURCES

- [Glossary](#)
- [SBTN FAQs](#)
- [SBTN Consolidated Data Needs Table \(Step 1–3\)](#)

PLEASE NOTE THE FOLLOWING CONVENTIONS USED IN THIS DOCUMENT:

- Numbers in brackets, for example (1), indicate citations which can be retrieved in the bibliography
- Superscript numbers, for example ⁽¹⁾, indicate explanatory notes, which can be found as footnotes in the Method Scope and as endnotes for the rest of the Guidance.

Method scope

This section of the Step 1 method document provides an overview of the basic elements of scope for the application of SBTs for nature: organizational scope, value chain scope, issue scope, and temporal scope.

This section of the Step 1 method document provides an overview of the basic elements of scope for the application of SBTs for nature: organizational scope, value chain scope, issue scope, and temporal scope. It also provides information on the types of sectors which will be best able to use SBTN’s first methods. These basic elements apply to each of the first methods released in 2023, Step 1: Assess, Step 2: Interpret & Prioritize, Step 3: Freshwater, and Step 3 Land.

SBTN has been working in collaboration with a number of organizations and initiatives to build on and align with existing frameworks, regulations, and standards. Links between the SBTN methodology and the core principles and guidance of other key initiatives are indicated in the methods under "Connection to other frameworks" and are noted throughout the Method Scope and in the rest of the method documents for Step 1: Assess and Step 2: Interpret and Prioritize. *The connections noted in these sections are not intended to be comprehensive.*

Users of SBTN methods should expect this document to be updated on an annual basis, in conjunction with updates to the target setting methods.

0.1 Organizational scope

Consistent with current best practice, companies *must* include the broadest possible coverage of their corporate activities as they start using the SBTN methods. This scope is expected to narrow as companies advance through the five steps of the process for setting science-based targets and begin applying target-setting methods and taking action.

Many companies setting science-based targets for nature are already engaged in measuring, disclosing, and actively managing their environmental footprints. To ensure that their application of the SBTN methods can build from their existing efforts with, for instance, the Science Based Targets initiative (SBTi); Greenhouse Gas (GHG) Protocol; the Accountability Framework initiative (AFi); context-based water targets; the CDP; Global Reporting Initiative (GRI); or Taskforce on Nature-related Financial Disclosures (TNFD). Companies are *strongly recommended* to use the same **organizational or business scope**¹ in their SBTN assessment as used in previous work. In cases where the recommendations from SBTN for organizational scope are more ambitious than a company’s current practices, companies are recommended to work to expand their organizational scope to the level indicated by SBTN by the next five-year target-setting period of science-based targets for nature.

¹ Generally, the highest-level boundaries drawn to delimit the activity scope of a corporate impact assessment and impact management exercise. The organizational boundary can be determined through one of three “control” approaches outlined by the Greenhouse Gas (GHG) Protocol Corporate Standard. Within the organizational boundary, companies can then draw their operational boundary, to distinguish between what are pressures and impacts associated with their direct operations (Scope 1) vs. those associated with their upstream and downstream activities (Scope 3). See [SBTN Glossary](#) for further detail.

Connection to other frameworks—
**‘Organizational boundary’ or
‘business scope’**

ACCOUNTABILITY FRAMEWORK INITIATIVE (AFi)

- Core Principles and Definitions (see specifically, “corporate group”)

CAPITALS COALITION

- Natural Capital Protocol (2016), Step 3: Scope the assessment

GLOBAL REPORTING INITIATIVE

- GRI 101: Foundation (2016)
- GRI 103: Management approach (2016)
- GRI 3: Material Topics (2021)

GHG PROTOCOL

- Corporate Standard (2004), Chapter 3: Setting Organizational Boundaries

INTERNATIONAL ORGANIZATION FOR
STANDARDIZATION (ISO)

- ISO 14001:2015 Environmental management systems—Requirements with guidance for use, Chapter 4.3: Determining the scope of the environmental management systems

- ISO 14046-1:2018 Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals, Chapter 5: GHG inventory boundaries
- ISO 14046:2014 Environmental management – Water footprint – Principles, requirements and guidelines, Annex A: Additional requirements and guidelines for organizations
- ISO/TS 14072: Environmental management — Life cycle assessment— Requirements and guidelines for Organizational Life Cycle Assessment.

LIFE CYCLE INITIATIVE (UNEP)

- Guidance on Organizational Life Cycle Assessment (2015), Chapter 3.2 Definition of goal and scope

TRANSPARENT PROJECT

- Standardized Natural Capital Accounting (2021), Scope

0.2 Value chain scope

Drawing again from current practice, SBTN requires that companies assess and address their impacts occurring within not just their direct operations, but also other parts of their **value chain**². Following from other frameworks, the value chain can be divided into three segments: **upstream**, **direct operations** and **downstream**. The activities included within each of these segments are summarized in Table 1. In general, companies setting science-based targets for nature as well as science-based targets for climate *should* use the same scope and approach to business segmentation.

Note that the value chain scope required by SBTN for this first release of science-based targets for nature is more focused than that recommended by other sustainability frameworks. This scope has been reduced due to feedback from reviewers of SBTN methods throughout the development process regarding the ability of nature impact assessment frameworks to capture impacts in different parts of the value chain and for specific activity categories, as well as feedback about needing options to reduce the overall complexity of the target-setting process. As such, the SBTN methods for upstream activities only *require* that companies include purchased goods and services (Category 1 in the GHG Protocol). Where companies have data available for other upstream activities, they *may* also include these in their assessments and targets, but they are considered optional. Similarly, for direct operations, the SBTN methods only *require* that companies assess impacts associated with their sites and facilities—the inclusion of vehicles and purchases of electricity (Scope 2) are considered optional.

Note also that the V1 SBTN methods for Step 1: Assess, Step 2: Interpret & Prioritize, and Step 3: Measure, Set & Disclose only *cover direct operations and upstream activities; coverage of downstream value chain impacts is out of scope for SBTN’s first method release*. This value chain scope has been selected for the following reasons:

- There is ample evidence that companies must manage not only the impacts occurring at the sites they manage within their direct operations, but also those occurring in their upstream value chains (1) (2).
- At present, there are many widely tested and used methods available to assess impacts from companies’ direct operations and upstream supply chains.
- The methods available for direct operations and upstream assessments yield results for which there is greater confidence in estimates of impacts than for the downstream value chain (3).
- The SBTN community has greater clarity on how target-setting can occur for impacts within companies’ direct operations and upstream than for downstream.

The exclusion of downstream from the first methods requires a caveat on the comprehensive coverage and applicability of the current version of science-based targets for nature for all companies. For some sectors, downstream environmental and societal impacts may be a substantial proportion of total value chain impacts. These sectors include, but are not limited to, oil and gas, chemicals, and retail (4) (5) (6) (7) (8). However, because many of the companies in these sectors will also have impacts in their direct operations and upstream, it is critical that they apply SBTN methods for these portions of their value chain. Companies are encouraged to seek solutions for assessing, tracking, and managing their downstream impacts in the absence of methods and guidance from SBTN. Guidance on how to assess a company’s downstream impacts will be provided in future SBTN methods, beginning with a scoping study projected for release in 2024.

Targets should be specific to the data companies have on each value chain segment. Therefore, companies *must* treat data for these value chain segments separately as they progress through the five steps of the SBTN target-setting method, except when combination of data is called for in the guidance documents.




*Targets should be specific to the data companies have on each value chain segment. Therefore, companies **must** treat data for these value chain segments separately as they progress through the five steps of the SBTN target-setting method.*

² Production of “economic value” along a series of activities, sites, and entities. Most value chain frameworks cover a suite of activities starting with the raw materials and extending through end-of-life management, that (a) supply or add value to raw materials and intermediate products to produce final products for the marketplace and (b) are involved in the use and end-of-life management of these products. See [SBTN Glossary](#) for further detail.



Table 1—General description of value chain categories, applicable to most businesses.

This table summarizes the SBTN requirements for value chain coverage in the first release of science-based targets for nature. For further detail on how value chain segments are defined by other leading frameworks, please see the supplementary material for this method.

SBTN		
<p><u>Within scope</u> of the first release of science based targets for nature methods</p>	<p>Upstream</p> 	<p>Cradle-to-gate impacts of goods and services purchased by the company.</p> <p>The first science based targets for nature methods <u>require</u> companies to assess and report on the impacts associated with their purchased goods and services (GHGP Scope 3, Category 1). For the Step 1a materiality screening, companies are required to review the projected impacts of their tier 1 upstream activities (those immediately connected to their purchases). As part of this screening, companies must review the SBTN high impact commodity list and report which of these as material for the company.</p> <p>For the Step 1b assessment, companies <u>must</u> ensure that they assess impacts associated with at least 67% of their material upstream impact, defined based on volumes or spend (associated with activities flagged in the Step 1a screening). Companies <u>must</u> include at least 90% of the high impact commodities (in raw or processed form) in their value chain assessment.</p> <p>When estimating the impacts associated with their purchased goods and services in Step 1b, companies <u>must</u> use pressure and state data for the most impactful activity (e.g. extraction) in these supply chains. However, for both the GHG Protocol and application of LCA approaches, inclusion of the other activity categories will still be desirable, and sometimes necessary, depending on the application at hand.</p>
	<p>Direct operations</p> 	<p>Gate-to-gate impacts of all activities conducted by the company within the organizational boundary.</p> <p>The first science based targets for nature methods <u>require</u> companies to assess and report on the impacts associated with all their directly owned or operated sites and facilities or other assets. Companies should aim to assess as close to 100% of their activities as possible, with allowable exclusions determined through the validation process.</p>
<p><u>Out of scope</u> of the first release of science based targets for nature methods</p>	<p>Downstream</p> 	<p>Gate-to-grave (or reuse) impacts of all good and services sold by the company.</p> <p>The first science based targets for nature methods <u>do not require</u> companies to assess or report on downstream impacts.</p> <p><i>SBTN will be conducting research and will publish a scoping paper (projected to be released in 2024) to advance method development on this topic.</i></p>

0.3 Conceptual framework and environmental topic scope



The SBTN methods utilize the drivers, pressures, state, impact, and response (DPSIR) framework. Beyond SBTN, DPSIR is a well-known framework used to summarize the relationship between different variables influencing environmental trends and outcomes, often used by policymakers for assessing problems and designing interventions, as well as by organizations developing methods for impact assessment and management. This framework has been adopted in academic research (9) (10) (11) (12) (13) (14) (15) as well as in practice and implementation by leading environmental NGOs (e.g., World Wide Fund for Nature (16) (17), Capitals Coalition (18)), standard setters (e.g., the Taskforce on Nature-related Financial Disclosures) (19), and international organizations (e.g., the European Commission and European Environment Agency (20), Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (21), United Nations Environment Programme (22) (23), Food and Agriculture Organization (24), Convention on Biological Diversity (25), and Organization of Economic Cooperation and Development (26)).









This framework examines the social and economic drivers (D) that exert pressures (P) on the environment and result in changes to the state (S) of nature. The relating impacts (I) on humans and environments may cause or require a societal response (R). This is not a linear framework but instead one that may have various feedbacks throughout the system. Of the DPSIR variables, SBTN methods for Steps 1, 2, and 3 focus on pressures³ and states (or the state of nature).⁴ Together these can be



used to describe key elements in the dynamics of nature loss that are relevant to companies at a global level, as well as more locally, in the landscapes where businesses operate. Both variables are needed, as often pressures can be viewed as “leading indicators” for eventual changes in the state of nature, such as changes in biodiversity, and impacts that may arise from this, such as changes in ecosystem services or nature’s contributions to people (27) (28). Evaluating how different actors respond to these changes, and how they can work to control them through proactive changes in target setting, is also at the core of the SBTN methods, but is not introduced until later steps (starting with Step 3 Measure, Set, Disclose).

SBTN methods for Step 1: Assess and Step 2: Interpret & Prioritize use an integrated approach to understand corporate environmental impacts and develop a plan for managing them with science-based targets for nature. By taking a more holistic view of the environmental pressures within the scope of SBTN methods, companies start their SBTN journey with a greater ability to take urgent action in line with global goals for nature and society. This approach also increases their potential to maximize co-benefits and minimize tradeoffs for nature, biodiversity, and for broader corporate sustainability efforts.

Table 2—Pressures managed with science-based targets for nature.

Pressures with filled diamond symbols  are those that are subject to target-setting methods in Step 3 using methods from SBTN and SBTi, these are required for inclusion in the Step 1a materiality screening. Those with open diamond symbols  are also required to be included in the Step 1a materiality screening based on their likely inclusion in the next releases of target-setting methods, but they may be excluded from the value chain assessment (Step 1b) and following steps. All other pressure categories not marked with a symbol are *recommended* but not required for assessment.

IPBES Pressure Category	SBTN Pressure Category	
Ecosystem use and use change	Land use and land use change (Terrestrial ecosystem)	
	Freshwater ecosystem use and change	
	Marine ecosystem use and change	
	Water use	
	Other resource use (minerals, fish, other animals, etc.)	
Resource exploitation		
Climate change	GHG emissions	
	Non-GHG air pollutants	
	Water pollutants	
Pollution	Soil pollutants	
	Solid waste	
	Disturbances	
Invasives and other	Biological alterations/interferences	

Symbol key:
 Required in the Step 1a materiality screening
 Expected to be in Version 2 release of target-setting methods

³ Anthropogenic activities that change the state of the environment and ecosystem, including the addition or removal of substances or organisms to the environment, or direct changes to the structure, function, or composition of ecosystems. Important pressures in the SBTN methods include water withdrawals, reductions in native vegetation, habitat conversion, land management practices (e.g., overgrazing or tillage), pollution, and land-use changes. See [SBTN Glossary](#) for further detail.
⁴ State of nature indicators describe the general conditions of nature in physical, chemical, or biological terms. See [SBTN Glossary](#) for further detail.

Table 3—State of nature (SoN) indicators relevant for the SBTN methodology.

The variables in this list are exemplary of state of nature variables used in SBTN Version 1 methods. Guidance on the use of specific indicators is provided in Step 1b: Value Chain Assessment and Step 3: Measure, Set & Disclose. Biotic variables are shown with a green line underneath, variables at the intersection of biotic and abiotic processes are shown with a yellow line, and abiotic variables are lined with blue. Note that outside the nutrients listed below there can be biotic and abiotic components of both soil and water quality.

SBTN State of Nature (SoN) Variables
Ecosystem extent, structure, composition, and function
Species biodiversity (e.g., population dynamics, richness, extinction risk, and loss)
Nature's contributions to people (i.e., ecosystem services)
Soil quality (nitrogen and phosphorus)
Water quality (nitrogen and phosphorus)
Water availability
Precipitation
Temperature

0.4 Sector applicability

With few exceptions,⁵ all companies are encouraged to apply the methods developed by SBTN to assess material pressures (Step 1) and prioritize locations and business components for target-setting (Step 2). Some aspects of the methods, including the language used in the guidance and recommended tools, may be more easily understood and used by certain types of companies depending on the complexity of their operations and value chains. Other aspects of the methods, including the scope of pressures covered and value chains, may result in some companies needing to consult additional resources to address other material pressures.

0.5 Assessment timeframe

Companies *must* reassess their environmental impacts every five years in line with current SBTN guidance and best available science, tools, and data and reflect any relevant changes in their business operations. This data must be resubmitted to SBTN, in line with all relevant requirements, for Step 1 and Step 2 checks and for Step 3 validation. Where the assessment is unchanged (e.g., the materiality assessment is still valid due to stability in company operations), companies may resubmit the same data and values.

REQUIREMENTS AND RECOMMENDATIONS
— METHOD SCOPE

- ◆ **Requirement 1. Screen all five pressures covered by SBTN's first methods, as well as those expected to be covered in the next release.**
In the V1 Step 1a method for materiality screening companies are *required* to screen the five pressures covered in the first SBTN target-setting methods (Step 3), and those covered by SBTi. These are marked with a ◆ symbol in Table 2. In Step 1a, companies are also required to screen the additional three pressures expected to be covered in the Version 2 release of target-setting methods marked with a ◇ symbol in Table 2. In total, eight pressures are required for inclusion in the screening exercise.
- ◇ **Recommendation 1. Use an approach to defining scope that is consistent with the company's current practice.**
When defining what activities are included in their upstream and direct operations, companies *should* use the same approach applied for data collection, impact management, and reporting under other frameworks, e.g., SBTi.
- ◇ **Recommendation 2. Screen and assess additional pressures if possible.**
All other pressures not marked with a symbol in Table 2 are optional to include in the assessment. Though these pressures have been identified as significant contributors to the loss of nature, these are not yet addressed by SBTN’s target-setting methods. Nonetheless, because these pressures can generate important impacts to nature, SBTN *recommends* that companies screen and assess them whenever possible using available data and methods.

⁵ The first release of SBT's for nature are not readily applicable to consultancies and financial institutions.

The background of the slide features a serene landscape at sunset. The sky is a gradient of warm colors, from deep orange near the horizon to a lighter yellow at the top. The sun is partially visible on the right side, creating a large, bright circular glow. In the foreground, there is a calm body of water reflecting the sky's colors. In the distance, there are silhouetted mountains. A small boat with two people is visible on the water in the lower right quadrant. The overall mood is peaceful and natural.

With few exceptions, *all companies are encouraged to apply the methods* developed by SBTN to assess material pressures (Step 1) and prioritize locations and business components for target-setting (Step 2).

Introduction

Step 1 is the starting point for companies setting science-based targets for nature.

The SBTN target-setting process follows five core steps to set science-based targets for nature (see SBTN Guide for Readers).¹

In Step 1 of the five-step SBTN methodology, companies first screen their portfolio of **economic activities for materiality** (Step 1a: Materiality Screening), and then estimate their **contributions** toward key issues through an assessment of **pressures and states/impacts** associated with each category of activity (Step 1b: Value Chain Assessment).

By using the Step 1 Technical Guidance, companies can determine which pressures they most likely need to address with targets, and which parts of their business are the highest priority to get started with first.

Within the context of the full methodology for setting science-based targets, Step 1 gives companies a sense of where they will need to invest their time and energy in the target-setting process. Regardless of their sector, geographic location, or level of sustainability experience, all companies should be able to complete Step 1 and meet the required validation criteria to move forward with the target-setting process.

1.1 Data requirements for Step 1

To provide companies with a clear view of the data needed for its first release of methods, SBTN has developed a set of tables outlining the data requirements for each step.

Table 4 includes the requirements for Step 1, but the full set of requirements for Step 1, 2, and 3 can be found in the Data Needs summary.²

Where needed, additional details on data requirements for each step and value chain category are provided within the methodology document. The data needed for each step of the target-setting process build on what is collected and used for the previous step, so companies *must* collect the *required* data for Step 1a before proceeding to Step 1b.

BUILDING FROM EXISTING WORK

Companies that are working to understand and act on their impacts for climate and nature, through the use of frameworks for assessment, accounting, and target-setting (e.g., Science Based Targets initiative (SBTi), Taskforce on Nature-related Financial Disclosures (TNFD), Greenhouse Gas Protocol (GHGP), CDP, Natural Capital Protocol (NCP), European Sustainability Reporting Standards (ESRS), and ISO standards), may have much of the data, resources, and capacity needed to set science-based targets for nature.

