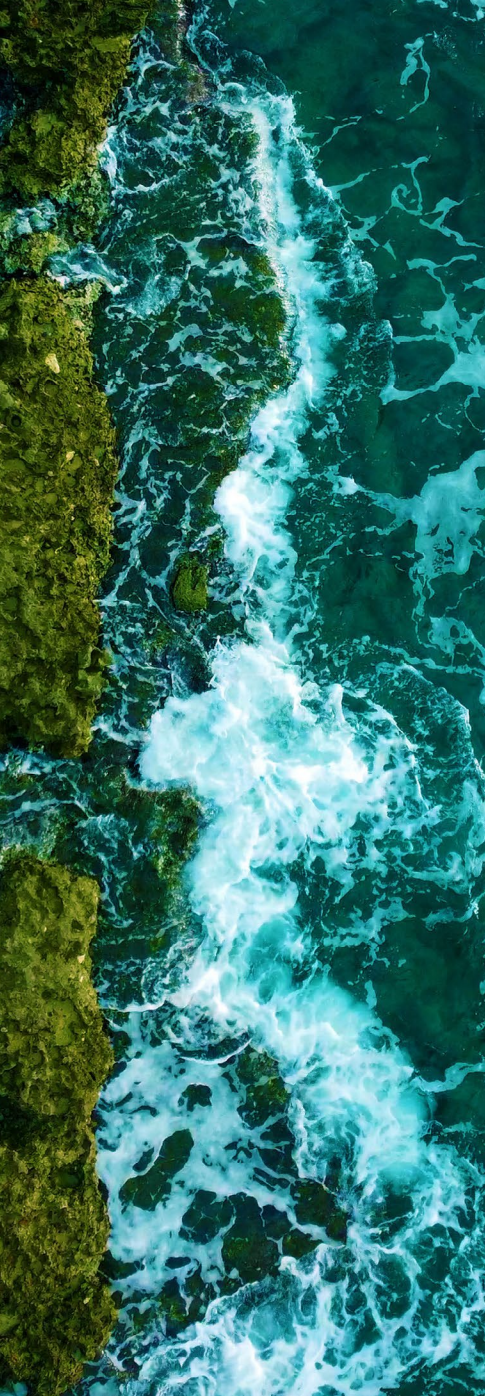
# CORPORATE MANUAL

## for setting science-based targets for nature

SCIENCE BASED TARGETS NETWORK
GLOBAL COMMONS ALLIANCE


Enabling companies to take credible
action towards an EQUITABLE,
NATURE POSITIVE,
NET-ZERO future.



"We now know where to focus our efforts and where action is needed most. SBTN allowed us to move from improvements based on only our own experience to targets that we know are good enough for the planet."

ALPRO

"By doing science-based targets for nature, you are paving the way for other frameworks—at least from a data perspective, the process is extremely rigorous and science-based. Climate and nature are deeply interrelated; SBTN gives us a clear pathway to create a resilient food model."

BEL GROUP

"SBTN has helped us deepen our understanding of our impacts and dependencies on nature, prioritize areas for action and changed the way we are engaging with suppliers to increase traceability and data transparency."

GSK

# FOREWORD

Dear Reader,

In response to corporate demand to make the target-setting process of the Science Based Targets Network (SBTN) as accessible and actionable as possible, I am pleased to share with you the SBTN Corporate Manual.

This resource is intended to help corporate sustainability experts and nature leads set science-based targets for nature, distilling much of our technical guidance to date (as at July 2024) with a focus on clarity and simple language. It lays the groundwork for target setting by helping prepare you for conversations with leadership to gain buy-in, to allocate necessary resources, and to brief staff or consultants. We also have an **interactive version** available on our website. With this foundation, you and your team can then use the comprehensive technical methods available in the **Resources Library** on our website.

A huge thank you to the pioneer target-setting companies and supporting partners. Their invaluable insights have been critical in strengthening our approach to strike the optimal balance between feasibility and scientific rigor.

At SBTN, we believe in the vital role that companies play in halting and reversing nature loss. Setting and implementing science-based targets is a commitment toward a future where both nature—including people—and business thrive. This manual connects your sustainability efforts to this broader mission, providing the tools and resources needed to take credible action.

**Jess McGlyn**
Corporate and Partner Engagement Director, Science Based Targets Network

> **"Setting and implementing science-based targets is a commitment toward a future where both nature—including people—and business thrive."**

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# READING GUIDE

The SBTN Corporate Manual is intended for corporate sustainability experts and nature leads at companies preparing to set science-based targets for nature.

It provides an overview of all existing technical guidance from the Science Based Targets Network (SBTN) for target setting. It will help you understand next steps in your target-setting journey and point you toward further resources to support you in the process.

The manual will be updated over time to incorporate and reflect all advances in the guidance and methods based on the latest science and regulatory developments.

This Corporate Manual synthesizes the July 2024 release of SBTN's technical guidance on Step 1: Assess (V1.1), Step 2: Interpret & Prioritize (V1.1), and Step 3 Freshwater: Measure, Set & Disclose (V1.1), as well as all related validation requirements.

The manual also provides a summary of Step 3 Land: Measure, Set & Disclose (V1) and the Stakeholder Engagement Guidance (V1).

In addition, the manual offers a high-level introduction to upcoming materials on additional biodiversity coverage, namely Step 3: Ocean, Step 4: Act, and Step 5: Track.

*An important note regarding language used in SBTN publications.*

*We use 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:*

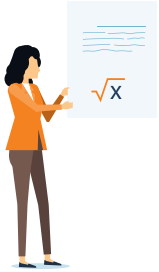
- *The terms "required," "shall," or "must" are used throughout this document to indicate what is required for targets to conform with the criteria.*
- *The terms "recommended" and "should" are used to indicate a recommendation, but not a requirement.*
- *The related terms "may" or "can" are used to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

# WHAT YOU CAN DO WITH THIS MANUAL

The manual serves as an entry point to setting science-based targets for nature. It allows you to:

**Understand** the process of setting science-based targets for nature.

**Prepare** for a conversation with leadership to gain buy-in and allocate necessary resources.




**Brief** technical staff or external consultants to start the target-setting process in detail.

Once you have read this manual, refer to the technical guidance section for a full understanding of the appropriate methods and the requirements for setting and validating your targets.

For more general introductory information on SBTN and science-based targets for nature, resources are available on the SBTN website, including: **what science-based targets for nature are**, **why they are important**, and **how they relate to other sustainability initiatives**.



## Disclaimers for readers

# BEST PRACTICES: PREPARING TO SET SCIENCE-BASED TARGETS FOR NATURE

# BEST PRACTICES: PREPARING TO SET SCIENCE-BASED TARGETS FOR NATURE

By taking the right actions, in the right places, at the right time, companies that adopt science-based targets for nature into their strategies will help turn the tide on nature loss. You will be contributing to a healthier, more resilient, and more equitable world, while also unlocking new business opportunities and securing the long-term viability of your organization.

In preparation for setting science-based targets for nature, companies should begin working on the key activities outlined here. These activities are based on insights drawn from various SBTN and partner-led corporate pilots to date. Additional insights from the companies setting the first science-based targets for nature can be found in the **Case Studies** section on SBTN's website.

## BEST PRACTICES:

### Internal collaboration:

- Develop a nature strategy with clear definition and ambition.
- Gain support from your leadership.
- Coordinate with internal stakeholders.

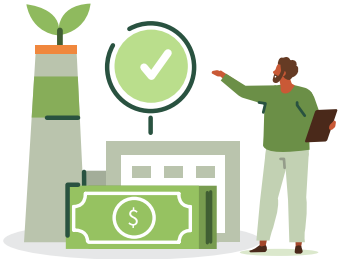
### Resources:

- Understand the data and tools available for use.
- Identify a dedicated technical team.

### Project management:

- Set a dedicated budget.
- Set a realistic timeline for next steps.
- Dedicate time to engage with local stakeholders.

# Internal collaboration



## Develop a nature strategy with clear definition and ambition.

Establish a strong case for why action on nature can create business value (e.g., avoiding crop loss from reduced pollination services). Align your organization's nature ambitions and climate strategies to increase importance, develop a clear value narrative, and address interrelated risks. Use the **Nature Strategy Handbook**, published by the Business for Nature coalition, to develop your nature strategy.

## Gain support from your leadership.

It is critical to get leadership buy-in and support to ensure success. Communicate that integrating your target-setting strategy with your business strategy can create additional value through improved capital flow, resource efficiency, enhanced value proposition, reputational capital, and more. Make sure that they are willing to engage adaptively in the act of target setting as the science, tools, and best practices evolve.

## Coordinate with internal stakeholders.

Ensure buy-in, clear communication, and agreement on the processes needed for target setting among internal stakeholders. These can include teams involved in procurement, finance, operations, business development, research and development, and compliance, in addition to sustainability. Effective coordination with, for example, procurement departments on upstream data is essential. This is particularly true for large companies sitting downstream of the value chain, where the exercise of preparing and collecting data can represent a significant undertaking. And remember, because nature target setting is localized and requires related stakeholder engagement, you will need to build relationships with your local offices.

# Resources

## Understand the data and tools available for use.

You will need in-house internal expertise in sustainability, as well as data and project management capabilities. Ideally, your organization will have upstream visibility and strong relationships with suppliers, at all material locations. It could be helpful to start by looking at SBTN's High-Impact Commodity List (HICL). Your organization might already have some form of existing nature "baseline" of direct operations you can build on, e.g., from previous materiality screenings, setting climate targets through the Science Based Targets initiative (SBTi), risk assessment through the Taskforce on Nature-related Financial Disclosures (TNFD) or disclosures through CDP.

## Identify a dedicated technical team.

Companies piloting the targets advised that specialized skill sets such as expertise in life cycle assessment and footprinting, proficiency in spatial analysis, and deep understanding of environmental data are crucial. Most pilot companies have relied on external consultants to support them through the process (see SBTN's **list of expert advisors**).

# Project management

## Set a dedicated budget.

Your team will rely on this budget to advance toward near-term priorities, including data collection, advances in transparency, priority analysis, recruitment of experts, stakeholder engagement, implementation of solutions to meet targets, and monitoring techniques to track progress. Note that SBTN-required tools are freely accessible, though some additional recommended tools might come at a fee.

## Set a realistic timeline for next steps.

At this stage, SBTN is unable to provide precise estimates of how long each step will take, given the many variables by sector, business model, and value chain complexity, as well as the extreme variety of internal processes among companies and the resources available to each. Over time, we aim to provide more representative data to guide your planning with more precision. Generally, companies starting to set science-based targets from scratch may take up to a year to gather data for their upstream supply chains where they may be sourcing raw materials.

## Dedicate time to engage with local stakeholders.

When developing, implementing, and tracking progress toward targets, engage with local stakeholders as often as necessary to ensure targets are equitable. See the section on the Stakeholder Engagement Guidance for more information.

Every company will have a different journey of setting science-based targets depending on its sector, business model, value chain complexity, internal processes, data availability, technical capacity, and many other factors. However, the end goal is always the same: to set and achieve ambitious targets that will protect and restore nature while increasing your company's resilience and long-term sustainability.