SBTN has provided pathways within the target-setting methodology to allow companies to leverage existing experience and information, including the following:

- Environmental management systems and internal environmental data infrastructure (for collection, processing, management, and learning)
- Environmental inventories
- Reports prepared for other globally recognized standards or disclosure frameworks
- Upstream transparency and traceability
- Commodity certification standards
- Experience with tools and models appropriate for use in the SBTN methods.³

Relationships with other stakeholders may help companies get off to a quick start with target setting and ensure the durability of their efforts. Of note, companies may draw from and seek to reinforce the following:

- Existing partnerships (with NGOs or consultancies)
- Existing stakeholder relationships
- Leadership (C-suite or board) support
- Relationships between sustainability and financial/procurement teams
- Supplier engagement or partnership
- Industry coalitions and cooperative/collaborative action with other companies.

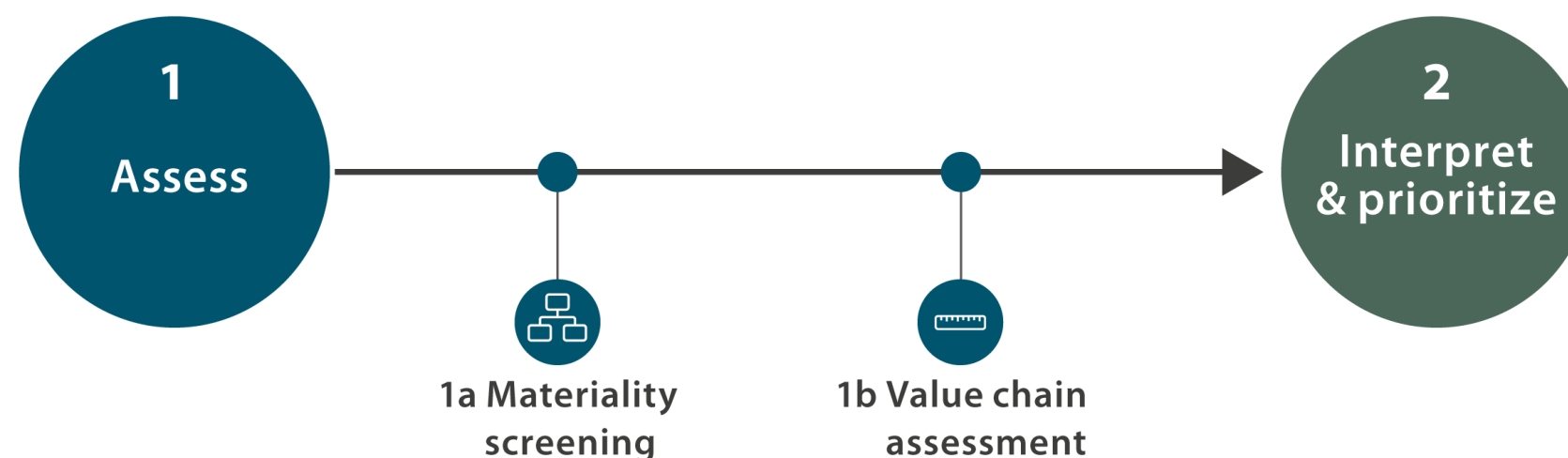


Figure 1—Overview of Step 1. This step can be broken into two methodological parts: the high-level materiality screening using global, sector-level information (Step 1a), and the in-depth value chain assessment using company-specific information and/or global models (Step 1b).

Table 4—Overview of data requirements for Step 1.

STEP 1: ASSESS			
		Step 1a: Materiality Screening	Step 1b: Value Chain Assessment
Objective of the method for this step		Determine the material pressures <i>most likely</i> to require target-setting by a company, based on sector-level information.	Estimate a company's contributions to key environmental pressures across its operations and value chains and screen the state of nature in order to inform decisions about what to set targets on, for which parts of the business, and where in the value chain.
Direct operations	Data needs	<u>Requirements</u> <ul style="list-style-type: none"> ◆ List of economic activities involved in the company's direct operations, aligned with the International Standard Industrial Classification of All Economic Activities (ISIC). 	<u>Requirements</u> <ul style="list-style-type: none"> ◆ Estimates of pressures for all sites and locations within the company's organizational boundary at a subnational level. ◆ Secondary estimates of state of nature (SoN) values per location. <u>Recommendations</u> <ul style="list-style-type: none"> ◆ Observations (rather than estimates) of pressure data for all sites and locations within the company's organizational boundary.
	Associated with what parts of the company's data?	Sites within the company's organizational boundary that the company either owns or controls.	
	Inputs and outputs	<u>Input from companies:</u> List of all directly owned or operated sites, location, and the activity or product/commodity involved. <u>Output from the method:</u> Estimates of pressures and SoN scores associated with each directly owned or operated sites, location, and the activity or product/commodity involved.	
Upstream	Data needs	<u>Requirements</u> <ul style="list-style-type: none"> ◆ List of activities in upstream (Tier 1/direct supply chain). ◆ List (categories) of high-impact commodities (both in raw and transformed/processed form) in the company's sourcing and upstream activities. <u>Recommendations</u> <ul style="list-style-type: none"> ◆ Primary data on upstream pressures (if available from Tier 1 or for commodities with high traceability). 	<u>Requirements</u> <ul style="list-style-type: none"> ◆ List (categories) of all goods and services* procured from upstream suppliers (Tier 1) (services aligned with ISIC Group or other equivalent sectoral classification). ◆ List of threatened species according to the International Union for Conservation of Nature (IUCN) and listed species according to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in the company's sourcing. ◆ Estimated volume or spend on high-impact commodities and other goods or services (e.g., distribution) procured from upstream suppliers. ◆ Estimated or modeled locations for each commodity/activity, associated with the highest-impact activity,** for each relevant pressure. ◆ Secondary estimates of SoN values per location, at least to country level. <u>Recommendations</u> <ul style="list-style-type: none"> ◆ Secondary data on pressures for all other commodities and activities, beyond the minimum required coverage (i.e., >67%). ◆ Cradle-to-gate assessment for all upstream activities and purchased goods.
	Associated with what parts of the company's data?	Commodities/goods and activities/services associated with the company's procurement or financial data for the sites included in direct operations.	
	Inputs and outputs	<u>Input from companies:</u> List of procurement (commodities/goods and activities/services) paired with known or expected sourcing location and spend or volume on each category. <u>Output from the method:</u> Estimate of pressures and SoN per commodity/good and activity/service at each known or expected location.	

Notes on data needs for the value chain assessment, upstream:

* Though companies are only required to assess the impacts associated with high impact commodities and at least 67% of their spend or volumes purchased deemed to be material after Step 1a, they will still need to have a list or inventory that includes all categories of upstream activity (i.e., 100% of their spend or volume).

** Companies should assume that sourcing (extraction/growing/harvesting) is the highest impact activity unless there is evidence to prove otherwise for a specific pressure category.



Step 1a: Materiality Assessment

2.1 OVERVIEW

Screening for material pressures in Step 1a enables companies to identify which pressure areas they will likely need to set targets on. This information can be used to set corporate expectations about the level of effort needed to address key environmental pressures and to be compliant with SBTN validation requirements.

2.1 Overview

Screening for material pressures in Step 1a enables companies to identify which pressure areas they will likely need to set targets on. This information can be used to set expectations for the company about the level of effort needed to address its key environmental pressures and to be compliant with SBTN validation requirements.

The guidance for the screening step is foundational for companies preparing to set targets for nature. This guidance introduces companies to the pressures that will likely be managed by science-based targets and encourages companies to get a better understanding of their businesses and their environmental impacts. This guidance introduces a prescriptive approach to screening impacts that is particularly useful for companies getting started with comprehensive environmental action. If companies have more precise and accurate

information on their environmental pressures, they may find the flexible approach to materiality screening to be more useful.

Given that the information used for this step is based on sector-level, global averages, it will not provide an exact representation of a company's impact on a given pressure category. This screening is designed to help companies focus the scope of their target-setting efforts in subsequent steps of the SBTN methodology (such as data collection in Step 1b and baselining in Step 3), and to give companies enough information to begin communicating internally about what the target-setting process is likely to entail (regarding pressures and value chain segments covered).

As an output from this sub-step, companies will have a list of pressures by sector, activity, and/or associated commodities relevant to the company.

2.2 Define scope for materiality screening

Throughout the process of setting targets, the scope of pressures and the scope of the business become more focused based on materiality and potential for effective interventions.

The broadest scope of the company's direct operations to be covered in the assessment can be referred to as the *organizational boundary*. This boundary *must* be defined by companies before they begin applying the method for Step 1.⁴ Once defined, the organizational boundary will dictate which parts of the organization *must* be considered in scope for the pressure screening step of the target-setting process (Step 1a). The scope of the business covered within the science-based target-setting methodology may narrow as companies undertake the value chain assessment; see Figure 2.

Many companies will have experience in defining an organizational boundary if they have used this for greenhouse gas accounting and financial reporting. Companies that have previously defined an organizational boundary for setting climate science-based targets are *strongly recommended* to use the same approach for setting nature science-based targets. Where SBTN guidance on organizational boundaries is more ambitious than current practice, companies are *recommended* to expand their organizational scope by the next five-year target-setting period for both climate and nature science-based targets.

For companies that have not used the GHG Protocol or SBTi methods, there are three primary approaches for defining the organizational boundary (29):

- **Financial control**—based on the ability of the company to direct the financial and operating policies of an operation (e.g., if the company has the right to majority benefits, or if it retains the majority of financial risks and rewards of the operation).
- **Operational control**—based on the ability of the company or one of its subsidiaries to introduce and implement operating policies at the operation.
- **Equity control**—based on the share of equity or economic interest that the company holds in an operation.

The choice of approach will dictate which subsidiaries and other activities are included within the direct operations scope of the target-setting process. To define the organizational boundary, teams working on target-setting can find information specific to the company in annual and financial reports, as well as internal reporting systems tied to procurement and environmental management.

By delimiting what is included within the company's direct operations, the organizational boundary will also define which activities will be accounted for when looking at the upstream segment of the company's value chain.

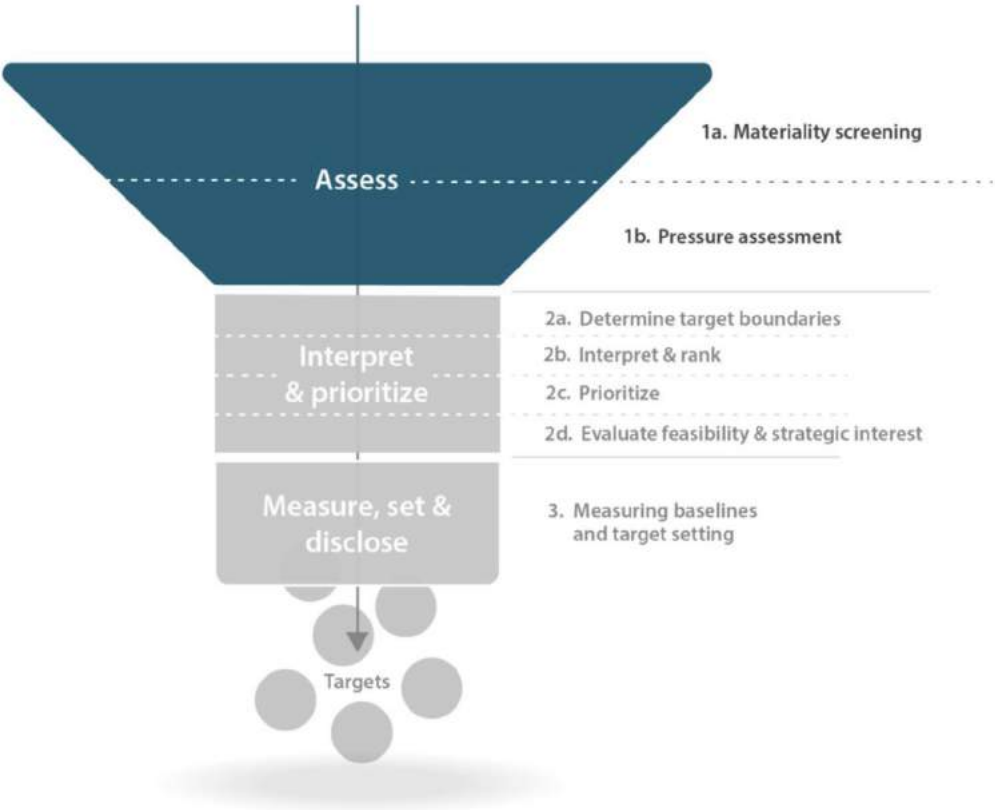


Figure 2—Narrowing the scope of the target-setting process. The process of setting science-based targets for nature requires companies to start with as broad a scope as possible in Step 1a. The scope of their economic activities which will be evaluated and managed through science-based targets becomes narrower as companies move through the subsequent steps of the methodology, getting more focused on the activities and locations that matter the most for nature and society as well as their businesses' target setting strategies.

Connection to other frameworks— Scope of materiality screening

ACCOUNTABILITY FRAMEWORK INITIATIVE

- Core Principles (30) and Definitions (31); see specifically, “corporate group”

CAPITALS COALITION

- Natural Capital Protocol (2016), Step 03: Scope the assessment (18)

GHG PROTOCOL

- Corporate Standard (2004), Chapter 3: Setting Organizational Boundaries (29)

GLOBAL REPORTING INITIATIVE

- GRI 1: Foundation (2021) (32)
- GRI 3: Material Topics (2021) (33)

INTERNATIONAL STANDARDS ORGANIZATION

- ISO 14001, Environmental management systems— Requirements with guidance for use (2015), Chapter 4.3: Determining the scope of the environmental management systems (34)
- ISO 14046-1, Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals (2018), Chapter 5: GHG inventory boundaries (35)
- ISO 14046, Environmental management – Water footprint – Principles, requirements and guidelines (2014), Annex A: Additional requirements and guidelines for organizations (36)
- ISO 14044:2006 Environmental management — Life cycle assessment — Requirements and guidelines, Chapter 4.2 Goal and scope definition (37)
- ISO/TS 14072: Environmental management — Life cycle assessment— Requirements and guidelines for Organizational Life Cycle Assessment (38)

LIFE CYCLE INITIATIVE (UNEP)

- Guidance on Organizational Life Cycle Assessment (2015), Chapter 3.2 Definition of goal and scope (3)

TRANSPARENT PROJECT

- Standardized Natural Capital Accounting (2021), Scope (39)

REQUIREMENTS AND RECOMMENDATIONS — SCOPE OF MATERIALITY SCREENING

- ◆ Requirement 2. Screening of full business. Companies *must* begin setting science-based targets by first screening for material pressures across the entirety of their business, as determined using the organizational boundary concept (Step 1a). In the value chain assessment, companies will likely focus on a smaller subset of their upstream activities (Step 1b). Downstream activities are not required.
- ◇ Recommendation 3. Preferred organizational boundary approaches for science-based targets for nature. To determine which activities to include within the organizational boundary used for setting science-based targets for nature, companies are *recommended* to use either the financial or operational control approach.
- ◇ Recommendation 4. Consistency of organizational boundary. Companies that have already set science-based targets for climate using the GHG Protocol for greenhouse gas accounting are *strongly recommended* to use the same organizational boundary for setting science-based targets for nature. This means that if a company is using the equity control approach for its science-based targets for climate, then it must use the same one for its science-based targets for nature.



”

Throughout the process of setting targets, the scope of pressures and the scope of the business become more focused based on materiality and potential for effective interventions.

2.3 Prepare data for screening

2.3.1 LIST ACTIVITIES WITHIN DIRECT OPERATIONS

Regardless of the approach used for the material pressure screening (introduced in section 2.2), companies will need basic information on the types of activities that characterize their business. Information on economic activities is commonly used to assess materiality, to manage data on impacts, and to convey information on impacts to users of those resources. This information (basic data on activities) will also be used by SBTN to verify comprehensive coverage of a company’s activities with the greatest environmental impact in the short term.

To complete the Step 1a: Materiality Screening, companies *must* classify all of their direct operations (see SBTN data requirements in Table 4) activities (e.g., products and services) into categories found in the fourth International Standard Industrial Classification of All Economic Activities scheme (ISIC4) (40). Economic activities classified using other common schemes such as the Global Industry Classification Standard (GICS) (41) must be translated to ISIC classifications using the provided crosswalk tables within the Materiality Screening Tool (42), see below for further guidance.

2.3.2 IDENTIFY UPSTREAM ACTIVITIES

Once companies have defined the organizational boundary and specified the activities that fall within their direct control or direct operations, they will then need to define the activities which occur within the other parts of their value chains and need to be included within the assessment for Step 1 of the target-setting process. Companies

must assess all value chain activities included in the SBTN data requirements outlined in Table 1 and 4. For more information on how SBTN defines the different value chain segments, see section 0.2 in the Method Scope.

To identify upstream activities, companies can use the Materiality Screening Tool, which uses companies’ input data on direct operations activities to automatically generate a list of economic activities expected to be in their upstream (based on direct and indirect spend data). Companies can then sense-check this by referencing their procurement data and any previous analyses.

Companies *should* also reference the SBTN High Impact Commodity List (HICL) (43) to ascertain whether any of their purchased inputs (raw ingredients, finished goods) will be required for inclusion in Step 1b: Value Chain Assessment. Note that purchased goods may include components containing high-impact commodities that may not be readily apparent in procurement data but must still be accounted for.⁵ This information can also be cross-referenced to companies’ procurement data.

DOWNSTREAM

As stated in section 0.2 in the Method Scope, companies are *not currently required* to screen impacts associated with their downstream activities in Step 1a. Companies are encouraged to seek solutions for assessing, tracking, and managing their downstream impacts in the absence of methods and guidance from SBTN. SBTN will be conducting research and will publish a scoping paper (projected to be released in 2024) to advance method development on this topic.

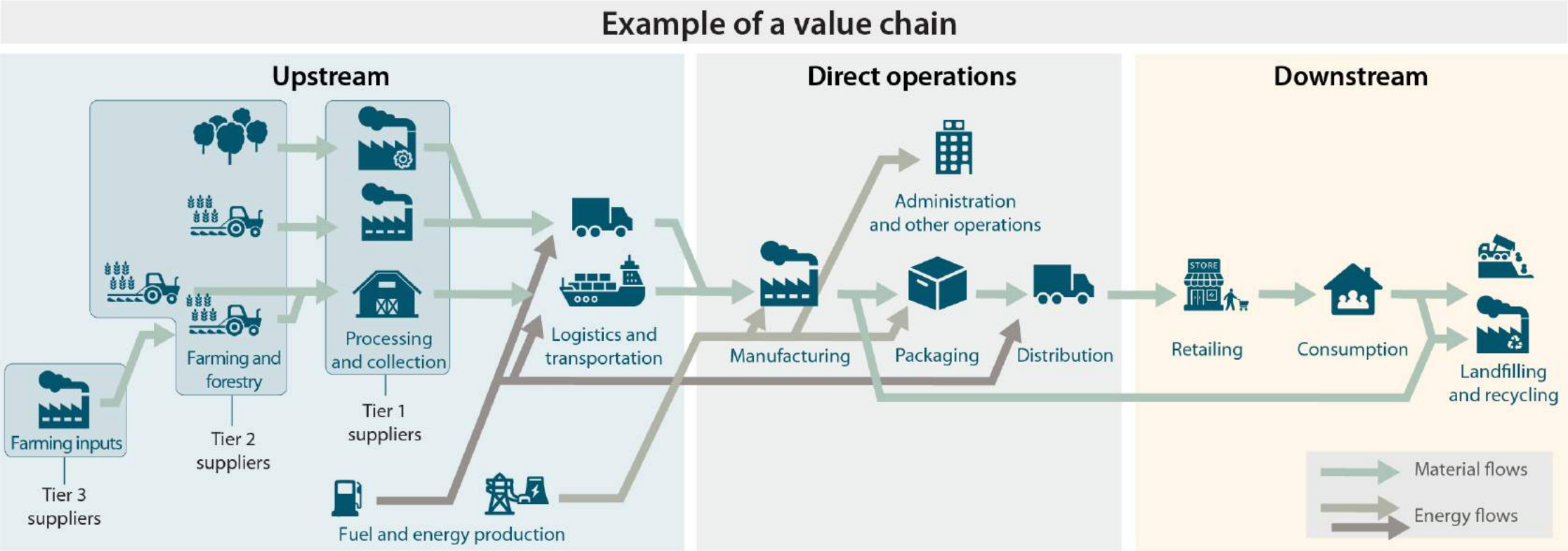


Figure 3 – Illustrative example of a company’s value chain. Green arrows represent the primary flows of material through the value chain, starting at the initial stage of extraction, and the production of implements needed for those activities, and ending with landfilling and recycling. Grey arrows represent flows of energy that contribute toward a company’s Scope 2 emissions. The two different shades of grey are intended to show different types of energy inputs. The boundaries between value chain segments are shown with the white lines between the blocks labeled “Upstream,” “Direct operations,” and “Downstream.” Different tiers in the company’s upstream supply chain are labeled to clarify scope of companies’ assessment required in Step 1.



2.4 Select an approach to screen for material pressures

SBTN methods emphasize *environmental and societal materiality*, or the importance of pressures stemming from economic activities, due to their impacts on the environment (e.g., conversion of natural ecosystems, extinction of species, depletion of water, release of carbon, and other disruptions of ecological processes) and their impacts on human health experienced directly or through degradation of the environment (e.g., toxicity of water, depletion of essential food stocks, removal of natural barriers to disease, and increased exposure to hazards such as fires, heat, and floods).

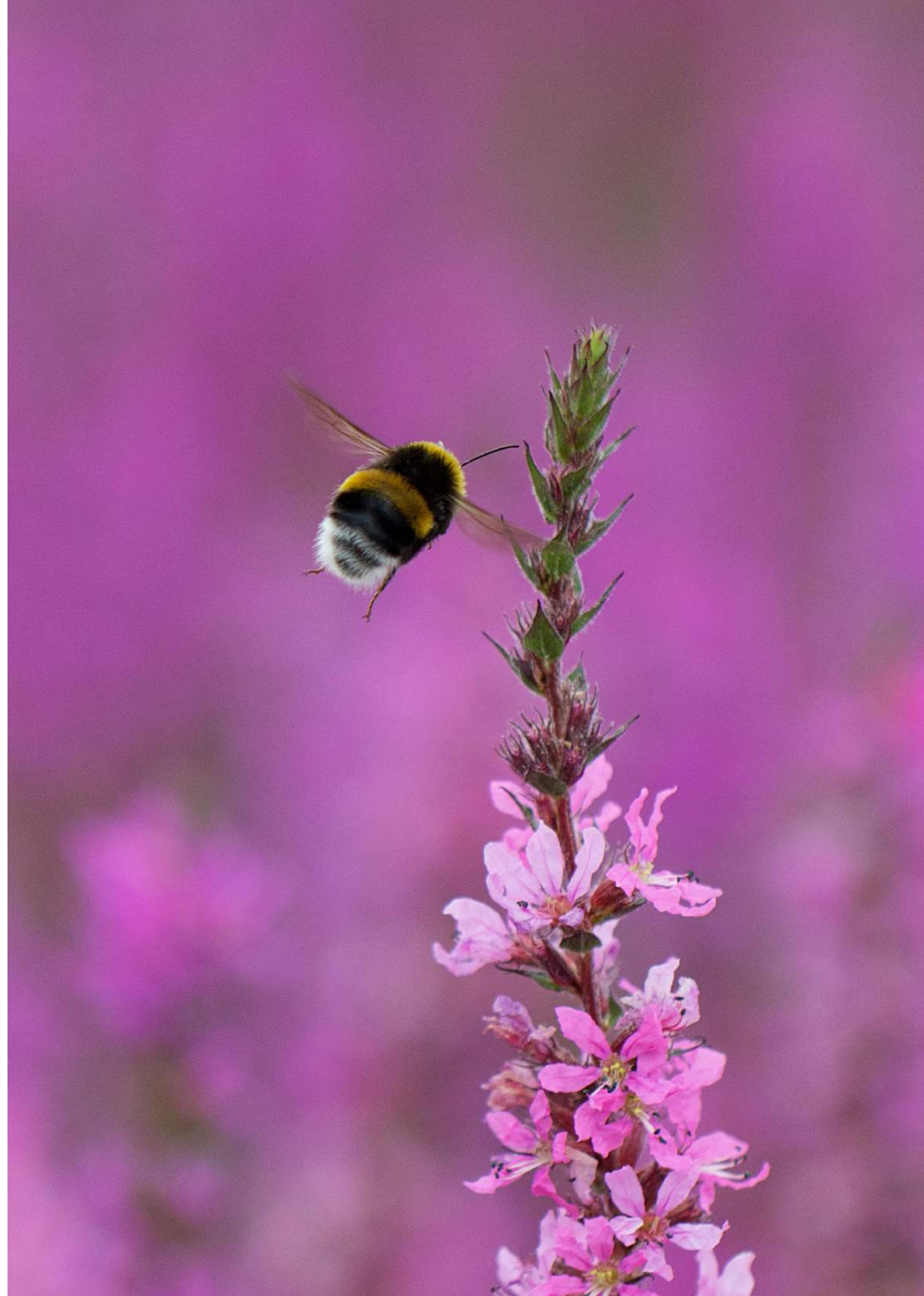
This perspective differs from and complements the **financial perspective of materiality** typically used by companies, which emphasizes how environmental impacts will affect the company (e.g., through disruptions of supply chains, exposure to lawsuits or media campaigns, and loss of social license to operate). Together, the two perspectives provide companies with a view of the “**double materiality**” of their impacts (44).

After conducting a materiality screening using the SBTN methodology, companies will understand which of their activities are likely to lead to environmental and social impacts, and are thus required for further assessment in the SBTN target-setting process.

OPTIONS

- **Prescriptive approach:** Use the Materiality Screening Tool (42) and the High Impact Commodity List (43) developed by SBTN to conduct a quick screening of the pressures linked to a company’s core activities and identify those that are most likely to be material for target-setting.
- **Flexible approach:** Use available tools or models to determine which of the company’s core economic activities are societally material. For this approach, companies can use resources included within the Step 1a Toolbox (45), or alternative tools that meet SBTN’s data and tool criteria (46).

Regardless of approach selected, companies must use the most recent data representative of typical present business, societal, and environmental conditions.⁶ Data collected by the company (primary data) must be collected no earlier than five years before the date of the method application unless evidence is submitted showing the last five years to be non-representative.



2.5 Screen for Materiality

The prescriptive approach relies on the use of the Materiality Screening Tool (4.2) and the flexible approach allows for use of tools highlighted within the Step 1 Toolbox (4.5) or those meeting SBTN tool and data criteria (4.6).

PRESCRIPTIVE APPROACH

- List the company's activities using a preferred economic activity classification scheme (e.g., ISIC4 (4.0) or GICS (4.1)) and relevant production processes if known or applicable.**
 - Activities should be selected based on the best information companies have available to describe their business, e.g., growing of rice, rainfed agriculture. Depending on the granularity of the tool or method used, companies should assess the material contributions of each activity in the company's direct operations and upstream separately (e.g., manufacturing of steel should be assessed separately from the construction of buildings).
 - If using GICS or the Statistical Classification of Economic Activities in the European Community (NACE) for economic activities, use the provided sectoral crosswalk table within the Materiality Screening Tool to find the relevant ISIC Group classification.
- Select the relevant sector and production process categories within the direct operations tab of the Materiality Screening Tool.**
 - These categories are provided as ISIC Groups (the three-digit score in the hierarchical ISIC classification).
 - Companies can use either ISIC Groups or the Production Processes from Exploring Natural Capital Opportunities, Risks and Exposure (ENCORE) to complete their materiality screening using the Materiality Screening Tool.⁸
 - Companies must consistently use either the ISIC Group or Production Process materiality rules for their screening (i.e., companies cannot apply one rule for one activity, and the other rule for another).
- Review the pressure estimates generated by the tool for each of its activities within the company's direct operations and consult the Interpretation Guidance provided within the tool to interpret the scores as needed.**
 - Materiality Screening Tool indexed pressure scores are calculated based on the ENCORE (4.7) impact materiality database, thus both the Materiality Screening Tool and the ENCORE database contain the same underlying ratings for direct operations.¹⁵
- Generate a list of upstream activities linked to each of the direct operations activities.**
 - The tool will automate the assessment of upstream economic activities to direct operations using EXIOBASE (4.8).
 - Within the tool, pressure scores provided for upstream sectors are linked to direct and indirect spending by the direct operations sector. As in the direct operations portion of the tool, the underlying pressure scores are derived from the ENCORE database.
- Review the tool-generated list of upstream activities and refine based on the particularities of the company.**
 - For example, companies can exclude oil and gas production from upstream energy sources if the company is only sourcing from renewables.
 - Documentation will be required to explain exclusions of activities flagged as material (see Requirements and Recommendations).
- List the high-impact commodities (HICs) linked to the company's direct operations and upstream activities.**
 - The SBTN High Impact Commodity List (HICL)⁹ *must* be used by companies purchasing commodities, as well as those involved directly in the growing, processing, or other life cycle steps of commodity production to assess their importance.
 - The Materiality Screening Tool will eventually link HICs to direct operations and upstream activities based on existing environmental activity and trade data.
- Review the list of HICs highlighted by the tool as being most relevant and refine based on the particularities of the company.**
 - Companies should sense-check if commodities listed are truly part of their economic activities, products, or services.
- Use the interpretation guidance provided by SBTN in the Materiality Screening Tool to determine which pressure categories *must* be included in the Step 1b Value Chain Assessment and *will likely* require targets to be set in Step 3.**
 - The Materiality Screening Tool uses thresholds, calculated as the median value by pressure, to determine which activities and pressures the company *must* continue to assess. Based on the outputs of the Materiality Screening Tool, companies can ascertain which activities and pressures are likely to require the company to set science-based targets. To be certain of which activities and pressures require management of targets, companies will complement their high-level screening with spatially explicit and company-specific information in the value chain assessment (Step 1b).
- Companies must record the outcome of the assessment of impacts material to the business for direct operation and upstream activities separately.**
- Record outputs for the Step 1a Materiality Screening (see example in Box 2).**

OR

FLEXIBLE APPROACH

- List the company's activities using a preferred economic activity classification scheme (e.g., ISIC4 (4.0) or GICS (4.1)) and relevant production processes, if available and/or applicable.**
 - Activities should be selected based on the best information companies have available to describe their business, e.g., growing of rice, rainfed agriculture. Depending on the granularity of the tool or method used, companies should assess the material contributions of each activity in the company's direct operations and upstream separately (e.g., manufacturing of steel should be assessed separately from the construction of buildings).
 - If using GICS or NACE classifications for economic activities, use the provided sectoral crosswalk table within the Materiality Screening Tool to find the relevant ISIC Group classification for submission to SBTN.
- Assess, for all the company's direct operations and upstream activities, the estimated materiality score each of the eight key pressure categories required in the Method Scope (section 0.3), using a preferred resource.**
- Ensure alignment of materiality definition used in tool and required by SBTN.**
 - Consult the definitions of pressures and the interpretation of materiality used by SBTN to ensure application of the flexible approach using previously retrieved data or proprietary methods will be defensible within the SBTN validation process. See Box 1 for description of materiality consistent with SBTN methods.
- [Optional] Cross-reference between third-party approaches and those suggested by SBTN, see the Natural Capital Protocol for definitions of pressure categories (18) and technical documentation and interpretation guidance provided by tool developers and third parties.¹⁰**
- Record materiality values.** Depending on the approach taken companies must either:
 - Record both the estimated materiality of the economic activity for each of the eight key pressure categories and the maximum materiality value by pressure (e.g., a given tool may estimate a materiality score of 5 for water use with a maximum allowable score of 10; both values *must* be reported for validation to SBTN). This value is typically a provided output of the tool.
 - Submit net estimates (calculated as the sum) of pressures for all geographic locations (consistent with Step 1b guidance) relevant for a given economic activity as well as a brief description of the methodology, tool, and data used to generate the estimate.
- Use the interpretation guidance and requirements provided by SBTN to determine which pressures *must* be included in the Step 1b Value Chain Assessment and *will likely* require targets to be set in Step 3. See Requirements and Recommendations.**
 - Companies may use a qualitative assessment of the score to determine which activities and pressures *must* be assessed further (reporting both the estimated materiality score and maximum values for validation as stated above).
 - If the distribution of scores by pressure is available, the company may use a threshold, calculated as the median value by pressure, to determine which activities and pressures the company *must* continue to assess. For example, as in the previous case, the score for water use may be 5 but the median value for water use across sectors is 4, indicating that the company *must* continue to assess that activity for water use. If using this approach, companies *must* report both the materiality value and the threshold.
- Record the outcome of the materiality assessment.**
 - Impact scores for direct operations and upstream activities must be recorded separately
- Identify which items in the SBTN High Impact Commodity List (HICL) (4.3) are material for the business.**
 - Regardless of screening approach, the High Impact Commodity List (HICL) *must* be used by companies purchasing commodities, as well as those involved directly in the growing, processing, or other life cycle steps of commodity production to assess their importance.
 - All companies will be *required* to include high impact commodities in their upstream value chain assessment (Step 1b).
- Record outputs for the Step 1a Materiality Screening for submission to SBTN, including economic activities, commodities, and the pressures associated with these (economic sectors must be classified using ISIC Groups).**
- Provide details of the methods, tools, and resources used for Step 1a, as well as the rationale for inclusion and exclusion of activities and pressures.¹¹**
 - If the evidence introduced by the company indicates the exclusion of a given economic activity or pressure from further analysis, the company *may* be asked to provide additional evidence and justification if that assessment contradicts the ratings found within the MST. If insufficient, SBTN validators *may either recommend or require* the company to continue assessing and evaluating impacts for that activity or pressure.
 - If the justification is deemed sufficient because it reflects company-specific (and not global sectoral average) information, then the data provided by the company will be anonymized and used in further revisions of the SBTN materiality screening methods and tool development.

The information provided in this section is intended to improve readers' understanding of materiality in the context of setting science-based targets for nature.

Conceptually, materiality is a way of distinguishing importance or significance. In the context of financial reporting and corporate disclosure, information is considered material if it will influence decisions made in relation to the company. Materiality can be determined based on various factors, depending on the objective of the assessment.

When setting science-based targets for nature, companies are *required* to use an **environmental and societal** lens in their assessment of materiality (Step 1), as well as throughout the decision-making processes guided by the methodologies. Where specified within the science-based target methodology, companies *may* also use a **financial** materiality lens. In these instances when both lenses are used together, companies may review and disclose their impacts on nature using a “**double materiality**” perspective (44).

For companies using the science-based targets for nature methodology, SBTN recommends that the following aspects of environmental impact are considered in this global sectoral screening:

- **Magnitude** (e.g., number of people affected, species affected, or extent of area impacted)¹² (33) (49) (50) (44) (51) (52) (53)
- **Irreversibility** (i.e., difficulty of remediating impacts)¹³ (33) (50) (44) (52) (53)
- **Frequency of impact** (e.g., number of times the impact is expected to occur as a given economic activity occurs) (33) (50) – *Note: this may be captured in a magnitude estimate when this accounts for the impacts of the activity as a whole rather than as singular processes*
- **Likelihood of impact** (e.g., confidence that an impact will occur, based on what is known about the economic activity)^{14,15} (33) (50) (44) (51)
- **Timing of impact** (e.g., whether the impact will occur within 1 year, 1–10 years, or more than 10 years) (50)

These aspects may be assessed in some, but not all, tools available to assist with the screening of materiality in Step 1a, as well as those tools used for the subsequent steps of the science-based target-setting methodology (including Step 1b and Step 3). Companies are therefore *recommended*, but not required, to consider all these aspects. Companies *may* choose to interpret the materiality of different issues using either component values (separate values representing aspects of materiality) or index values (combined and/or weighted aggregate materiality scores) in their evaluation of impacts.

It may not be possible to establish absolute quantitative thresholds for each aspect of materiality (e.g., magnitude and irreversibility), nor for each pressure category (e.g., land-use change and water use), at a global level. Instead, the Materiality Screening Tool, and other such approaches, employ relative thresholds based on the distribution of impacts across sectors. Where more precise quantitative assessments of materiality are required for setting science-based targets for nature, they will be incorporated into Step 3 and will be based on spatially explicit and company-specific estimates of pressures.

Any company seeking validation of science-based targets for nature (see Step 3) *must* follow guidance on reporting and interpretation of materiality scores as outlined in the Step 1 flexible and prescriptive approaches for materiality screening below.

If companies use data, tools, qualitative literature reviews, or targeted studies to include additional aspects of materiality, they *must* provide both a methodological explanation and justification (with relevant data and citations) for how these additional aspects of materiality are incorporated in their decision on whether to proceed with assessing a given pressure or economic activity (Step 1b).

As the output of the screening in Step 1a, companies should be able to provide estimates of the *expected materiality* of each of their broad activity categories, e.g., the impact of manufacturing is expected to be high for water use, vs. the impact of distribution is expected to be very low for water use. Based on this initial screening, the company would continue to assess and quantify its pressures on water use for its manufacturing activities. SBTN may request additional information from the company when their screening removes an economic activity or pressure considered material within the Materiality Screening Tool.