**Additional materials to prepare your organization for setting science-based targets for nature can be found in the "How to get started" section on our website.**

# NAVIGATING SBTN RESOURCES

# NAVIGATING SBTN RESOURCES

The map on the following page provides a high-level overview of the main resources you will use in your journey to set and achieve your science-based targets for nature. The SBTN guidance includes methods for freshwater, land, and climate (through SBTi), with methods for ocean under development. Biodiversity is integrated across all these realms.

The guidance is organized into a 5-step approach that guides you to understand your impacts on nature, prioritize which of those to address first, set science-based targets for different issues, determine the actions to reach your targets, and implement measurement, reporting, and verification (MRV) processes through the whole journey. There are specific validation requirements associated with the methods and an upcoming claims guidance will provide recommendations on how to communicate about your targets. Complementary guidance and resources on stakeholder engagement and biodiversity coverage are also available to support you on your journey.

## Corporate manual iconography

### Realms of nature:

Freshwater Land Ocean Climate

### Biodiversity:

### Pressures on Nature:

Land Use & Land Use Change

Freshwater Ecosystem Use & Change

Marine Ecosystem Use & Change

Other (Biological) Resource Use

Soil Pollution

Water Pollution

Water Use

Greenhouse Gas Emissions

# CORPORATE MANUAL CONTENT MAP

A snapshot of content covered in the corporate manual, summarizing the main resources you will use to set and achieve science-based targets for nature through a 5-step process. Our guidance covers four realms of nature: freshwater, land, ocean, and climate, with biodiversity a connecting element across all realms.

## 1 ASSESS

### Assess Technical Guidance

High-level understanding of the environmental materiality of your activities and an overview of the pressures and the state of nature associated with your value chains.

## 2 INTERPRET & PRIORITIZE

### Prioritize Technical Guidance

Defines the spatial areas where you will set targets and prioritizes among them based on environmental and other factors.


## 3 MEASURE, SET & DISCLOSE

### Freshwater: Technical Guidance

Calculates your baseline of water withdrawals and nutrient loading to freshwater and uses hydrological models to set Water Quantity and Water Quality Targets.

### Land: Technical Guidance

Calculates your baseline for change of natural areas, (agricultural) land use, and other landscape indicators, to set No Conversion, Land Footprint Reduction, and Landscape Engagement Targets.

### Ocean: Technical Guidance

**(IN DEVELOPMENT)**

Will provide target-setting guidance to Avoid and reduce overexploitation (of wild caught seafood), Protect structural marine habitats, and Protect endangered, threatened, and protected marine species (from the impacts of fishing).

### Climate Targets: SBTi's Technical Guidance

**(NOT COVERED IN CORPORATE MANUAL)**

Provides all guidance needed to set SBTs for climate.

## 4 ACT

### Act Introduction

**(IN EARLY DEVELOPMENT)**

Introduces the types of actions you could take to reach your targets.

## 5 TRACK

### Track Introduction

**(IN EARLY DEVELOPMENT)**

Introduces the general Measurement, Reporting and Verification expectations you will have to follow.

### SBTN Validation Requirements →

Indicates the process and completion requirements (Steps 1, 2, and 3) to get your targets validated.

### SBTN Claims Guidance →

**(IN LATE DEVELOPMENT)**

Describes the claims language you can use after your targets are validated.

### Stakeholder Engagement Guidance →

Provides recommendations for engagement with affected stakeholders while recognizing their knowledge and potential contributions to the 5-step SBTN process.

# HOW SBTN METHODS DIRECTLY SUPPORT BIODIVERSITY

Biodiversity is a core component of nature, along with the abiotic elements (such as the water in freshwater and marine systems, the soil, and the atmosphere). It can be viewed through multiple lenses, each intricately dependent on the others: genes, species, ecosystems, and nature's contributions to people (NCP).

## The SBTN guidance does not currently cover genetic diversity but does address threats to species, ecosystems, and NCP. These elements of biodiversity are embedded in all SBTN steps:

- The materiality screening (Step 1a) uses biological resource use and ecosystem conversion, while the value chain assessment (Step 1b) requires estimation of several biodiversity-related indicators. These indicators include pressures of (terrestrial) ecosystem conversion and sourcing of threatened and trade-regulated species, as well as state of nature indicators such as species extinction risk, species endemism, ecosystem integrity and condition, ecosystem connectivity, NCP, and delineated areas of biodiversity importance. Step 2b uses these biodiversity indicators to inform the location ranking that is itself the basis of the Step 2c prioritization process.
- The Step 3 Freshwater methods do not explicitly cover biodiversity indicators, but as explained in that section, biodiversity is embedded within the thresholds that inform the target ambition levels for both the water quantity and quality targets. Namely, the quantity targets ensure the maintenance of environmental flows, and the quality targets ensure the avoidance of eutrophication, both of which are directly tied to biodiversity.
- Within the Step 3 Land methods, the No Conversion of Natural Ecosystem targets account for ecosystem integrity and condition in the definition of natural lands, and refer to the importance of different regions, such as in the delivery of NCP and the preservation of threatened ecosystems and species when determining the target year. The Land Footprint Reduction targets contribute to biodiversity by increasing the land available to restore natural habitats. The Landscape Engagement targets afford companies the flexibility to propose the most relevant biodiversity indicators for the local context, for example for ecosystem integrity.