Connection to other frameworks — Screening approaches and definitions of materiality

CAPITALS COALITION

- Natural Capital Protocol (2016), Step 4—Determine impacts and/or dependencies (18)

CDP

- Climate Questionnaire (2023) (54)
- Forests Questionnaire (2023) (55)
- Water Security Questionnaire (2023) (56)

EUROPEAN UNION

- Directive 2014/95/EU [on Non-Financial Risk Disclosure/NFRD] (57)
- Regulation 2020/852 [on the establishment of a framework to facilitate sustainable investment/EU Taxonomy] (58)
- Directive 2022/2464 [on corporate sustainability reporting/CSRD] (52)¹⁶
- European Financial Reporting Advisory Group/European Sustainability Reporting Standards (59):
 - ESRS 1—General requirements
 - ESRS E2—Pollution
 - ESRS E3—Water and marine resources
 - ESRS E4—Biodiversity and ecosystems

GLOBAL REPORTING INITIATIVE:

- GRI 1: Foundation 2021 (32)
- GRI 3: Material Topics 2021 (33)

INTERNATIONAL FINANCIAL REPORTING STANDARDS/INTERNATIONAL SUSTAINABILITY STANDARDS BOARD:

- Exposure Draft ED/2022/S1 General Requirements for Disclosure of Sustainability-related Financial Information (60)

INTERNATIONAL STANDARDS ORGANIZATION

- ISO 14001:2015 Environmental management systems—Requirements with guidance for use (34)

NATURAL CAPITAL FINANCIAL ALLIANCE

- ENCORE tool (47)

OECD

- Due Diligence Guidance for Responsible Business Conduct (51)

WWF

- Risk Filter Suite: Biodiversity Risk Filter and Water Risk Filter (61)



REQUIREMENTS AND RECOMMENDATIONS —APPROACH FOR MATERIALITY SCREENING

◆ Requirement 3. Pressures to cover.

Companies *must* conduct a high-level screening in Step 1a that covers eight of the key pressures driving the loss of nature. These pressures include terrestrial ecosystem use and use change, freshwater ecosystem use and use change, marine ecosystem use and use change, water use, other resource use (minerals, fish, other animals, etc.), GHG emissions, soil pollutants, and water pollutants. Other pressures, such as non-GHG air pollutants, solid waste, disturbances, and biological alterations, *may* be optionally included in Step 1a.¹⁷

◆ Requirement 4. Upstream assessment scope.

In the impact screening for Step 1a, companies *must* include all upstream activities. Companies' upstream value chains are composed of many inputs, including raw and processed commodities as well as those embedded in the supply chain.¹⁸ Upstream activities included in the screening step should correspond to those reflected in the companies' procurement data and/or bills of materials.

◇ Recommendation 5. Application of SBTi methods can be used for GHG emission assessment instead of new analysis using SBTN methods.

If companies have a validated SBTi target or have submitted their SBTi target for validation, they may forgo screening of GHG emissions within Step 1a.

◇ Recommendation 6. Choose a screening approach appropriate to the company's starting point.

Companies that have a more advanced understanding of the societal materiality of their activities and have gathered data on their environmental pressures and impacts (including primary or secondary data) *may* use the flexible approach to impact screening. In cases where companies have done primary data collection or an assessment of their unique footprint, the flexible approach is particularly useful, as it may be better able to deliver accurate results. SBTN strongly *recommends* that practitioners and companies new to sustainability assessments use the prescriptive approach. This approach is also *recommended* in cases where a company is uncertain about whether its existing tools and data will meet the quality criteria established by SBTN (46).

2.6 Refine sector-level estimates

This section describes the process companies can use to challenge outputs of the Materiality Screening Tool when using the prescriptive approach for materiality screening.

The Materiality Screening Tool is built from the ENCORE database (47), resulting in shared underlying scores between the tools, though the interpretation guidance is specific to the Materiality Screening Tool. The ENCORE dataset was developed through a qualitative literature review that surveyed the typical impacts of different sectors on different aspects of the environment. The scores in the ENCORE dataset and in the Materiality Screening Tool reflect a high-level understanding of impacts at a "global" or non-spatially explicit level and are expressed as a "sectoral average" or typical impact profile of a company in the given sector. This approach has some methodological limitations including sample size (impacting representativeness of sector), lack of availability or accuracy of studies, and geographic bias. Therefore, companies using the Materiality Screening Tool may find that their activities and impacts are not well represented in the current tool. In those cases, companies *must* provide data justifying the inclusion or exclusion of activities and/or pressures, as well as the rationale and justification including relevant methodologies.

As in the flexible materiality screening, if the evidence introduced by the company indicates the exclusion of a given economic activity or pressure from further analysis, the company *may* be asked to provide additional evidence and justification if that assessment contradicts the ratings found within the Materiality Screening Tool.

If the information is not seen as sufficient justification by SBTN validators, SBTN *may either recommend or require* the company to continue assessing and evaluating impacts for that activity or pressure.

If the justification is deemed sufficient to support the inclusion or exclusion of an activity or pressure because it reflects company-specific (and not global sectoral average) information, then the data provided by the company can be anonymized and used in further revisions of the SBTN materiality screening methods and tool development along with data from the flexible materiality screening.



2.7 Interpret materiality screening outputs

This section provides guidance on how to interpret the outputs of the materiality screening in Step 1a for use in subsequent steps of the science-based target-setting methodology. The Step 1a Materiality Screening is based on global, sector-level information, and can be used to indicate the broadest scope of activities and pressures that are likely to be the focal point of companies' target-setting efforts. Companies will continue to refine their understanding based on the data collected as part of the Step 1b Value Chain Assessment, which guides companies through the collection of spatially explicit, company-specific information on pressures and states.

The recommendations and requirements for Step 1a will be linked to the validation criteria used by SBTN when reviewing submissions and are specific to pressures that *must* be addressed by targets. These requirements will determine which tools and methods are appropriate for use in the subsequent steps of the methodology (Step 1b: Value Chain Assessment; Step 2: Interpret & Prioritize; Step 3: Measure, Set & Disclose). Relative materiality of activities flagged during the materiality screening assessment will be particularly important for companies using a business unit approach for assessment and target-setting.

REQUIREMENTS AND RECOMMENDATIONS —INTERPRETING MATERIALITY SCREENING RESULTS

◆ **Requirement 5. Pressures in scope for materiality screening.**

Companies *must* currently screen for eight pressures: terrestrial ecosystem use, freshwater ecosystem use, marine ecosystem use, water use, other resource use, climate change, soil pollution, and freshwater pollution in Step 1a. For the value chain assessment in Step 1b, only five pressures—terrestrial ecosystem use, water use, climate change, soil pollution, and freshwater pollution—are *required*, pending the results of the materiality screening.

◆ **Requirement 6. Pressures to carry forward to value chain assessment.**

For each value chain segment, companies *must* continue to assess all pressures (as specified above), within the current SBTN methods scope for which they have any *activities* where values are either:

- Greater than or equal to the given threshold for materiality in the Materiality Screening Tool using either the Production Process- or Group-level scoring thresholds (prescriptive approach), or
- “Of concern,” based on the assessment of a relative estimate of materiality (provide score with the highest value or threshold calculated on the median value by pressure) or absolute estimate of materiality (a quantified value per pressure category based on primary or modeled data)¹⁹ (flexible approach).

◆ **Requirement 7. Restrictions on use of ISIC Group level materiality threshold in prescriptive approach.**

Though companies using the ISIC Group level materiality rules (calculated as the mean of all relevant production processes for each group in scope for the screening) to interpret the Materiality Screening Tool *can* submit scores only at the ISIC Group level, they *must* note which production processes exceed the materiality threshold at the ISIC Group level. This scenario may occur when the Group is eliminated from further screening (materiality score = 0), but one or more production processes within that group are determined to require further screening (materiality score = 1). Companies may only eliminate a required production process (materiality score = 1) from the value chain assessment if they can provide additional evidence that the production process is not relevant to the company.

◆ **Requirement 8. Submission of evidence for exclusion of pressures.**

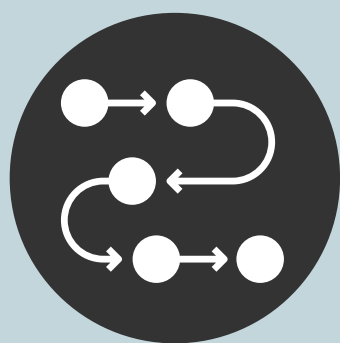
Companies that have conducted a screening for GHG emissions or another pressure and determined it is not material, *must* submit evidence as specified by SBTN.

◆ **Requirement 9. Submission of evidence for inclusion and exclusion of activities.**

Companies *must* provide appropriate justification for their identification of materiality for activities and pressures assessed (methods, tools, and data needed to support or reproduce the provided estimates).

◇ **Recommendation 7. Interpretation of “no data” values in the Materiality Screening Tool.**

“No data” values are an indication of the current evidence level for a given sector and pressure category in the tool and not an indication of a lack of environmental impacts. For this reason, companies are *strongly recommended* to submit evidence supporting the inclusion or exclusion of relevant pressures with no data values in the Materiality Screening Tool.



Step 1B: Value Chain Assessment

3.1 OVERVIEW

The objectives of this step in the method are to estimate the *pressures* on nature that a company generates and to identify the geographic areas in which these pressures are particularly harmful to the *state of nature* (SoN).

3.1 Overview

The objective of Step 1b is to estimate the pressures on nature that a company generates and to identify the geographic areas in which these pressures are particularly harmful to the state of nature (SoN).

As noted in Step 1a, companies that have already made progress on their sustainability journey may wish to use existing data, tools, and resources to fulfill the requirements for this assessment.²⁰ The information compiled during this exercise may be utilized by companies throughout the target-setting process, enabling more rapid calculation of their target baseline in Step 3, and appropriate resourcing and prioritization for target-setting.

Stakeholders, including Indigenous Peoples, other local stakeholders impacted by company activities (e.g., community members, workers and others), civil society, academics and local government, are critical partners in place-based action. Companies are *recommended* to use SBTN's stakeholder engagement guidance alongside the technical methods (Step 1-5). The guidance found therein will enable companies to engage in more equitable, just, and rights-based implementation of science-based targets for nature and will complement the technical guidance provided in this and other documents. The guidance from SBTN on Stakeholder Engagement can be accessed via the resource library, the link to the beta version is available [here](#).

To estimate their contributions toward pressures, companies can use data on material or commodity purchasing, extent and type of economic activities, and production quantities to generate representative values for their footprint associated with different activities.

The methods used for pressure estimation will in most cases require that companies provide location information (e.g., of the country from which they are sourcing), or will include default assumptions about likely locations associated with economic activities if companies do not have this information. In this sense, all pressure estimates will be underpinned by location information, though the degree of certainty/precision associated with these locations will vary, influencing the subsequent prioritization and target-setting approaches.

During the Step 1b Value Chain Assessment, companies may associate estimates for multiple pressures (e.g., for water pollution, water withdrawals, and land use) with each different activity, commodity, and location included in the assessment. However, companies are *required* to analyze the data for each pressure separately, within each of the value chain segments assessed in Step 2: Interpret & Prioritize in the SBTN methodology.²¹ To facilitate the completion of Step 2, companies are recommended to use a data structure that allows for easy separation of data by pressure category.

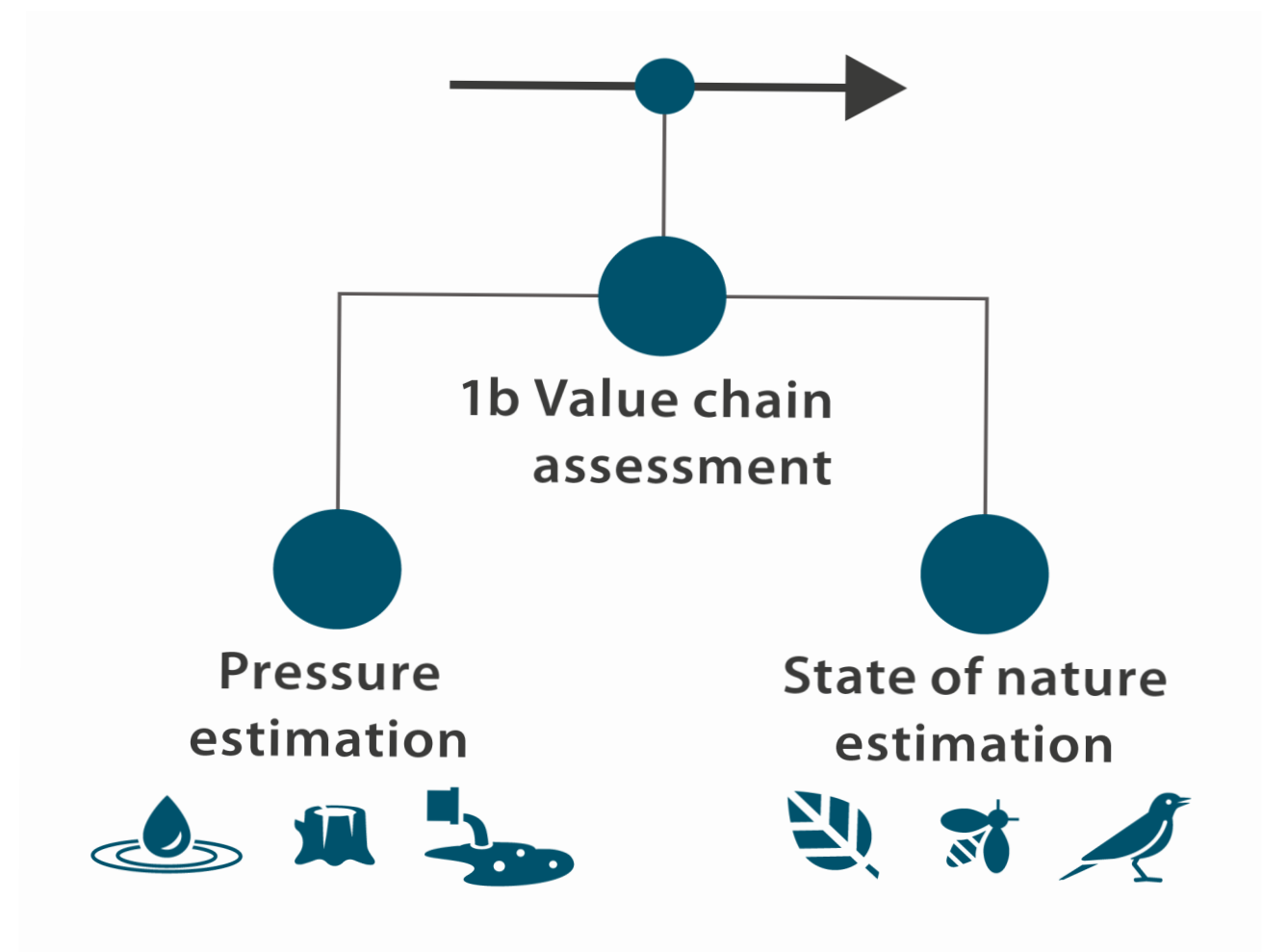


Figure 4 – Overview of Step 1b: Value chain assessment. In the value chain assessment, companies collect data and estimate their contributions toward material pressures, and then estimate the state of nature in the locations where they operate.



Box 3—Differentiating between data needs for Step 1 and Step 3.

Companies setting science-based targets for nature and looking to have their targets validated will be expected to have completed some version of a materiality screening and impact assessment. This allows companies to focus on the most material aspects of their business, as well as the most material issues. Once materiality and impact are determined, companies will be able to establish robust target-setting strategies and use SBTN's target-setting methods.

There are different levels of accuracy and precision required in Step 1 vs. Step 3 in the SBTN five-step methodology:

- In Step 1, the estimation of pressures in the value chain assessment can be done using observations or modeled data. In Step 3, however, companies will need to utilize more accurate and precise quantification of pressures and impacts for baselining and finer scale data (appropriate to the target, following the guidelines set out in the Step 3 methodologies). If companies use precise data to describe their impacts in Step 1, they *may* be able to use this information to determine baseline pressure levels of corporate impact to manage through targets (Step 3).
- In Step 1, the estimation of state of nature data can be done at a coarse scale (e.g., country-level). However, in Step 3, companies will need to refine this (e.g., to landscape or basin-level) to ensure they are setting targets against the best possible reference point.
- In Step 1, companies are recommended to use data representing one year (12 months), from a recent, representative year. To complete the baselining exercise in Step 3, they may need to collect data for additional years for the sites selected.

To ensure that the data used in Step 1b are compatible with the target-setting methodologies in Step 3, companies are *required* to use SBTN guidance on pressure and state of nature (SoN) indicators and to utilize data and tools compatible with SBTN criteria.



3.2 Scope for the value chain assessment

By Step 1b of the target-setting process, companies are expected to have determined their organizational boundary, and to have begun to narrow in on the activities contributing to the pressures driving the loss of nature.

Companies will use the activity scope defined in the Step 1a Materiality Screening as their starting point for the Step 1b Value Chain Assessment, but may narrow this further by using some of the options described below.

The scope of pressures covered in the value chain assessment is determined by Step 1a, through the prescriptive or flexible screening approach, followed by refinement, and should not be further reduced.

ECONOMIC ACTIVITY COVERAGE
The key activities for companies to include in their value chain assessment are listed in Table 1 in section 0.2 in the Method Scope. Below, Table 5 provides an overview of the scope required for each value chain segment, including descriptions and details of the activity assessment boundaries. Please note this is the basic scope of activities that companies are recommended to include for first SBTN methods; companies in certain sectors may wish to go beyond this and assess activities associated with additional value chain categories (see Method Scope, Table 1).

As noted in Table 5, companies *must* conduct the upstream value chain assessment for the most impactful stages of the value chain

for a given pressure, based on estimated environmental impacts (this can be determined as a qualitative assessment at the sector or commodity level based on either the High Impact Commodity List (HICL) or other peer-reviewed sources). They *may choose* to complete cradle-to-assessments for upstream value chains with high transparency and traceability and/or high environmental impacts.

CHOOSING AN ASSESSMENT PERIOD
When selecting the time period covered by the data used in the value chain assessment, companies *must* select a **representative year**. This *must* be a 12-month period, occurring as recently as possible, that is representative of their business, as well as of societal and environmental conditions.

The representative year *must* be no earlier than five years before the date of the method application unless evidence is submitted showing the past five years as non-representative. Explanation of the year selected may be requested in the validation process for Step 1. The nominal year associated with the models and data used in the assessment may vary but is *recommended* to align with the choice of representative year as closely as possible. Companies are *recommended* to collect primary data within the representative year.

Table 5—Assessment boundaries for value chain segments in the pressure and state of nature assessment.

Value chain segment	Description of activities	Minimum assessment boundary
Direct operations	100% of sites and facilities within defined organizational boundaries	All pressures generated at or by those facilities in a representative year, as well as the state of nature associated with those facilities.
Upstream	All high-impact commodities, as well as other goods and services associated with at least 67% of the company's material (based on Step 1a screening) spend or volume	All pressures and states associated with the most impactful life cycle stage of the commodities/goods and activities/services associated with the company's material spend or volume.

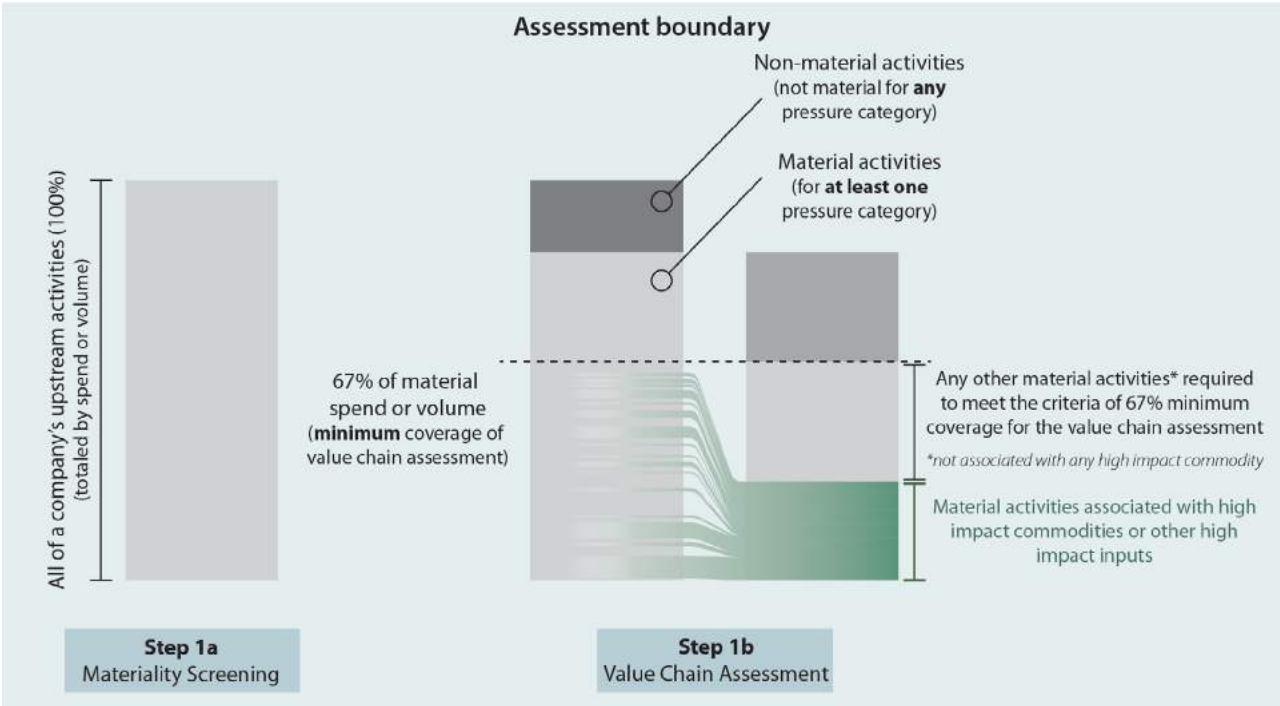


Figure 5—This figure depicts the reduction of upstream scope of economic activities and goods/commodities from the Materiality Screening Step 1a to Value Chain assessment Step 1b. Companies may reduce their coverage of material economic activities to a minimum of 67% of spend or volume in Step 1b but must keep all high impact commodities in scope.



DIRECT OPERATIONS

Companies must assess pressures and states in the Step 1b Value Chain Assessment for all economic activities in the direct operations that were determined to be material in the Step 1a Materiality Screening.



UPSTREAM

To determine their upstream value chain coverage, companies should do the following:

- Begin Step 1a by including all upstream activities (i.e., those related to the full 100% of their upstream spending)²² in their high-level screening in Step 1a. After using the prescriptive or flexible approach for screening, they can exclude a certain number of activities that do not appear to be material.
- For the remaining material upstream activities (i.e., those that surpassed materiality thresholds across pressure categories), companies should then assess which of these are connected to items on the High Impact Commodity List, such as palm oil, soybean, cement, petroleum, and cotton.²³ All those inputs that are connected to the HICL must be included in the Step 1b assessment.
- In special cases, companies may source IUCN threatened species (62) (species that are classified as vulnerable: VU; endangered: EN; or critically endangered: CR) or CITES listed species (63). When this is the case, these must be included in the assessment. Examples of endangered or CITES listed species include those known in the lumber trade as Ipê or Brazilian Walnut (*Handroanthus impetiginosus*: IUCN Near Threatened/CITES Appendix II and *Handroanthus serratifolius*: IUCN Endangered/CITES Appendix II) or Southern bluefin tuna (*Thunnus maccoyii*: IUCN Endangered).
- The company must then continue to assess material upstream activities until covering at least 67% of spend or volume reflected in their procurement activities or bill of materials.²⁴ Note that companies must include all high-impact commodities in their initial assessment even if they exceed the 67% spend threshold. Companies should treat this ≥67% coverage level as an initial objective to achieve

in their first round of target-setting and aim to expand out to at least 95% over the five-year target assessment period. Companies with full GHG inventories prepared for climate science-based targets already are recommended to assess impacts associated with at least 95% of their upstream activities.

- To complete the assessment, companies are required to use data on the economic activity in their upstream supply chain known to be the most impactful for a given pressure. In most cases, the most impactful stage in the upstream corporate value chain is the primary production, harvesting, or “cradle” stage. For some commodities, however, preprocessing or another stage may be more impactful; in these cases, companies may assess this more impactful stage, instead of the cradle stage. Companies will find information in the HICL to help identify which commodities this applies to. When assessing a stage other than cradle stage, they must report their justification with references.
- Companies may additionally use data on the amount of spend, volume, revenues, or wastes associated with different upstream value chains to determine which are those most likely to be environmentally significant and therefore require urgent assessment.



DOWNSTREAM

As stated in the Method Scope in section 1.2, companies are not currently required to assess impacts associated with their downstream activities in Step 1a or Step 1b.



**Connection to other frameworks—
Activity scope for value chain assessment**

ACCOUNTABILITY FRAMEWORK INITIATIVE

- Core principles, 3: Specification of commitments (30)

CAPITALS COALITION

- Natural Capital Protocol, Step 3: Scope the assessment (18)

CDP

- Climate Questionnaire (2023) (54)
- Forests Questionnaire (2023) (55)
- Water Security Questionnaire (2023) (56)

EUROPEAN UNION

- Directive 2014/95/EU [on Non-Financial Risk Disclosure/NFRD] (57)
- Regulation 2020/852 [on the establishment of a framework to facilitate sustainable investment/EU Taxonomy] (58)
- Directive 2022/2464 [on corporate sustainability reporting/CSRD] (52)
- European Sustainability Reporting Standards
 - ESRS 1: General Requirements (44)

GLOBAL REPORTING INITIATIVE

- GRI 1: Foundation 2021 (32)
- GRI 3: Material Topics 2021 (33)
- GRI 303: Water and Effluents 2018 (64)
- GRI 304: Biodiversity (2016) (65)
- GRI 305: Emissions 2016 (66)
- GRI 308: Supplier environmental impact assessment (2016) (67)

GREENHOUSE GAS PROTOCOL

- Corporate Standard (2004), Chapter 4: Setting Operational Boundaries (29)
- Scope 3 Standard (68)

INTERNATIONAL STANDARDS ORGANIZATION

- ISO 14001:2015 Environmental management systems—Requirements with guidance for use, Chapter 4.3: Determining the scope of the environmental management systems (34)

TRANSPARENT PROJECT

- Standardized Natural Capital Accounting (2021), Section 1.2: Scope (39)

PRESSURE CATEGORY COVERAGE

The pressure categories that companies *must* assess their contributions toward if deemed material in the Step 1a screening are summarized in Table 6. Please note, the **indicators** and **metrics**²⁵ introduced in this table are essential for gathering information to inform prioritization decisions in Step 1 and Step 2 but may not be the exact list of indicators used for setting targets in Step 3.

The list of preferred metrics is subject to change as the science-based target-setting methods are updated in response to advances in the study of environmental impacts and dynamics and innovations in environmental monitoring and modeling (tools and data).²⁶ Because of these adjustments throughout the methods, and the potential for change over time, the specific metrics and indicators used

to measure pressures are *not required*, but only *recommended*. However, it is *required* that companies completing the SBTN Step 1 method do assess their contributions toward all pressure categories.

Though SBTN Step 3 methods for target-setting do not currently address “other resource use” including species overexploitation, companies that source threatened species according to the IUCN or CITES listed species *must* submit species names, status, quantities, and sourcing location for those species as part of their Step 1 assessment (see Requirements).

See SBTN data and tool criteria for guidance on spatial and temporal resolutions to use when estimating pressures, and the SBTN Step 1 Toolbox for value chain assessment tools that companies can use to complete SBTN requirements (45) (46).

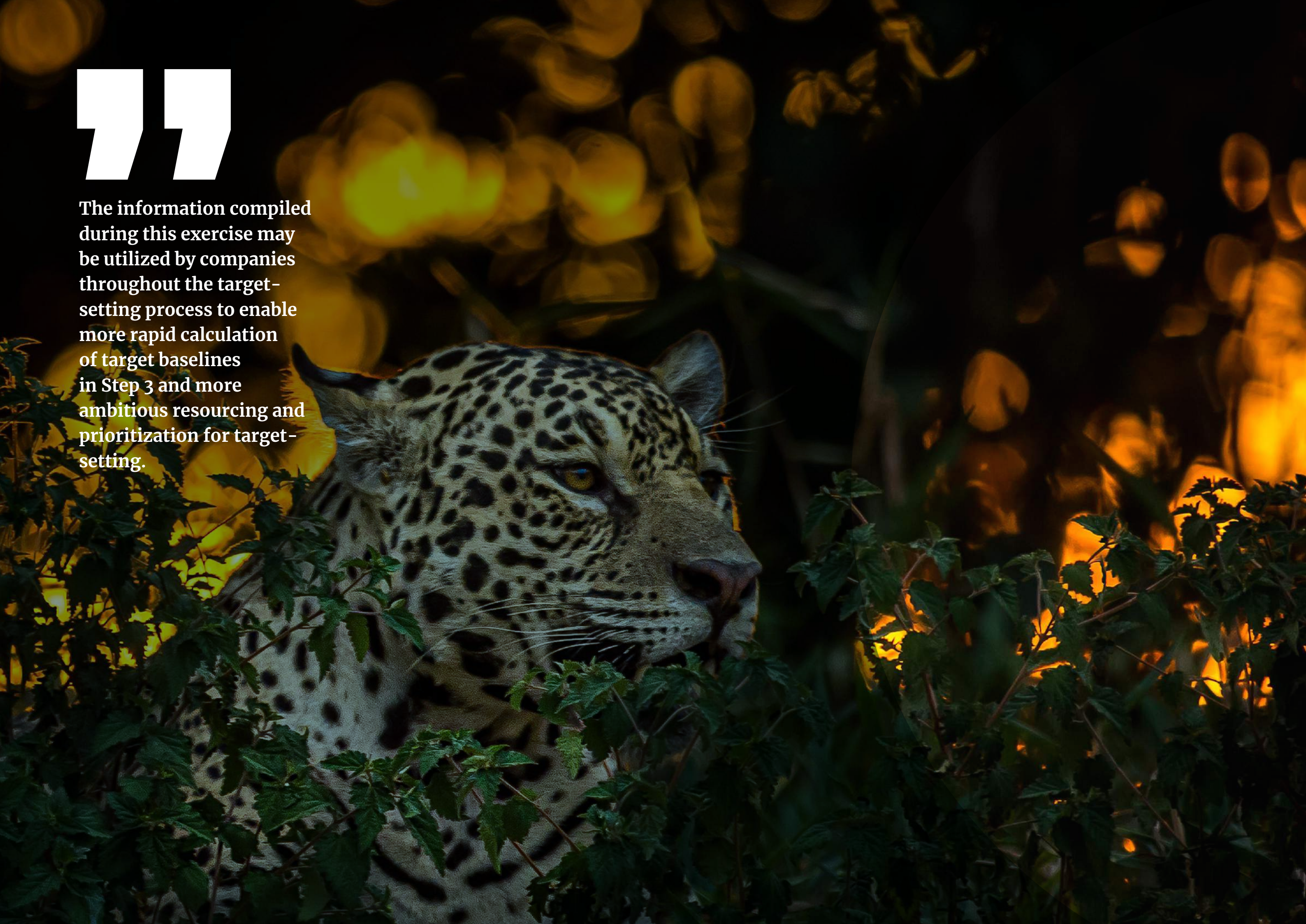
Table 6—Environmental pressure indicators recommended for use in the value chain assessment.

IPBES Pressure Category	SBTN Pressure Category	Metric
Ecosystem use and use change	Land use change	Area (km ² or ha) converted since 2020 (or earlier), by pre- and post-conversion ecosystem type and use ²⁷
	Land use	Area (km ² or ha) of land use, including known land management practices (e.g., crop rotation, tillage practices, or fire regimes) ²⁸
	Water use	m ³ or km ³ , per source (surface water, groundwater, etc.) ²⁹
Climate change	Greenhouse gas emissions	t CO ₂ e, per activity estimated separately for industrial activities and land-based emissions; tCO ₂ /t (product, e.g., cement or steel) or gCO ₂ /spatial unit
	Soil pollution	Applied nitrogen (N) and phosphorus (P) (kg ha ⁻¹)
Pollution	Water pollution	kg N, P eq; total or concentration (%) in discharged water (and volume of these discharges)

²⁵See Step 3: Land for details on the appropriate cutoff date to use, depending on the area associated with sourcing or direct operations.

”

The information compiled during this exercise may be utilized by companies throughout the target-setting process to enable more rapid calculation of target baselines in Step 3 and more ambitious resourcing and prioritization for target-setting.



Connection to other frameworks— Pressure scope for value chain assessment

ALIGN PROJECT

- Recommendations for a standard on biodiversity measurement and valuation (2022), Section 4.1.2: Universal recommendations (69)

CAPITALS COALITION

- Natural Capital Protocol (2016), Step 04: Determine impacts and/or dependencies (18)

CDP

- Climate Questionnaire (2023) (54)
- Forests Questionnaire (2023) (55)
- Water Security Questionnaire (2023) (56)

EUROPEAN UNION

- Directive 2014/95/EU [on Non-Financial Risk Disclosure] (57)
- Regulation 2020/852 [on the establishment of a framework to facilitate sustainable investment/EU Taxonomy] (58)
- Directive 2022/2464 [on corporate sustainability reporting] (52)
- European Sustainability Reporting Standards
 - ESRS 1: General Requirements (44)

GLOBAL REPORTING INITIATIVE

- GRI 1: Foundation 2021 (32)
- GRI 3: Material Topics 2021 (33)
- GRI 303: Water and Effluents 2018 (64)
- GRI 304: Biodiversity (2016) (65)
- GRI 305: Emissions 2016 (66)

TASKFORCE ON NATURE-RELATED FINANCIAL DISCLOSURES

- The TNFD Nature-related Risk and Opportunity Management and Disclosure Framework Final Draft – Beta v0.4; see content on Evaluate (E3, E4) and disclosure recommendations for Strategy A, Risk & Impact Management A, Metrics & Targets B (19)

TRANSPARENT PROJECT

- Standardized Natural Capital Accounting (2021), Scope (39)

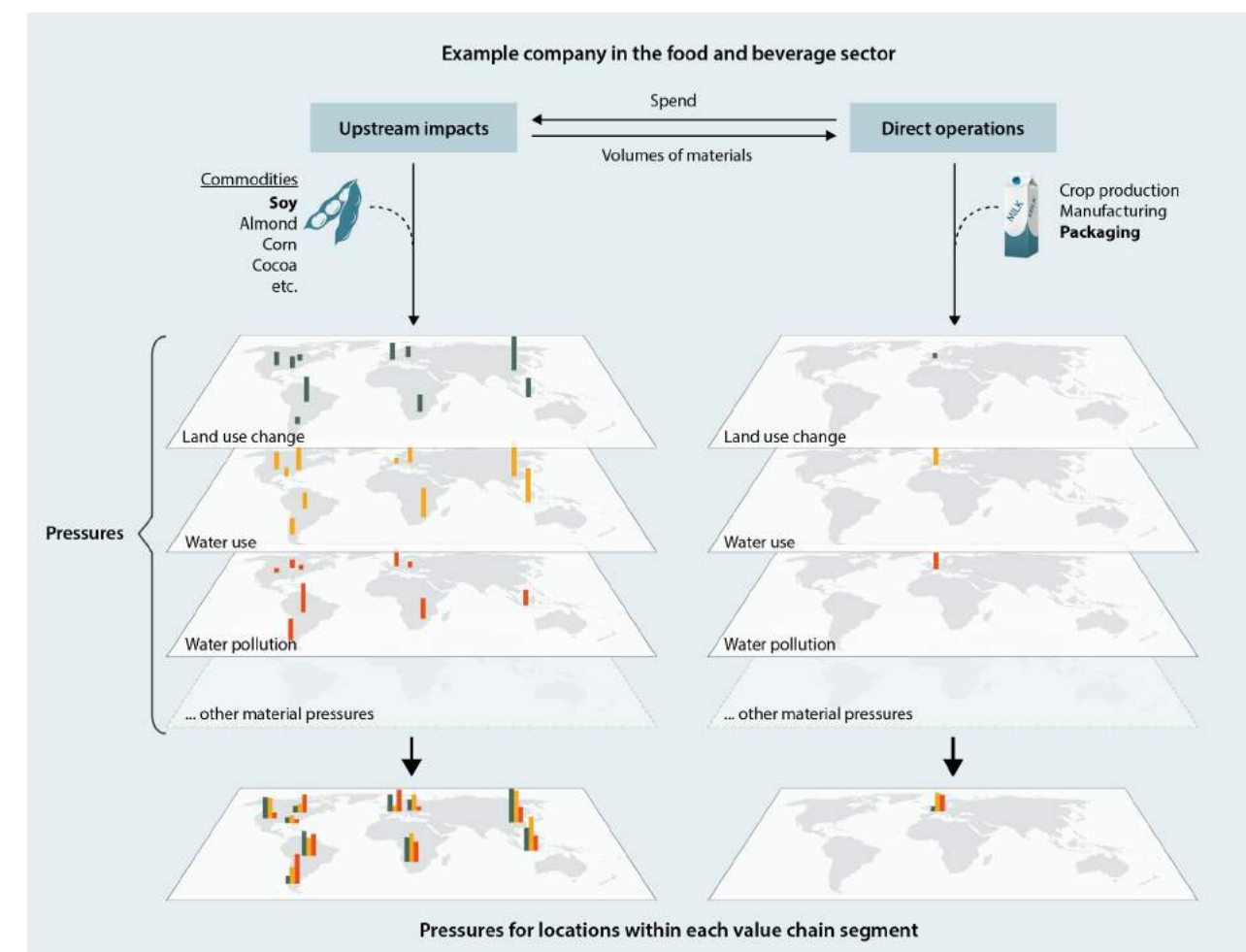


Figure 6—Combining pressure data to complete the value chain assessment. This figure illustrates the process of pressure data collection for the different parts of a company's value chain. Each pressure is estimated separately for each activity–location pair included in the company's assessment scope.



REQUIREMENTS AND RECOMMENDATIONS —ACTIVITY AND PRESSURE SCOPE FOR VALUE CHAIN ASSESSMENT

◆ Requirement 10. Material activities and pressures must be assessed.

Companies following the SBTN Step 1 method in order to set science-based targets for nature must assess the contributions of their activities to all pressures flagged as material in Step 1a, that are within the current SBTN methods scope (first release, 2023).

◆ Requirement 11. Setting targets on all material pressures, over time.

Companies will be expected to manage and set targets on all pressures found to be material at the end of Step 1 but will not be expected to set targets on everything at once.

◆ Requirement 12. Assessment of the full organizational boundary, over time.