**SBTN is developing further guidance to expand the current biodiversity coverage. An upcoming paper will assess the key gaps in the suite of methodologies and the best opportunities to cover these gaps, for example:**

- Changes to the methods for Step 1: Assess and Step 2: Interpret & Prioritize will improve the selection and coverage of biodiversity indicators used in the value chain assessment and in the ranking and prioritization processes. Biodiversity will also play a more important role in determining the landscape selection for the Landscape Engagement target and the model selection to support Freshwater target setting.
- The Step 3 Land methods (V2) will embed biodiversity indicators in the thresholds that inform target ambition levels (in the way that the Freshwater methods currently do). Potential indicators include natural vegetation cover and indicators related to soil condition.
- The Step 3 Ocean methods will be the first to cover the pressure category of direct resource extraction. These methods may then be expanded to apply to the terrestrial and freshwater realms.
- Targets mirroring the Landscape Engagement target may be developed soon for both the freshwater and ocean realms. In the medium to long term, SBTN will explore issues such as ecosystem fragmentation and connectivity for both freshwater and terrestrial ecosystems, as well as invasive species, particularly in the freshwater and ocean realms.

The SBTN methods currently available and under development focus on pressure-based targets linked primarily with avoidance and reduction actions. Biodiversity state-based targets, including for species extinction risk and ecosystem integrity and condition, are an area of ongoing exploration and may be developed in the future.

1

# STEP 1:
## Assess your impacts on nature

## AFTER COMPLETING STEP 1 YOU WILL HAVE:

- Identified which of your company's pressures on nature are material to set targets on.
- Decided if you will focus your target-setting efforts on some of your business units first or start with the enterprise as a whole.
- Compiled data to quantify these pressures and the state of nature across your value chains.

# WHY SHOULD I ASSESS MY COMPANY'S IMPACTS ON NATURE?

All of your company's **economic activities** have an impact on nature, for example, by transforming land, extracting resources, or releasing harmful emissions to the environment. In sustainability science, the ways in which an economic activity can affect nature are often called environmental **pressures**.[1] Not all of your pressures will be equally significant in terms of their impacts on nature. You should focus your target-setting efforts on those pressures that are determined to be **material** for the environment from a societal perspective, in other words, if the pressures are in reality or potentially causing significant impacts on people and nature.

By following the Step 1 technical guidance you will achieve two objectives. First, you will gain a broad understanding of which of your economic activities, and the environmental pressures they generate, are material enough to warrant setting science-based targets for nature. Second, you will collect the relevant operational and environmental data on these activities, which will be required to apply the methods outlined in subsequent steps. This helps focus your data gathering and target-setting efforts on the issues that are most important for nature. At the same time, this comprehensive overview of environmental data can also prove useful in supporting your sustainability initiatives and responsibilities beyond the context of science-based targets for nature.

1 SBTN uses this terminology, but other initiatives and frameworks may use equivalent terms, such as direct drivers or impact drivers (used by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the Natural Capital Protocol, respectively).

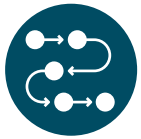
> **"This integrated assessment of nature impacts alongside climate has led us to identify a raw material that, despite minimal GHG emissions, exerts significant impacts on nature."**
>
> SBTN 2024 PILOT COMPANY

# HOW DO I ASSESS MY COMPANY'S PRESSURE ON NATURE?

## Step 1 is organized in two sub-steps:

### Step 1A

Step 1a, the **materiality screening**, is a quick and high-level process where you identify whether your economic activities are material on **eight pressure categories**. You will use the Materiality Screening Tool, which will also provide insight on your upstream material activities. You will then be able to refine the automated results with your own, company-specific data. Your materiality screening must cover all of your company's direct activities in your direct operations and upstream value chains.



### Step 1B

Step 1b, the **value chain assessment**, is a more thorough process, but it is restricted to those activities and pressures that were determined to be material in the materiality screening. In this assessment, you will map your activities and value chains and quantify their resulting pressures on nature. You will also determine how healthy or fragile the **state of nature** is in your operating and sourcing locations. This requires good visibility over your value chains, but full traceability is not immediately required. You may choose to complete this assessment for your whole enterprise or to focus first on some of your **business units**.

You will find a number of tools and resources, including many that are open source and open access, recommended in SBTN's Step 1 Toolbox. You can use any of these, or any other tool that meets SBTN's data quality criteria, to complete the screening and assessment.

## STEP 1A: MATERIALITY SCREENING

TASK 1

### Define your organizational boundary

Provide a list of all the economic activities that fall within your operations and are thus under your responsibility.

TASK 2

### Identify your direct operations and upstream activities

Classify your value chain activities using a standardized economic classification system.

TASK 3

### Identify high-impact commodities in your activities

Report the presence of any commodities in your value chains that are associated with greater risks for nature.

TASK 4

### Screen for materiality

Use SBTN's Materiality Screening Tool to quickly determine which of SBTN's eight environmental pressure categories are material for your activities.

TASK 5

### Refine the results to reflect your company's activities

Optionally, use your own data to refine the screening results in a way that is more representative of your particular business practices.

## STEP 1B: VALUE CHAIN ASSESSMENT

TASK 6

### Select business units for target setting

Optionally, focus your initial target-setting on only some of your business units, keeping the rest for later. This is recommended if you have complex operations.

TASK 7

### Map your value chain activities and locations

Describe direct operations activities and identify their locations. Report all production input volumes procured and identify their sourcing locations.

TASK 8

### Quantify the environmental pressures of your activities

Measure or estimate the pressures of your value activities on land use and land use change, water use, soil pollution, and water pollution.

TASK 9

### Assess the state of nature in each geographical location

Gather information about environmental conditions at each of your value chain locations for indicators such as ecosystem extent, surface water flows, nutrient pollution levels in soil and in freshwater, and ecosystem- and species-level biodiversity.

This infographic describes the main actions you will take to implement Step 1a: Materiality Screening, including the initial screening where you look into what pressure categories such as land use and land use change, water use, soil pollutants, and water pollutants are material for your economic activities.

# STEP 1A: MATERIALITY SCREENING

**TASK 1-2** Define your organizational boundary and identify your economic activities

DIRECT OPERATIONS

UPSTREAM VALUE CHAIN

**TASK 3** Identify high impact commodities in your activities


**TASK 4-5** Use the Materiality Screening Tool to screen each activity's materiality on 8 pressure categories

X *Represents non-material pressures*

# Step 1A. How do I screen my activities for materiality?

TASK

## 1 Define your organizational boundary

Your **first task** is to define your **organizational boundary**. This is a list of the business operations that fall directly within your company's ownership or control, and thus under your responsibility, in the year in which you are completing your assessment. You may use one of three approaches to define the organizational boundary: financial control, operational control, or equity share.

In the financial control approach, you account for the impacts associated with operations that you can direct (e.g., you have the right to the majority of benefits or retain financial risks and rewards); in the operational control approach, you account for operations where you can implement operating policies; and in the equity control approach you account for a percentage of the impacts, equal to the share of equity or economic interest you hold in the operations.

If you have previously set climate targets with SBTi or have defined your organizational boundary for other sustainability initiatives that align with the Greenhouse Gas Protocol (GHGP), we encourage you to use the same approach for SBTN. As a reference, you can consult the **GHGP's guidance** on how to define your organizational boundary.

### Output(s) of this Task:

- List of activities considered in your organizational boundary.

### Prepare for your target validation:

- You will have to justify the approach chosen to define your organizational boundary and provide supporting documentation explaining your activities (such as organizational charts and annual reports).

TASK

# 2 Identify your direct operations and upstream activities

In **Task 2**, you list all the economic activities in your organizational boundary classified by the group-level codes defined by the International Standard Industrial Classification of All Economic Activities **(ISIC) system**. This inventory requires general (i.e., categorical) information rather than specific descriptions of what happens at each site.

You will then use SBTN's **Materiality Screening Tool** to automatically get a list of your (expected) upstream activities. This list is built from known economic input-output relationships between sectors and you should sense-check that each item applies to your company's specific case.

The first release of the SBTN methods does not cover any **downstream** activities, i.e., any economic activities and processes (such as distribution, consumption, and end-of-life) occurring after the sale of your goods and services. You may interpret and adapt the methods to address these parts of your value chains, but this is currently outside the scope of the SBTN methods and targets.

### Look ahead:

- For Step 1b you will require operational and spatial data for all material pressures and activities in your value chains (e.g., volumes of goods and the places where they are produced). This will require you to trace (some of) your sourcing beyond Tier 1 suppliers. This information is not used in Step 1a, but you may start gathering this information already if it helps your data collection process.

### Output(s) of this task:

- Lists of standardized economic activities for your direct operations and for the operations of your suppliers.

TASK

# 3 Identify high-impact commodities in your activities

For your **third task**, you will refer to **SBTN's High-Impact Commodity List (HICL)**, which is a compilation of commodities known to be major drivers of biodiversity loss, including those listed in the EU's new **Deforestation Regulation (EUDR)**. You will prioritize your data collection efforts for these commodities in later tasks.

Check which of these commodities are present in your operations. For example, you may participate in their primary production as part of your direct operations or you may find them in your procurement if you source them for processing, manufacturing, distribution, or any other value chain activity. You must also indicate whether commodities such as soy and palm oil are embedded in animal feed in your value chains.

You must report any high-impact commodity (HIC) in your value chains and indicate in which form (such as raw or processed) you produce or acquire them. The HICL includes a handful of commodities in different stages of transformation. For example, you will find both cattle and (cattle-derived) leather, and both iron and steel. Use the form that is most closely related to your activities.

Record the list of HICs in your direct operations (if you do the primary production) and upstream (if you source the commodity).

**Output(s) of this task:**

- Lists of high-impact commodities in direct operations (primary production) and upstream (sourcing).

TASK

# 4 Screen for materiality

In the **fourth task**, you screen each economic activity for its materiality based on the eight pressure categories required by SBTN: land use and land use change; freshwater ecosystem use and use change; marine ecosystem use and use change; water use; other resource use; greenhouse gas emissions; freshwater pollutants; and soil pollutants. You may include additional pressure categories, such as invasive species or air pollutants, but this is not required.

Using the **Materiality Screening Tool**, select any standardized economic activity from the database and the tool will directly indicate its materiality against each pressure category.

You must also consult the HICL to determine whether any additional pressure categories are considered material for your HICs (on top of those categories that are considered material at the activity level).

### Take note:

- This screening reflects the expected materiality of the economic activity, based on global, sector average data, rather than of your company's specific operations. It provides you with an indicative overview rather than a definite assessment.

### Output(s) of this task:

- Tables showing the expected materiality (Yes/No) of each economic activity (and HIC) against each pressure category.

TASK

# 5 Refine the results to reflect your company's activities

In the **fifth task**, you can use data unique to your organization or operating context to justify that an economic activity in your value chain is significantly different from the global average results given by the Materiality Screening Tool due to different practices, processes, product choices, or regional context.

In other words, you may argue that in your particular case, an activity should not be considered material despite the screening tool indicating otherwise. The opposite situation, where the screening tool indicates an activity is in general not material, but you consider it to be material in your particular case, is also possible. This is important because the materiality screening results will directly inform the scope of the data collection efforts in Step 1b and all subsequent steps of the method.