Companies setting science-based targets for nature must eventually assess all material aspects of their organizational boundary (as determined in Step 1a) as well as the value chains associated with these when using the method for Step 1b: Value Chain Assessment.

◆ Requirement 13. Direct operations assessment scope.

For the SBTN validation process, companies must be able to demonstrate that they have estimated material pressures and economic activities, for all sites owned or operated by the corporation (i.e., their direct operations or Scope 1).

◆ Requirement 14. Upstream assessment scope.

For the SBTN validation process, companies must also demonstrate that they have estimated the pressures associated with all inputs derived from items on the SBTN High Impact Commodity List (i.e., in their upstream or Scope 3)³⁰ and the pressures associated with at least 67% of spend or volume of their upstream activities. For companies sourcing highly transformed or embedded volumes of high impact commodities, it may be difficult to ensure that 100% of the commodity volume/spend is assessed. In these cases, companies must assess at least 90% of sourced volume/spend but are recommended to address as close to 100% as possible using modeled estimates.

◆ Requirement 15. Include IUCN threatened and CITES listed species.

Companies that source IUCN threatened species (62) (species that are classified as vulnerable: VU; endangered: EN; or critically endangered: CR) or CITES listed species (63) must include these in their scope of assessment. When compiling their data, companies should prepare to submit the species names, quantities, and sourcing location for those species.

◆ Requirement 16. Justification of final scope.

Companies must be able to justify any deviations in the above prescribed scope through a credible analysis that proves that none of the recommended activities that are excluded contribute to environmental or social impacts. Ideally this analysis should be verified by an external body.

◇ Recommendation 8. Use metrics and indicators recommended by SBTN.

Companies completing their value chain assessment may wish to select methods and tools that allow them to estimate their pressure contributions in the metrics and indicators specified by SBTN (see Table 6).

◇ Recommendation 9. Additional pressures are optional.

Companies may assess their contributions to additional pressures while collecting data for Step 1b, but to fulfill the requirements of this method and be able to set science-based targets using Step 3 methods, additional pressure data collection is not required. For instance, many companies and experts have asked about what companies that want to take action on solid waste, including plastic waste, can do now. Companies setting science-based targets can set targets on these issues, but SBTN is not validating targets set for any pressure or environmental issue not covered by SBTN methods for Step 3.³¹ This also applies to the following pressure categories required in the Step 1a materiality screening: freshwater ecosystem use and conversion, marine ecosystem use and conversion, and other resource use.

◇ Recommendation 10. Business unit approach.

Companies with complex operations may focus on discrete parts of their business in the Step 1b assessment and the use of science-based target-setting methodologies in Step 3. These discrete parts, known as **business units**, correspond to geographic regions, industries, or brands (see Supplementary Material). The option for narrowing the assessment using business units, known as the **business unit approach (BUA)**, may only be applied after companies have completed the materiality screening for their full organizational boundary.³² Using the BUA will limit the claims a company can make about the application of science-based targets for nature. *Note: Companies using the BUA will still need to comply with all requirements for the value chain assessment.*

◇ Recommendation 11. Alignment with climate assessment scope.

Companies with full GHG inventories prepared for climate science-based targets are recommended to assess impacts associated with at least 95% of their upstream activities.



3.3 Check for readiness

Before beginning the value chain assessment, companies *should* determine where they have complete, missing, or partial data available for getting started with target-setting. This can be done in reference to the data needs outlined in Table 4. Companies may be able to leverage recent assessments and data collection efforts for the process of setting science-based targets.

Past efforts likely to be helpful to companies completing the value chain assessment (and the rest of Steps 1 and 2) include:

- certifications or other investments in supply chain traceability
- product or enterprise-level impact assessments following standardized life cycle impact assessment methods (e.g., those from the International Standard Organization, ISO)
- greenhouse gas accounting and data used for setting science-based targets for climate
- water impact accounting and data used for setting enterprise-level water targets or context-based water targets
- applications of the Natural Capital Protocol
- information collected for reporting to CDP on water, forests, or climate
- information collected for disclosing in line with the Global Reporting Initiative (GRI), particularly the standards on material issues, water, and biodiversity
- information collected for the Taskforce on Nature-related Financial Disclosures (TNFD) disclosure requirements
- supply chain due diligence and other initiatives to ensure avoidance and management of potential labor and human rights issues (e.g., in line with guidance from the OECD or UN).

Note that while companies’ engagement in the initiatives mentioned above can lead to more and better data being available for use in the target-setting process, evaluation of existing sustainable practices will primarily be incorporated during the baselining assessment in Step 3, not in Steps 1 and 2.³³

SBTN *recommends* that companies complete a pressure and state of nature assessment for all parts of their business within scope for the value chain assessment as determined through Step 1a to facilitate enterprise-wide completion of the target-setting exercise.

However, for companies without the required data for the full enterprise, a business unit approach *may* be used. In these cases, companies may continue the assessment for part of the business for which they have the required data, while continuing to collect data to fill gaps for those where they are not yet able to meet the SBTN requirements. Companies will only be able to make claims about target-setting which correspond to the business unit(s) selected to continue the assessment and target-setting exercise. See the Business Unit Approach in the supporting materials at the end of this paper for more details on selecting business units and increasing coverage from business units to enterprise wide.

Table 7 can be used by companies to record the type of information they already have available for the value chain assessment. Based on this table, they can get a quick sense of their “data readiness” for target-setting.

Table 7—Readiness screening template for companies planning to assess their whole business.

	Descriptions of activities (direct operations), and goods and services (upstream)	# of sites	Sites with pressure data (e.g., water use)	Sites with state of nature data (e.g., water availability)	Level of readiness
Direct operations	Construction	15	15	15	✓
	Site development	25	25	22	Almost ready
	Real estate management	10	10	10	✓
Upstream	Mining	7	5	5	Almost ready
	Steel production	4	4	3	Almost ready
	Cement production	5	2	2	Almost ready

When screening for data readiness upstream, companies may wish to specify whether they have better data available for certain commodities, activities, goods, and services. For many companies, location data for upstream activities may initially be a barrier to setting science-based targets. To get started on upstream targets today, SBTN recommends that companies use estimated location data (e.g., for sourcing of a commodity such as cotton) at a national level, based on footprinting and pressure/impact assessment tools and global trade datasets.

Each row should represent an activity (goods or services), separated by direct operations and upstream, allowing companies to distinguish data readiness between each row (good/service). If using a business unit approach, rows should be associated with both activities and business units (keeping distinction between direct operations and upstream). This allows companies to distinguish data needs for a given activity between business units.

Note: At this point in the method, companies may want to record which of the data needed for SBTN they already have, and what starting points, such as climate or water data they can build upon.

3.4 Estimate contributions toward environmental pressuress

For the value chain assessment, multiple method pathways are possible, depending on the type of data available to companies. These options are described in the following sections and are summarized using workflow diagrams.

The information compiled during this exercise can be referenced by companies during the target-setting process, and some of it will be required for Step 3. Per SBTN guidance, not all the information collected for Step 1b will need to be publicly disclosed.

For “worked examples” illustrating how the methods are applied by different companies, please see the SBTN Resource Library.³⁴

3.4.1 DIRECT OPERATIONS

The two main approaches for pressure quantification in the SBTN V1 Step 1 methodology are observational data and modeled estimates. Both scenarios are described below, with preference given to observations (when they are available):

- **Observational data:** Observations of the relevant pressure (e.g., stream gauge or sensor data or area estimation by a company based on maps of land holdings). These may be generated by the company themselves or, where appropriate, retrieved from publicly available data sources.
- **Estimation through quantitative modeling:** Estimations of pressure metrics using quantitative modeling approaches, which take as inputs specific data from the relevant locations or sites. Estimations may also be generated using data on the activity, spend of the company, quantity of goods or services produced, and geographic location.

Regardless of the pressure quantification approach taken, where location data are known and can be verified companies *must* use these. If these are unknown and can be estimated only based on the sourced commodity, then companies *may* use their best estimate for this analysis.

See Figure 7 for a simplified diagram of the workflow for the direct operations segment of the value chain assessment.

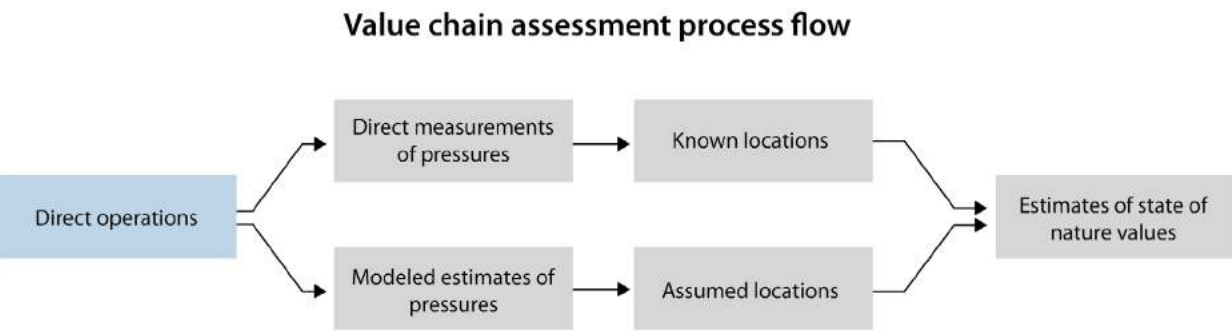


Figure 7—Overview of data collection pathways for the direct operations segment of the value chain assessment.

REQUIREMENTS AND RECOMMENDATIONS
—DIRECT OPERATIONS PRESSURE ESTIMATION

- ◆ **Requirement 17. Use of observations.**
SBTN *requires* that companies use observational data, where available. This recommendation holds for both the direct operations and upstream value chain assessment (where those data would be coming from a supplier or other relevant source in-situ). In some cases where these data are not available, companies may need to estimate the pressures for their direct operations sites and activities, as well as those upstream. In those cases, companies can employ alternative approaches to estimate their pressures.
- ◆ **Requirement 18. Scope of value chain assessment: direct operations.**
As stated in section 3.2, during the value chain assessment companies *must* estimate pressures for 100% of the sites and facilities they own or operate. For each site or facility, companies *must* assess pressures flagged as potentially material in Step 1a for that activity category.³⁵ Any additional pressures can also be included but are not required for validation.
- ◆ **Requirement 19. Compatibility of units.**
Pressure quantifications or estimates must be provided in units compatible with SBTN recommendations. If deviating from the recommended metrics, companies *must* provide a justification. When moving forward to the Step 3 methods, units *must* match the guidance provided in the relevant target-setting methodologies.
- ◆ **Recommendation 12. Spatial resolution and scale of assessment.**
The spatial resolution of pressure data *should* be at the finest spatial resolution possible to represent the site being evaluated (site scale). When using observations,³⁶ they *should* be collected at the site scale, allowing for aggregation to appropriate scales for further analyses, see guidance on tool and data criteria (4.6). See how a company can format results for their direct operation pressure assessment in the worked examples available through SBTN’s Resource Library.



3.4.2 UPSTREAM

Because companies have varying data quality and availability on their upstream value chain, different pressure estimation methods for upstream activities are needed. The methods and tools used in the upstream pressure assessment may be based on an in-depth review of activities along the commodity supply chain (e.g., unit process data from cradle-to-gate) or it may be based on a model of that commodity's impacts based on a handful of activities (e.g., impacts related to sourcing activities). Because of these differences in data, companies may either estimate their upstream pressures by activity or as aggregate pressures by commodity.

As an example of the variation in data availability for upstream activities, for commodities and supply chains (e.g., palm oil or timber) where companies have invested heavily in traceability or conducted life cycle assessments, they may have unit process level data to use in pressure estimation. For other parts of their upstream activities, pressures may be relatively unknown (e.g., aluminum) and estimation will require the use of more readily available data (e.g., spend to Tier 1 suppliers of the metal). When commodities or sourced materials are part of more complex or mixed ingredient products, the impact can be estimated using the proportion of raw commodity volumes or based on proportional ingredient lists.

To enable all companies to get started with target-setting, SBTN currently considers two main approaches for quantifying upstream pressures in Step 1b, aligned with the guidance given for direct operations above. Figure 8 shows a simplified diagram of the workflow for the upstream segment of the value chain assessment, using either option.

- **Observations of pressures.**
This may only be available to companies with strong supplier relationships in the upstream and may need additional validation and verification by the purchasing company before submission to SBTN.
- **Estimation of pressures using best-available data and models.**
Based on the type of data companies have for a given commodity or activity, they *may* use:
 - spend-based estimation
 - volume-based estimation.

Regardless of the pressure quantification approach taken, where location data are available companies *must* use known locations. If these are unknown and can be estimated only based on the sourced commodity, then companies may use their best estimate for this analysis.

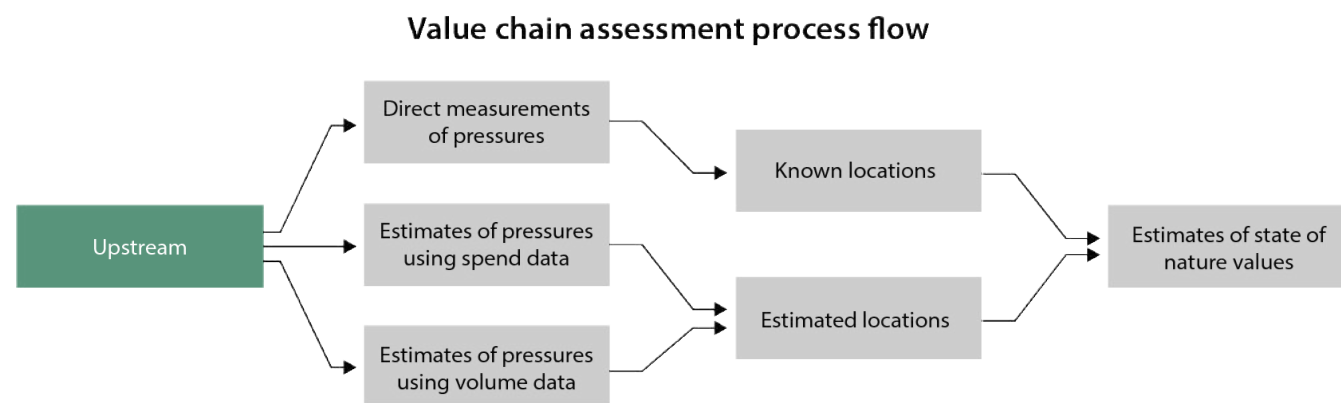


Figure 8—Overview of data collection pathways for the upstream segment of the value chain assessment.

Box 4—Pressure estimation techniques.

When observations of pressures are not available, companies may use quantitative models and tools for pressure estimation such as life cycle impact assessment approaches. SBTN *recommends* that, where possible, companies utilize models that produce estimates representative of the actual activities undertaken at each operational site and are consistent with SBTN tool and data criteria.

As detailed above, model selection should reflect both company data availability and the range of pressures a company *must* assess (based on the materiality screening in Step 1a). Relevant resources for companies include environmentally extended input-output (EEIO) models and databases (e.g., EXIOBASE or Eora), life cycle impact assessment methods (e.g., IMPACT World+) and life cycle inventory databases (e.g., ecoinvent, the Federal LCA Commons (US), or those produced for the EU (70) (71) (72)). While these are commonly used approaches for modeling pressures, there is no one solution and companies should combine these with other approaches like spatial modeling and remote sensing to address method needs. See additional tools available to support the Step 1b pressure assessment in the SBTN Step 1 Toolbox (45).

Connection to other frameworks— Approaches for pressure estimation

CAPITALS COALITION

- Natural Capital Protocol, Step 05: Measure impact drivers (18)

GLOBAL REPORTING INITIATIVE

- GRI 303: Water and Effluents 2018 (64)
- GRI 304: Biodiversity (65)
- GRI 305: Emissions 2016 (66)

ISO

- 14044:2006 Environmental management — Life cycle assessment — Requirements and guidelines (37)

TASKFORCE ON NATURE-RELATED FINANCIAL DISCLOSURES

- The TNFD Nature-related Risk and Opportunity Management and Disclosure Framework Final Draft – Beta v0.4; Evaluate (E3, E4) and disclosure recommendations for Strategy A, Risk & Impact Management A, Metrics & Targets B (19)

TRANSPARENT PROJECT

- Standardized Natural Capital Accounting (2021), Annex II (39)

LIFE CYCLE INITIATIVE (UNEP)

- Guidance on Organizational Life Cycle Assessment (2015), Chapter 3.2 Definition of goal and scope (3)



REQUIREMENTS AND RECOMMENDATIONS—UPSTREAM PRESSURE ESTIMATION

- ◆ **Requirement 20. Scope of assessment: upstream value chain.** For the value chain assessment, companies *must* estimate pressures for *all* high-impact commodities (sourced directly as raw commodities, value-added commodities, or finished products), as well as the pressures associated with the rest of their spend data (organized by activity or another category). For companies sourcing highly transformed or embedded volumes of commodities (see SBTN Glossary), it may be difficult to ensure that 100% of the commodity volume is assessed. In these cases, companies *must* assess at least 90% of sourced volume but are recommended to address as close to 100% as possible using modeled estimates.
- ◆ **Requirement 21. Representativeness.** Pressures *must* be estimated based on the activities, commodities/goods, or services that companies source from upstream suppliers.
- ◆ **Requirement 22. Activities to consider when estimating pressures.** When estimating upstream pressures, companies *must* focus on the activities that are expected or known to be the greatest contributors to a given pressure category. Note that this may mean that multiple unit processes and locations need to be included for a given commodity if they are the most important for different pressures.
- ◆ **Requirement 23. Use of primary data when available.** In cases where companies can use primary data from upstream suppliers to quantify pressures, they *must* use this information rather than pressure estimation. However, in most cases, upstream pressures will need to be estimated. When primary pressure data are not available, companies are *recommended* to select tools and resources for pressure estimation based on both the amount of available company data and the pressures they *must* assess (according to their materiality screening).
- ◆ **Requirement 24. Spatial resolution of pressure data for direct operations.** Companies *must* provide pressure data at a minimum of sub-national scale for direct operations. Conducting Steps 1 and 2 at this scale will satisfy SBTN requirements but *may* mean a more difficult transition to Step 3 target-setting methods, which must be conducted at a finer spatial resolution.
- ◆ **Requirement 25. Spatial resolution of pressure data for upstream activities.** For upstream activity location data, it is *required* that companies attempt to collect or model sourcing location data to at least a country-level sourcing location. Companies may only use data coarser than country level when sourcing locations cannot be refined past a geographic region or set of possible countries of origin (this may be the case when sourcing commodities through a wholesaler) but *must* submit an explanation to SBTN.