Note that the screening is done at an activity-wide level, hence the entirety of your operations that fall within that activity classification must be different from the global average to justify changes across all pressure categories at the activity level. You must present all information to support your refinements as part of your target submission for validation.

Although it will be rare, if the results indicate that one of your activities is not material on any of the eight pressure categories, you may exclude it from all following tasks in the process.

### Output(s) of this task:

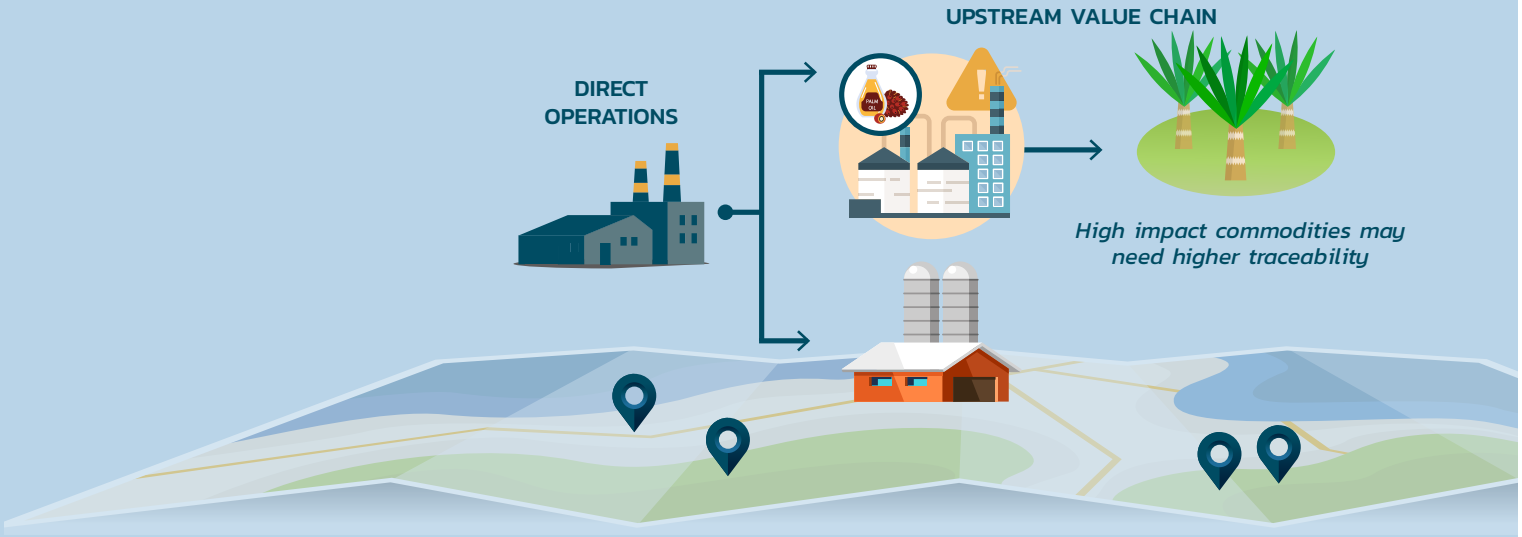
- Tables with refined materiality results (Yes/No) of each economic activity against each pressure category.
- Accompanying information justifying any changes from the outputs of the screening.

This infographic describes the main actions you will take to implement **Step 1b: Value Chain Assessment** where you map your operations and sourcing areas to get an overview of the environmental pressures from your activities and the state of nature in your locations.

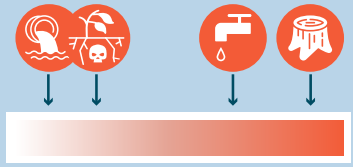
# STEP 1B: VALUE CHAIN ASSESSMENT

**TASK 6** Select business units for target setting based on the material pressures.

**TASK 7** Map your value chain activities and locations




**TASK 8-9** Assess the environmental pressures of your activities and the state of nature in each value chain location.



# Step 1B. How do I assess the pressures of my activities and the surrounding state of the environment?

TASK

## 6 Select business units for target setting

In **Task 6**, you may use the **business unit approach** (BUA) to select discrete parts of your business and focus the rest of the target-setting process (i.e., Steps 1b, 2, and 3) on those, rather than the entire enterprise.

The BUA was designed with large multinationals and conglomerates in mind, to facilitate target setting when not all parts of the business might be equally ready to set targets, for example due to lack of value chain data. It is also appropriate for subsidiaries and units of companies that have a very decentralized decision-making structure, when leadership from these devolved segments of the organization want to set science-based targets before there is complete buy-in from the parent company.

You must identify and select business unit(s) with sufficient operational autonomy and/or support from the C-suite to allow target setting. These business units may not be defined solely for SBTN, instead they must be pre-existing structures in your organization, with, for example, separate operating budgets, profit and loss statements, and financial reporting.

The selected business units should ideally have a high impact on nature relative to other units, as shown by the materiality screening results of the economic activities of those units.

You may also justify your choice by data readiness or capacity to act. Once you have made your selection, extract the outputs of Task 5 related to those business units and proceed to the next tasks of the process. Keep in mind that your target-setting claims will be limited until you have set targets for your whole business, to provide public transparency about the extent and coverage of your targets.

### Output(s) of this task:

- List of selected business units, the rationale for their selection, and justifying evidence.
- Table of economic activities, their materiality results (Yes/No for each pressure category), and their size relative to the whole enterprise, for the selected business units.

### Prepare for your target validation:

- You will need to justify the feasibility to set targets for the chosen business units and that these were already functioning parts of your company, indicate their size relative to the excluded ones, and provide a map of their respective materiality screening results

TASK

# 7 Map your value chain activities and locations

In **Task 7**, you will create a map of your value chain activities, including a description and their locations and, for your upstream segment, the volumes of procured goods and the locations where these are produced and transformed.

Indicate all of your **direct operations activities**, i.e., all those within your organizational boundary. This includes activities happening in your own sites as well as regular off-site activities (especially for sectors such as fishing, extraction, construction, and transportation). Indicate all the locations of these activities using subnational data or, ideally, the most precise scale possible.

For your **upstream**, you only need to focus on your **production inputs**. These are the goods you buy to process, transform, integrate in your products, or resell—this includes raw materials, packaging, and inputs that may become waste or byproducts, as well as inputs such as fertilizers and pesticides (for agriculture) and explosives and solvents (for extraction). All other procurement, such as capital goods, services, and other goods that are not used as production inputs, are out of scope of the assessment. Use your company's procurement and inventory data to build a list of your production inputs. Match these goods against the upstream value chain activities provided by the Materiality Screening Tool for your sector (in Task 2), adjusting the results as appropriate. You should use the value chain activity responsible for the most recent production or transformation stage leading to the product you sourced.

Register the total **volumes** (measured in tonnage or an equivalent metric) associated with each of your production inputs in a typical year. Then, referring to the HICL, estimate the volumes of HIC-derived components in your procurement, disaggregating per commodity and indicating the (combined) total volume.

You will then identify the locations of certain value chain stages that will be the focus of the assessment.

- For HIC-derived [components of] production inputs, the relevant value chain stage is the most impactful production or transformation stage, for each material pressure category, in the upstream life cycle of the commodity.

  For some HICs, the relevant value chain stages may differ depending on the pressure categories. For example, for leather, processing may be relevant for water pollution, while primary production (for the production of the cattle hides) may be relevant for land use and land use change. In general or in absence of information, you should assume that the primary production stage will be the most impactful one.
- For all other [components of] production inputs, it is possible to assess any value chain stage—this can be the most impactful one (as with HICs) or any other, such as the most recent processing or transformation stage.

Before you proceed to the next task, make sure you have identified the relevant value chain locations for at least 67%, by volume, of [the components of] all your production inputs (including HICs) and 90%, by volume, of the (combined) total volume of HIC components, including all EUDR-listed commodities.

Refer to the International Union for Conservation of Nature **(IUCN)'s Red List of threatened species**, and to the Convention on International Trade in Endangered Species of Wild Fauna and Flora **(CITES)' list of species subject to international trade regulations** and identify whether any of these species are present in your operations. For example, you may participate in their extraction as part of your direct operations in sectors such as fisheries or forestry. You may also find them in your upstream value chain if you procure them, either in raw or processed form, as an input for your activities. This may happen in industries such as food, wood and paper, and chemicals and pharmaceuticals, or in any industry that participates in these value chains, as would be the case for transportation and logistics, or retail.

Record the list of species from the IUCN or CITES lists present in your operations.

### Look ahead:

- You will be able to complete Steps 1 and 2 with approximate or estimated locations, but to proceed to Step 3 you may require more precise location data. Your location data will inform your pressure and state of nature assessments (Step 1b, Tasks 8 and 9), determine your target boundaries (Step 2a), and influence your ranking and prioritization (Steps 2b and 2c), so it is important to use the best data possible from the beginning. You should, in all cases, use the most precise location levels available and aim to improve your traceability across your value chains, to improve your capacity to set targets in accordance with the Step 3 guidance.

### Output(s) of this task:

- Tables of direct operations activities, their description, and location; and tables of volumes procured of production inputs, their description, breakdown into relevant components (such as HIC content), and locations for the assessment.
- List of species from IUCN and CITES lists present in value chains (direct operations and upstream).

TASK

# 8 Quantify the environmental pressures of your activities

In the eighth task, you will quantify the pressures associated with the activities in your direct operations and with the production inputs in your procurement. This means you will estimate how much land or water was used, or the amount of pollutant emissions generated, in these value chain stages.

You only need to quantify the pressures that were shown to be material in Step 1a, Task 5, using these indicators:

| Material pressure category | Pressure indicator |
|---|---|
| Land use and land use change | Both required for each location:<br>• Land use (area and description of land management practices)<br>• Land use change (by ecosystem and land use type, since 2020 or earlier) |
| Water use | Either one required for each location, possible to mix across locations::<br>• Water withdrawals (by source)<br>• Water consumption (where water returns match the time, space, and quality of the withdrawals; by source) |
| Soil pollutants | Required for each location:<br>• Nutrient application to soils (from fertilizer application)<br><br>Optional for each location:<br>• Nutrient loading to soil via solid waste (e.g., from organic waste)<br>• Other pollution loading to soil (e.g., acidification or toxic chemicals) |
| Water pollutants | Both required for each location:<br>• Nutrient loading to freshwater via soil (ideally separating nitrogen and phosphorus)<br>• Nutrient loading to freshwater via wastewater (ideally separating nitrogen and phosphorus) |
| GHG emissions | *You are required to follow SBTi target-setting guidance* |

There are two types of approaches to quantify your pressures: measurements and (model-based) estimations.

- **Measuring** means generating the values yourself, for example from sensors, stream gauges, maps, or satellite data. You should always measure your pressures if you have the data and capacity to do it, as it will facilitate target setting and implementation in Steps 3 and 4.
- You can also **estimate** the values using pre-existing databases and tools, such as life cycle analysis tools or publicly available statistical data. These models will generally rely on input data such as the production volumes of an activity, so you will need your procurement data. You can always use estimations to complete Task 8, but you should note that this will limit your capacity to complete Steps 3 and 4 and, in some cases, you may have to recalculate your pressures with measurements to proceed with the process.