- ◇ **Recommendation 13. Sourcing as default assumption.** Companies *should* assume that raw material extraction or sourcing is the highest-impact activity for a given pressure unless there is evidence to prove otherwise. Companies may wish to consult life cycle inventory databases to ascertain the most significant point of production to use when estimating impacts and generating location data.
- ◇ **Recommendation 14. Retrieve precise location data if possible.** Location information is necessary to estimate pressures (i.e., estimates on pressures are based on information with a geographic origin or link). When companies are not able to provide this information directly, it will often be provided through default assumptions embedded in tools and methods. To get the most accurate results in the Step 1b Value Chain Assessment and have the best data possible to use for prioritization in Step 2 and target-setting in Step 3, it is *recommended* that companies specify the locations associated with their activities rather than rely on the assumptions of tools and methods used to complete the assessment.
- ◇ **Recommendation 15. Type of pressure data for direct operations.** SBTN *recommends* that companies collect primary, site-level data on pressures in their direct operations.
- ◇ **Recommendation 16. Suggestions for retrieving upstream location data.** Companies are encouraged to model these sourcing locations using information from suppliers (solicited through questionnaires) or global datasets reflecting typical sourcing profiles for certain commodities (e.g., FAOSTAT (73) or Trase (74)). For upstream activities, data gaps on likely sourcing locations can also be addressed by modeling data using environmentally extended input-output (EEIO) tables (e.g., EXIOBASE (48) or Eora (75)) or life cycle impact inventories (e.g., ecoinvent (70)).

3.5 Estimate the state of nature

Information about where an impact is occurring is necessary to understand the relative significance of a given pressure.

Pressure flows of the same magnitude occurring in different geographic locations will have different significance, depending on factors such as the sensitivity of the local ecosystem to additional changes, presence of threatened species, or reliance of local communities on an impacted resource. Therefore, to understand the contextual significance of a company’s pressure footprint, spatial indicators to summarize the state of nature are needed.

3.5.1 BIODIVERSITY STATE OF NATURE AND PRESSURE-SENSITIVE STATE OF NATURE INDICATORS

Economic activities undertaken by companies, as well as broader socio-economic and demographic trends, have been shown to drive and accelerate biodiversity loss through pressures such as land use change, overexploitation of resources, GHG emissions, pollution, and invasive species. Only by evaluating both direct linkages from pressures to changes in states (e.g., water use to water availability), as well as the potential impact of those pressures on biodiversity, will companies have the necessary information to manage their impacts effectively and in the most critical locations to mitigate biodiversity loss and other critical societal and environmental issues (e.g., water security).

Two types of spatial indicators for the state of nature *must* be used in the value chain assessment:

- **Pressure-sensitive state of nature indicators [SoN_p]**—indicators appropriate to summarize the features of the state of nature most directly connected to the pressure being assessed.
- **Biodiversity state of nature indicators [SoN_b]**—indicators appropriate to estimate the state of nature in terms of biodiversity, along three key dimensions: the ecosystem, species, and genetic level.

Incorporating both types of state indicators allows companies to target those locations where they are having the greatest impact and have the highest potential to make a change (through SoN_p), as well as those locations that have the greatest intrinsic value for biodiversity and where the resulting nature’s contributions to people are most critical.

SBTN *requires* companies to use pressure-sensitive indicators (SoN_p) in Step 1 and Step 2 to capture the more direct impacts of a given pressure on the state of nature. Currently, the additional elements captured by SBTN SoN_p indicators include water availability, water pollution, and natural ecosystem extent, structure, composition, and function (captured through an index of terrestrial ecosystem intactness). Known connections between different pressures and aspects of nature used for selecting indicators for the value chain assessment are summarized in Table 9 below.

By adding other SoN_b indicators beyond those highlighted for species and ecosystems, companies may also incorporate both the impacts and *dependencies* of companies on biodiversity and the resulting ecosystem services, or nature’s contributions to people. This approach emphasizes the importance of ecosystem services critical for business operations (e.g., regulating services such as pollination or direct inputs of biological material for cosmetics and pharmaceuticals) through the protection and enhancement of economically relevant aspects of biodiversity, often referred to as natural capital (18) (19) (76).

To complement the analysis possible using SoN_p indicators, SBTN *requires* companies to use at least one biodiversity-specific indicator, SoN_b.

Biodiversity can be defined simply as the variability in living organisms from all sources at the ecosystem, species, and genetic scale (77). In some cases, the recommended SoN_p indicators may incorporate measures of biodiversity at the ecosystem scale e.g., Ecosystem Integrity Index (EII) (78). To

complement these and summarize biodiversity at a more granular scale, companies are *recommended* to use a species risk and extinction indicator, such as the global Species Threat Abatement and Restoration (STAR) metric (79), in line with best practices for impact screening from the Align project (69). The STAR metric is an appropriate match to the pressure and threat framing that SBTN utilizes to address nature impacts. Where the availability of these data may not match the taxonomic focus of the target-setting exercise, companies may use an indicator of species endemism richness such as range-rarity.

Companies are *recommended* to go beyond the requirements for use of a single indicator of biodiversity and utilize multiple complementary metrics of biodiversity (representing different dimensions of biodiversity e.g., species and ecosystems) to get a fuller picture of how they can best prioritize action mitigating biodiversity loss. However, in cases where companies use ecosystem condition index, such as the Ecosystem Integrity Index, a species-level indicator is *required*. Examples of the biodiversity data and metrics that can be used in the SBTN methods are provided in the table below.

For further detail on the connections between pressure and state metrics in the SBTN methods, please consult the V1 SBTN Indicator Framework in the Supplementary Materials at the end of this document.

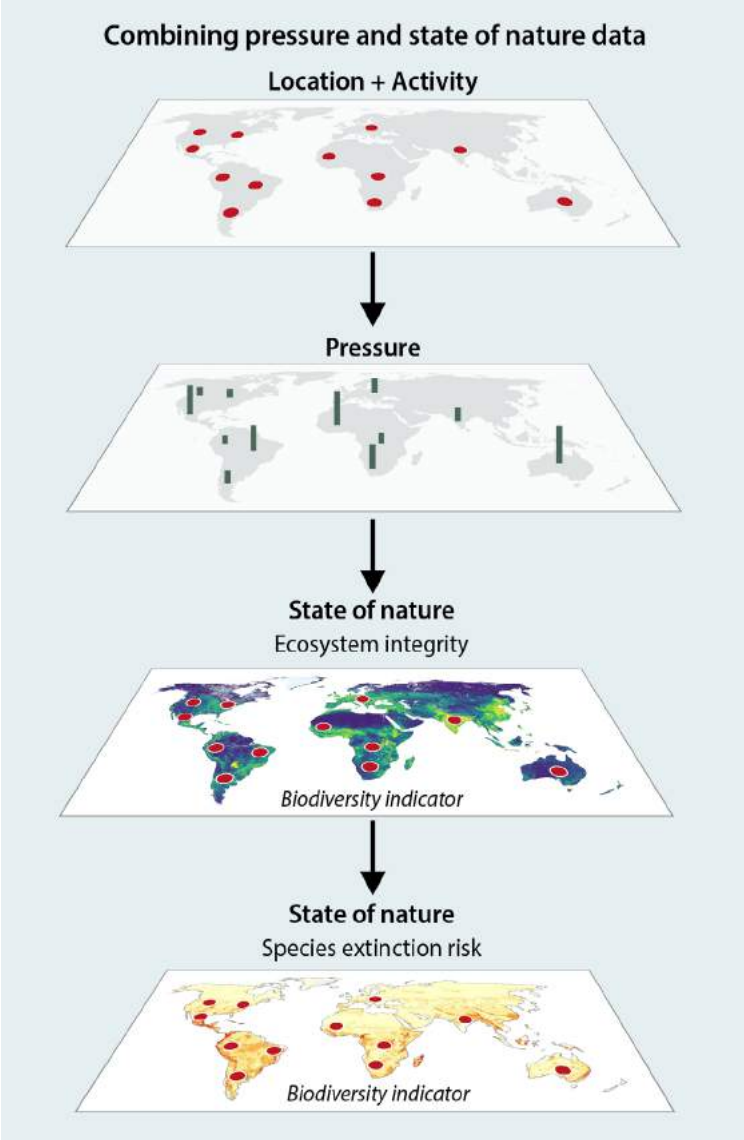


Figure 9—Combining pressure and state of nature data. This figure illustrates the process of combining data on a pressure with the relevant state of nature pressure-sensitive indicator (SoN_p) and the biodiversity state of nature indicator (SoN_b). This process should be repeated for each pressure using a different SoN_p.

Table 9—Joining pressure and state variables.

SBTN Pressure Category	SBTN State Category & Metric (SoNP)
Terrestrial ecosystem conversion	Area (km2 or ha) of remaining intact ecosystem and land use by ecosystem and land use type
Terrestrial ecosystem use	Natural ecosystem structure, function, and composition
Water use	Surface water flows and groundwater levels
Greenhouse gas emissions	Assessed within the SBTi framework but can be captured through state indicators such as temperature, precipitation, and extreme events
Soil pollution	Soil nitrogen (N) and phosphorus (P) concentrations
Water pollution	Instream N and P concentrations

Table 10—Further detail on biodiversity metrics for the first release of SBTs for nature. This table is intended to be illustrative and not exhaustive. The recommended datasets included here reflect the appropriateness for the SBTN methods, data availability, and ease of interpretation. Emphasis is placed on global datasets. See the SBTN Step 1 Toolbox for more specific information on specific datasets and tools to be used in the biodiversity assessment.

Dimensions of biodiversity (SoN _B) relevant for Step 1 and 2 methods	Description of biodiversity metrics (SoN _B)
Species endemism	Species endemism relates to the uniqueness of a species - often defined by the size of its global range. Rarity-weighted richness is a commonly used measure which combines endemism and species richness. It is calculated as the sum of the inverse of species ranges within a given grid/raster cell.
Species extinction risk	The risk that the global population of a species falls beneath a critical threshold resulting in an inability of the species to reproduce and thrive across all populations. The Species Threat Abatement and Restoration (STAR) metric is an example of a metric that measures the contribution that investments can make to reducing species' extinction risk (see text for caveats on taxonomic coverage).
Ecosystem integrity/condition	Ecosystem integrity/condition comprises facets of ecosystems including structure, function and composition. Ecosystem Integrity Index (EII) is an example of an index that measures change in all three components of ecosystem integrity against a natural baseline for terrestrial ecosystems. <i>'Note that when users are evaluating pressures for which EII is used to quantify the SoN_p, a complementary biodiversity indicator at the species level is <u>required</u>.</i>
Ecosystem connectivity	Measures of ecosystem connectivity (included within EII for terrestrial ecosystems as part of structural integrity), focus on structural connectivity, or the arrangement of habitat within a larger landscape matrix.
Nature's contributions to people	Metrics which capture the contributions, both positive and negative, of living nature (e.g., diversity of organisms, ecosystems, and their associated ecological and evolutionary processes) to the quality of life for people. This can be captured within the target-setting approach by evaluating provision of NCPs.
Delineated Areas of Importance for Biodiversity	These areas are determined based on aggregate metrics of biodiversity importance and may also reflect relevant conservation and management measures. Areas of biodiversity importance can be determined based on aggregate biodiversity metrics and may also reflect relevant conservation and management measures. Examples include protected areas, Key Biodiversity Areas (KBAs), High Conservation Value (HCV) areas, and 'Other effective area-based conservation measures' (OECMs).

3.5.2 TOOLS TO SUPPORT THE STATE OF NATURE ASSESSMENT

There are several existing tools and data layers that can be used to derive information on state of nature indicators for the value chain assessment. For some variables, SBTN provides explicit requirements about which tools to use for the value chain assessment (see Requirements). For other state of nature variables, SBTN provides guidance on the suggested units, tools, and data sources and will check for appropriate application of the tool and data criteria when companies have submitted their data following completion of Steps 1 and 2. See SBTN Step 1 Toolbox for more (45).



Box 5—Relationships between variables and rationale for the approach.

Changes in pressure flows, accumulated pressure levels, and pressure-linked state of nature values can lead to changes in the general state of nature (i.e., the general conditions of nature in physical, chemical, or biological terms), but the causal relationships between these variables is not always clear. For this reason, SBTN intentionally includes the assessment of pressures and states of nature separately within the company’s initial screening of its contributions toward negative impacts on nature. This separation acts as a methodological safeguard to ensure that all aspects of a company’s activities that may be contributing toward negative impacts on nature are captured in the assessment.

The staged assessment approach in Step 1 provides companies with information on:

- the magnitude of each pressure generated by the company in each location
- the health of nature, expressed in terms of state of nature (pressure-specific and general), in each location

The combination of data points collected during the value chain assessment will allow companies to choose which locations and business activities to prioritize based on the magnitude of pressure and health of nature and the values of these indicators relative to one another (in Step 2). This analysis allows companies to consider the potential connection between each pressure (e.g., water withdrawals) and a specific state of nature variable (e.g., water availability), and the potential connection between that pressure and biodiversity (e.g., species extinction risk, linked to water availability). The use of these different variables is intended to ensure that companies are focusing on the right pressures in the right places.

Connection to other frameworks —State of nature assessment

ALIGN PROJECT

- *Recommendations for a standard on biodiversity measurement and valuation* (2022), Section 4.2: Methodologies to measure business impacts on biodiversity (69)

CAPITALS COALITION

- *Natural Capital Protocol* (2016), Step 06: Measure changes in the state of natural capital (18)

EUROPEAN UNION

- European Financial Reporting Advisory Group/European Sustainability Reporting Standards (59):
 - ESRS E4—Biodiversity and ecosystems

GLOBAL REPORTING INITIATIVE

- GRI 304: Biodiversity (2016) (65)

TASKFORCE ON NATURE-RELATED FINANCIAL DISCLOSURES

- The TNFD Nature-related Risk and Opportunity Management and Disclosure Framework Final Draft – Beta v0.4; Locate (L1, L2, L4) and Evaluate (E1, E2, E4), and Disclosure Recommendations on Strategy, Risk & Impact Management, and Metrics & Targets (19)

TRANSPARENT PROJECT

- *A methodology promoting standardized natural capital accounting for business* (2021), Section 2: Measure and value (39)

REQUIREMENTS AND RECOMMENDATIONS— STATE OF NATURE ASSESSMENT

◆ Requirement 26. Use of nominal present-state data, consistent with pressure data.

The methods for Step 1 and Step 2 of the science-based target-setting process only require companies to consider nominally “current” state of nature values (i.e., values from the recent past and present). This present and historical impact-focused approach is more compatible with the type of information companies are required to use for measuring and estimating pressures (again recent past or present, based on data availability).

◆ Requirement 27. Required tools to use for state of nature assessment.

To understand the level of water availability and water pollution (SoN_p indicators related to the pressures of water use and water pollution) throughout their value chains, companies are *required* to consult the following:

- *Water availability*: SBTN Unified Water Availability Dataset (80)
- *Water pollution*: SBTN Unified Water Pollution Dataset (80)

WWF and WRI are planning to include these two datasets in their online tools (Water Risk Filter and Aqueduct). In the meantime, a free interactive online tool (81) is temporarily available to enable users to extract the values of these two SoN_p indicators for locations of interest. Links to these tools are accessible in the references for this method, see number 80 and 81.

◆ Requirement 28. Biodiversity indicators (SoNB) requirement.

Companies are required to use a biodiversity state of nature indicator in this analysis to accompany pressure and pressure-sensitive state of nature data. In addition, where companies use ecosystem condition/integrity indices, such as the Ecosystem Integrity Index, to represent pressure-sensitive state of nature a complementary species-level indicator of biodiversity is required.

◇ Recommendation 17. Use of forward-looking data.

Forecasted data are not required to be used in the Step 1 and 2 methods, but future projections of pressures and states of nature (incorporating climate and socio-economic scenarios) *could* be helpful for companies to consider and may be included in subsequent versions of SBTN methods (for Step 1, 2, and 3).

◇ Recommendation 18. Use multiple datasets to verify priorities.

To increase confidence that companies’ target strategies will prioritize the places where nature and society need it the most, it is *recommended* that companies consult more than one dataset for each SoN indicator, if available. This applies to indicators for both pressure-sensitive state of nature indicators and biodiversity state of nature indicators.

◇ Recommendation 19. Recommended tools to use for state of nature assessment.

To complete this step of the target-setting methodology, companies are *recommended* to use datasets or tools presented in the SBTN Step 1 Toolbox (45) or a tool that meets the SBTN tool criteria (46).

3.6 Link pressure and state of nature data for the value chain assessment

Operationally, the step of linking pressure and state of nature (SoN) data can be conducted after collecting pressure and SoN data in Step 1, though the data itself will only be needed in Step 2. By doing this earlier, a common spatial scale can be identified and companies can avoid multiple aggregating steps.

3.6.1 DIRECT OPERATIONS STATE OF NATURE ASSESSMENT

The state of nature assessment for a company's direct operations is performed by using the pressure estimates per operational site as derived in section 3.4 and combining this with the location for each operational site. This must be done in accordance with guidance on harmonizing spatial and temporal scales (46).

Using the data gathered during the pressure assessment, companies should be able to export these into the tools highlighted above for the SoN_p variables linked to their material pressures, and to gather data on aspects of biodiversity for their SoN_b assessment. Together, the recommended tools will generate a list of values capable of describing the expected state of nature—i.e., relative health of different ecosystems—for the different locations where the company operates.

3.6.2 UPSTREAM STATE OF NATURE ASSESSMENT

When performing the state of nature assessment for the upstream segment of the value chain, companies should repeat the process described above for direct operations to input location data into SoN tools or reference SoN values for locations in the suggested datasets. However, companies should consider the range in precision of data that will be reflected in their upstream assessment, see requirements for this step and Box 6—Additional guidance. Companies that are only able to attain country-level location data for their upstream activities will need to use country-level SoN values. To

appropriately link their pressure and SoN data, a company would need to calculate the sum of each pressure (e.g., all water use) associated with all (upstream) activities that contribute to this within a given country (e.g., the water use associated with multiple farms, or water use associated with extraction as well as processing). Each water-using activity would be associated with one common SoNP value for water availability at country level.

When the spatial resolution of the SoN data is at a finer spatial resolution than pressure data, then an appropriate aggregating statistic must be used to upscale the data (in many cases, mean or median values). An example of this would be a company that has state- or province-level data on land management for agricultural holdings but finer-scale data on ecosystem intactness. The company would then calculate the median ecosystem intactness for the province to continue in the analysis.

Box 6—Additional guidance on different options for pressure estimation.

Due to the various methods available for the upstream pressure assessment, companies may find that their pressure data on commodities reflect different levels of precision, both in terms of activities included and the sites or locations associated with these (i.e., the spatial resolution of their activity data). The methods and tools used in the upstream pressure assessment may be based on an in-depth review of activities along the commodity supply chain (e.g., unit process data from cradle-to-gate) or it may be based on a model of that commodity's impacts based on a handful of activities (e.g., impacts related to sourcing activities). Because of these differences in pressure data, companies may either compute their upstream pressure estimates per activity or compute the aggregate pressure estimates by commodity.

Pressure estimation using life cycle assessment methodology will reflect the different level of analysis used to understand the system and will result in results aggregated at different levels (e.g., at unit process level, or system level) and different levels of detail or precision.





After mapping their value chains and estimating pressures, companies are ready to progress onto the selection of locations where they can begin setting targets for nature.

REQUIREMENTS AND RECOMMENDATIONS — COMBINING PRESSURE AND STATE OF NATURE DATA

◆ Requirement 29. Harmonize pressure and state of nature data (when not already compatible for combination).

When pressure data are finer scale than recommended SoN_p data (e.g., pressure estimates are based on data from sub-national or site level while SoN values are given at country level), the data for that pressure *must* be aggregated within the spatial unit of the SoN_p data.

◆ Requirement 30. State and pressure data needed for each activity–location pair.

To complete Step 1, companies *must* record this SoN information alongside their pressure data for each site/activity–location pair in their direct operation dataset and for each commodity–location or activity–location pair in their upstream dataset. This information will then be analyzed in Step 2 to determine which locations are highest priority for target-setting.

◆ Requirement 31. Precision of pressure data considered before SoN data collection.

Before beginning the SoN assessment, companies *must* consider the level of precision in their pressure data to determine the locations to use for the SoN assessment (e.g., the country or set of countries estimated as probable sourcing locations). See Box 6—Additional guidance.

◆ Requirement 32. Check appropriateness of SoN data.

For the upstream analysis, SoN estimates *must* be associated with companies' procurement or upstream activity data (in spend or volumes) and be consistent with guidance on spatial resolution of pressure data.

◇ Recommendation 20. Ensure compatible spatial and temporal resolution.

When completing the value chain assessment, companies are *strongly recommended* to use state of nature data that are compatible with the spatial and temporal scale of the pressure data they have collected (i.e., data which is delineated along similar political and natural boundaries, and cover a similar period of time). When the spatial resolution of pressure and recommended SoN data are not equal, the finer-scale data *should* be aggregated to the coarser of the two scales. Because of the potential inconsistency of spatial scales between these data sources, SBTN *recommends* that companies use datasets and resources for the SoN assessment that have a broader spatial extent (this refers to coverage across company sites, not to be confused with spatial scale). This may help companies avoid having to harmonize datasets before proceeding with the analysis.

◇ Recommendation 21. Data structure for upstream value chain assessment.

For ease of analysis in Step 2, it is *recommended* that companies sort their data by commodity or activity category, though other aggregating options are possible.

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Explanatory notes

1. The [Guide for Readers](#) is a summary document explaining the five-step target setting framework, intended to provide orientation to users of the method that are new to SBTN.
2. See [SBTN Data needs table](#).
3. See [SBTN Step 1 Toolbox](#) for tools and data for impact assessment.
4. Note that for setting science-based targets for climate and greenhouse gas accounting, companies use the organizational boundary as the basis for accounting and creating a precise impact inventory. Because science-based targets for nature are more complex, in terms of indicators required and methods for assessment, the organizational boundary is used as the starting point for the screening and assessment step (Step 1: Assess) and is followed by further refinement of data and scope of analysis until companies are ready to set targets in Step 3: Measure, Set, Disclose.
5. See [SBTN Glossary](#) for more detail on how to differentiate between commodity types.
6. Dates may vary for different models and datasets.
7. Initial guidance on use of either approach is included in the Materiality Screening Tool Interpretation Guidance. Further documentation will be provided to facilitate analysis using either economic activity category.
8. More information on this data and the materiality methodology are available in the tool.
9. The HICL used for this analysis is based on novel SBTN research and expert input from the SBTN network. The linkages between commodities and sectors are based on the ISIC classification system.
10. This should be retrieved from each resource used to complete the assessment.
11. This evidence must comply with SBTN's data and tool criteria (see citation [46](#)).
12. The magnitude of an impact (in terms of people, financial assets, and natural assets affected) is often required in cost-benefit analyses used to evaluate different economic decisions.
13. In jurisdictions around the world, reversibility is often a required component of environmental impact assessments (EIAs) and environmental impact statements (EIS). See the US Code of Federal Regulations: <https://www.ecfr.gov/current/title-40/chapter-V/subchapter-A/part-1502> and Basics of Environmental Assessment under CEAA 2012: <https://www.canada.ca/en/impact-assessment-agency/services/environmental-assessments/basics-environmental-assessment.html>.
14. Likelihood is often associated with assessments of risk, rather than evaluation of impact. However, likelihood is included in the screening step (Step 1a) because this is used to screen where impacts are likely to be occurring and precedes the detailed evaluation of impacts.
15. Following EFRAG, likelihood should not be weighted on par with severity when human rights are impacted by the activity.
16. Note, the CSRD entered into force on January 5, 2023. The directive of the European Union will affect around 50,000 companies, requiring them to report on sustainability in line with the European Sustainability Reporting Standards (ESRS) developed by EFRAG. The Commission is expected to adopt the first set of standards in mid-2023. See the European Commission for more: https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en.
17. As noted in the Method Scope, several pressures that will eventually be a part of SBTN methods are currently considered optional because there are not yet any target-setting methods under development by SBTN to address these.
18. Following CDP (2023), a commodity is considered “embedded” when it has been used anywhere in the supply chains or the direct operations associated with a final product. This includes commodities that are not present in the final product: for example, soy used to feed animals bred for consumption or to produce dairy and eggs. <https://guidance.cdp.net/en/guidance?type=ExternalRef&idtype=RecordExternalRef&cid=F0.4&otype=ORS&incchild=1µsite=1&gettags=1>.
19. Interpretation keys should be provided alongside the value range for the tool used.
20. For starting points that companies can draw from to complete the assessment, see section 1.1—Data requirements for Step 1.
21. See Method Scope, section 0.2—Value chain scope for more information on what should be included in the assessment.
22. The 100% should capture “all activities” determined by all purchases (in spend or volumes) and reflected in the company’s procurement sheet or financial records.
23. SBTN defines **high-impact commodities** as raw and value-added materials used in economic activities that are known to have material links to the key drivers of biodiversity loss, resource depletion, and ecosystem degradation. Activities associated with high-impact commodities include: extraction of these commodities (e.g., mining, farming), clearing of lands for extraction, processing of commodities (into refined or value-added forms), manufacturing commodities into complex products (with additional inputs), distribution of commodities, and the procurement of commodities (in their raw, value added, or final form). The approach for compiling SBTN’s initial High Impact Commodity List is explained in the documentation for the tool and is informed by peer-reviewed literature, expert opinion and gray literature. SBTN is continuing to conduct research to identify additional commodities and their environmental impacts.
24. To facilitate this assessment, companies may wish to sort their data by most to least spend.
25. SBTN defines an **indicator** as “A specific metric used to track performance or progress (positive or negative change) against a goal or target.”
26. As an example of how this list is subject to updating over time, some reviewers may notice that indicators for pressures such as resource use, invasive alien species, short-term disturbances such as light pollution, additional pollutants beyond nitrogen and phosphorus, and fragmentation of rivers from dams or other infrastructure are not included, despite being acknowledged by SBTN as significant pressures fueling the loss of biodiversity. These indicators are not directly applicable for use with the first methods; hence companies are not currently required to estimate their contributions toward these. This may change in the future according to SBTN method development.
27. For a standard classification scheme of land use, SBTN will draw from [IPCC \(2003\)](#), which identifies six categories of land use: forest land, cropland, grassland, wetlands, settlements, and other land, including infrastructure and human settlements, and from [AFI \(2020\)](#), which identifies a

- seventh category: plantation, which must be accounted for when measuring deforestation and conversion.
- 28. As part of a company's contributions toward land/terrestrial ecosystem use, intensity of use will also need to be quantified. SBTN currently expects that the intensity of use will be approximated based on the company's contributions toward the other key pressure categories, such as pollution, resource exploitation, and invasive alien species. Further guidance on accounting is forthcoming.
 - 29. SBTN is considering including net water consumption as an optional indicator for companies whose water use is better captured by this indicator. Given that the location, time, and quality of the water returns would affect the impact of the water use, the criteria to use this indicator is still under development.
 - 30. Note again that this rule applies to the direct and indirect procurement of commodities. Companies must include all commodities received in their raw form, as well as value-added commodities, and products containing those commodities.
 - 31. See SBTN Step 3 methods, accessible on the SBTN website: <https://sciencebasedtargetsnetwork.org/resources>.
 - 32. See the Supplementary Material to Step 1 on how to define a business unit, and how to use the methodology for Steps 1 and 2 with a business unit approach.
 - 33. These practices are only considered once companies have determined the specific locations and activities that they will manage with targets. This will allow for the evaluation of efforts within a specific context, using appropriate indicators.
 - 34. See SBTN Resource library.
 - 35. In other words, companies must estimate total pressure contributions for each pressure category in which they had activities with expected pressure contributions above the global average. Pressure categories for the value chain assessment are listed in Table 6.
 - 36. For both direct operations and upstream impacts, in cases where companies have collected primary data for some of these pressure indicators (e.g., GHG emissions for operational sites), they must opt for utilizing these pressure quantifications rather than using modeled estimates.

Table of acronyms

Biological Diversity Protocol	BDP
Biodiversity State of Nature Indicators	SoN _B
Global Reporting Initiative	GRI
Greenhouse Gas Protocol	GHGP
High-Impact Commodity	HIC
High-Impact Commodity List	HICL
Life Cycle Impact Assessment	LCA
Natural Capital Protocol	NCP
Nature's Contributions to People	NCPs
Pressure-sensitive State of Nature Indicators	SoN _p
Science-Based Targets	SBTs
Science Based Targets Initiative	SBTi
Science Based Targets Network	SBTN
Materiality Screening Tool	MST
State of Nature	SoN
Taskforce on Nature-related Financial Disclosures	TNFD

Supplementary materials

Table S1—Crosswalk of SBTN value chain segments and existing definitions under leading frameworks.

This table provides context for the V1 value chain requirements from SBTN, relating these to recommendations and best practices from other leading frameworks and approaches including, the Greenhouse Gas (GHG) Protocol, Biological Diversity Protocol (BDP), Natural Capital Protocol (NCP), and the Life Cycle Impact Assessment (LCA). Not all activities listed are required for inclusion in the first SBTN methods, please see table 1 in the Method Scope for more detail on SBTN requirements.

RELATED FRAMEWORKS				
Upstream	SBTN	GHGP	BDP & NCP	LCA
Within scope of the first release of science based targets for nature methods	<p>Cradle-to-gate impacts of goods and services purchased by the company.</p> <p>The first science based targets for nature methods <u>require</u> companies to assess and report on the impacts associated with their purchased goods and services (GHGP Scope 3, Category 1). For the Step 1a materiality screening, companies are required to review the projected impacts of their tier 1 upstream activities (those immediately connected to their purchases). As part of this screening, companies must review the SBTN high impact commodity list and report which of these as material for the company.</p> <p>For the Step 1b assessment, companies <u>must</u> ensure that they assess impacts associated with at least 67% of their material upstream impact, defined based on volumes or spend (associated with activities flagged in the Step 1a screening). Companies <u>must</u> include at least 90% of the high impact commodities (in raw or processed form) in their value chain assessment.</p> <p>When estimating the impacts associated with their purchased goods and services in Step 1b, companies <u>must</u> use pressure and state data for the most impactful activity (e.g. extraction) in these supply chains.</p>	<p>Scope 3—Upstream activities. These include</p> <ul style="list-style-type: none">• purchased goods and services (Category 1)• capital goods (Category 2)• fuel and energy-related activities (Category 3)• upstream transportation and distribution (Category 4)• waste generated in operations (Category 5)• business travel (Category 6)• employee commuting (Category 7)• leased assets (Category 8)	Activities of suppliers	<p>“Cradle-to-gate”—typically includes some combination of the following, depending on what the company does in-house versus what it outsources to other companies:</p> <ul style="list-style-type: none">• material or resource extraction• manufacturing and processing (before purchase by the assessing company)• packaging• distribution and storage (when using vehicles and facilities not owned by the assessing company)
Direct operations Within scope of the first release of science based targets for nature methods	<p>Gate-to-gate impacts of all activities conducted by the company within the organizational boundary (defined based on one of the GHGP control approaches).</p> <p>The first science based targets for nature methods <u>require</u> companies to assess and report on the impacts associated with all their directly owned or operated sites and facilities or other assets. Companies should aim to assess as close to 100% of their activities as possible, with allowable exclusions determined through the validation process.</p>	<p>Scope 1—Activities of the reporting company. These include</p> <ul style="list-style-type: none">• production of goods and services• company facilities• company vehicles <p>Scope 2—Impacts associated with the purchase and consumption of electricity, including the production of energy, distribution of electricity, and heating or cooling of facilities used in direct operations.</p>	Activities over which the business holds ownership or control	<p>“Gate-to-gate”—depending on the activities owned or operated by the company, this can again include</p> <ul style="list-style-type: none">• material or resource extraction• manufacturing and processing• packaging• distribution and storage
Downstream Out of scope of the first release of science based targets for nature methods	<p>Gate-to-grave (or reuse) impacts of all good and services sold by the company.</p> <p>The first science based targets for nature methods <u>do not require</u> companies to assess or report on downstream impacts.</p> <p><i>SBTN will be conducting research and will publish a scoping paper (projected to be released in 2024) to advance method development on this topic.</i></p>	<p>Scope 3—Downstream activities. These include</p> <ul style="list-style-type: none">• downstream transportation and distribution (Category 9)• processing of sold products (Category 10)• use of sold products (Category 11)• end-of-life treatment of sold products (Category 12)• downstream leased assets (Category 13)• franchises (Category 14)• investments (Category 15)	Activities linked to the purchase, use, reuse, recovery, recycling, and final disposal of the business's products and services	<p>“Gate-to-grave”—again depends on the activities owned and operated by the company, but typically includes</p> <ul style="list-style-type: none">• distribution and storage• activities associated with the use of a product or service (within households, other companies, or other users such as governments)• end-of-life (e.g., landfilling or incineration)• recycling

THE BUSINESS UNIT APPROACH

SBTN has created the *Business Unit Approach (BUA)* for two main scenarios: first to enable large, complex companies to get started with target-setting by focusing on the parts of their business where they have the most material impacts, most capacity, and traction; and second, to enable companies that are subsidiaries or are clearly in charge of certain operations (e.g., semi-independent brands or geographic business operations) within a larger business, and are able to act autonomously in the target-setting process, to begin target-setting without requiring buy-in and action from the parent company. In both cases, the first business unit(s) for which targets are set are expected to provide proof of the feasibility of the target-setting process and allow for scaling of corporate impact coverage over time. See section 3.3 of this method for more information on determining data readiness.

Business units can be defined using discrete units corresponding to geographic regions, industries, or brands. SBTN *recommends* that business units be used in the target-setting process only when these are a well-established part of the company’s organizational structure (e.g., different units already used for determining decentralized business strategies

or reporting). The business unit approach *should not* be applied to business units that have been delineated solely for the purpose of setting science-based targets for nature. Companies may be asked for an annual report or equivalent to evidence the business unit classification used for the science-based target-setting process.

For either scenario, companies will have time-bound expectations for increasing the coverage of business units. Fulfillment of these requirements will affect companies’ abilities to make claims about their progress against science-based targets for nature.

Companies using the BUA must complete a Step 1b Value Chain Assessment and follow the approach to defining target boundaries and screening for feasibility in Step 2 for all activities associated with business units for which they intend to set targets in Step 3. If companies use this approach, it is also *recommended* that they complete a value chain assessment for all business units where they have the required data, while continuing to collect data to fill gaps for those business units for which they are not yet able to meet those requirements.

Box S1—The need for a business unit approach articulated by companies within the SBTN Corporate Engagement Program.

Can we start with our European business unit, which is ready to take this on?

We would like to set targets for the biggest sector we operate in first

We are not sure that Group-level is the right level for us to start setting targets

SCENARIO 1: COMPLEX COMPANIES

For these companies, a “mapping” of business units is required in Step 1a, as they compile the list of economic activities of relevance in their direct operations and upstream supply chains. Companies in this case *must* only exclude business units once they have performed the Step 1a Materiality Screening for the entirety of the business. To select which business units to begin with for further assessment and target-setting, companies *must* use the outputs of Step 1a (see section 2.4 on screening for materiality). Companies *may* wish to prioritize business units that account for the majority of their overall spend or revenue (i.e., they may wish to consider materiality from a *financial perspective*) in addition to evidence proving materiality from a *societal or environmental perspective*. To exclude business units with activities warranting further analysis, companies *must* justify exclusions and provide sufficient evidence as part of their target validation pre-check, as well as make a time-bound commitment to cover the rest of the (material) corporate boundary: e.g., Ursus Nourishment’s parent company makes a commitment to set science-based targets with all of its brands and direct operations by 2028.

Tracking business unit coverage:

- SBTN will use the “map” created by the company of the full business to track coverage of business units over time. Each unit should be assigned a different score based on societal/environmental materiality. These scores can also incorporate financial materiality and readiness of the unit.
- For each business unit, progress will be checked on the following:
 - Completion of the value chain assessment
 - Validation of targets initiated
 - Target boundary completion for each pressure
 - Target attainment/progress against outcomes.

Time-bounds for ratcheting coverage:

- All companies using the BUA for setting science-based targets for nature are *required* to have completed a value chain assessment for all material business units by 2028 at the latest. This requirement is based on assumptions about the amount of time needed between assessment and target-setting, and the lag times between target-setting and changes on the ground. Considering these periods, 2028 would seem to be the latest possible point to complete the assessment of all business units if a company setting science-based targets for nature today wants to claim and maintain alignment with 2030 goals.

SCENARIO 2: AUTONOMOUS BUSINESS UNITS

- Conduct materiality screening for own business unit (Step 1a) to move through methods (Step 1b– Step 2)
- Conditions for use:
 - Must be able to identify and justify classification of self as autonomous unit in pre-check materials.
 - Must submit high-level screening of full business (parent company) based on publicly available information, e.g., financial or sustainability reports of the full company, as part of pre-check (at the end of Step 2).
 - Must submit Step 1a screening results and initial targets to parent company once validated (at the end of Step 3).

COMPANY A

- Global infrastructure and networks
- Global energy and commodity management
- Green power and thermal generation
- Global retail
- Global e-mobility

COMPANY B

- Marketing and communications
- Supply
- Industry

COMPANY C

- Pharmaceuticals
- Consumer health
- Crop science

COMPANY D

- Beauty and personal care
- Foods and refreshment
- Home care

COMPANY E

- Cement
- Aggregates
- Ready-mix concrete
- Solutions and products

COMPANY F

- Zone Americas
- Zone Europe, Middle East, and North Africa
- Zone Asia, Oceania, and sub-Saharan Africa
- Health science



Figure S1 — Indicator Framework v1.

This illustrative framework supports the implementation of Step 1 and Step 2 of the first release (2023) of Science Based Targets for Nature. The indicators are categorized according to the IPBES drivers of biodiversity loss and further broken down by the eight pressure categories used in the materiality screening (Step 1a). State of Nature (SoN) categories and indicators are categorized according to the pressure indicator that they are most responsive to, and then according to the aspects of biodiversity that are emergent from these.

In Step 1b companies are requested to use these pressure and SoN indicators to assess their value chain (Step 1b). White boxes indicate that those categories are required in the methods, while gray boxes are optional.

Indicators in each category are included here as examples, companies are requested to consult the Step 1 and 2 guidance for further information on the appropriate choice of indicators for their target setting. This diagram is intended to characterize the kinds of indicators that can be used and the relationships between these, but is not considered comprehensive. Additional metrics and detail will be added as part of the SBTN's biodiversity analysis.