If a given activity of volume has zero or near zero associated pressures for a particular pressure indicator, you must still report these values. You should use tools appropriate for your activities, for example those that are tailored to your sector or geographic location. The SBTN Step 1 Toolbox includes a number of recommended tools that can be used in this assessment. Note that if you use an estimation tool that provides aggregated pressure data for the whole life cycle of a product (i.e., cradle-to-grave) you will need to attribute all these pressures to the value chain stage you are assessing instead of allocating only a fraction (i.e., you are required to overestimate your pressures).

For each pressure category (each calculated separatedly), Task 8 will be complete when you have quantified pressure indicators for:

- 100% of direct operations activities;
- at least 67% (by volume) of all your production inputs, including content from HICs; and
- at least 90% (by volume) of your HICs, including 100% of EUDR-listed commodities.

### Output(s) of this task:

- Tables from Task 7, complemented with pressure indicators for all activities.

TASK

# 9 Assess the state of nature in each geographical location

Finally, you will complement your environmental pressure estimates with information on the state of nature for each of the locations included in Tasks 7 and 8.

State of nature indicators describe how healthy or fragile a location is, which helps us understand how serious a given pressure can be for that location. The SBTN methods use two types of state of nature indicators:

- **Pressure-sensitive state of nature (SoNP)** indicators are those that describe (generally abiotic) environmental conditions that are directly affected by the pressures. You have to use those that reflect the material pressure categories of the value chain activities you are assessing in a given location.

- **Biodiversity state of nature (SoNB)** indicators describe the state of biodiversity at the levels of species and ecosystems and of nature's contributions to people (NCP). As biodiversity is affected by all pressure categories, these indicators provide a holistic reference of the state of the environment in a given location that complements all the pressure-sensitive indicators.

  You must assess one ecosystem-level and one species-level indicator, and can optionally assess NCP indicators. Noting that some SoNB indicators only capture terrestrial or freshwater biodiversity, you must use those that are relevant for your activities and pressures. For example, population abundance of freshwater species (SoNB) would be relevant to complement the indicators of water withdrawals (pressure) and water availability (SoNP).

| Material pressure category | SoNP indicators |
|---|---|
| Land use and land use change | Ecosystem extent and ecosystem intactness/ integrity (ecosystem structure, function, and composition) |
| Water use | Surface water flows, as defined by Hogeboom (2020) or by SBTN's Unified Water Availability Dataset, depending on the spatial resolution<br>Optional: Groundwater levels |
| Soil pollution | Nutrient pollution levels in soil or other soil pollution indicator (if nutrients are not relevant) |
| Water pollution | Nutrient pollution levels in freshwater (instream nitrogen or phosphorus concentration), as defined by McDowell (2020) or by SBTN's Unified Water Pollution Dataset, depending on the spatial resolution |

Use the tools in the SBTN Step 1 Toolbox (or other tools meeting SBTN data quality criteria) to check the state of nature values for each location in your direct operations and upstream.

**Output(s) of this task:**

- Tables from Task 8, complemented with SoNP indicators matching the material pressure categories for each activity and at least two SoNB indicators.

# USEFUL RESOURCES

You can find the following materials in the **Step 1 Resources** section of our online target-setting guide:

- Step 1 Technical Guidance V1.1
- Step 1 & 2 Technical FAQ
- High-Impact Commodity List
- Materiality Screening Tool
- Step 1 Toolbox
- SBTN's Data quality criteria
- Unified water quantity layer
- Hogeboom's global water quantity app
- Unified water quality layer
- McDowell's global water quality model results
- Illustrative case study – Ursus Nourishment

# GLOSSARY

**Organizational boundary:** The business operations that fall directly within your company's ownership or control, and are thus under your responsibility for target setting.

**High-impact commodities:** Commodities known to be major drivers of biodiversity loss, including those listed in the EU's new Deforestation Regulation (EUDR), and that are prioritized for data collection in the value chain assessment.

**Materiality:** This describes the environmental significance of an impact on nature, from a societal perspective.

**Pressures:** The ways in which an economic activity can affect nature; for example, water withdrawals, land use change, and pollutant emissions.

**States of nature:** These describe how healthy or fragile nature is in a given location (and how susceptible nature is to a pressure in that location); for example, water availability, ecosystem extent, and pollutant concentrations.

**Business unit:** A discrete part of your operations that can be chosen as the focus of your target setting.

2

# STEP 2:
## Interpret & Prioritize your activities

## AFTER COMPLETING STEP 2 YOU WILL HAVE:

- Defined target boundaries for each material pressure category, setting out which activities and locations require setting science-based targets for nature.
- Ranked locations within these target boundaries to define where to act first based on their environmental materiality.
- Considered other social priorities, dependencies on nature, and strategic business factors along the environmental materiality ranking to identify top-priority locations.

# WHY SHOULD I INTERPRET AND PRIORITIZE MY ACTIVITIES BY THEIR IMPACTS ON NATURE?

In Step 1, you estimated the environmental pressures that result from your activities, as well as the state of nature in your value chain locations. But this overview does not indicate where it is relatively more or less important to focus your target-setting efforts. Step 2 allows you to prioritize by weighing your pressures against the health (or fragility) of the environment in each value chain location. Societal needs as well as corporate, strategic needs are also incorporated to generate a more holistic approach to prioritization that accounts for feasibility and risk.

The main objectives of Step 2 are to rank all locations in your target boundaries by how important it is to act in each one, and then to define a shortlist of top-priority locations for initial target setting. You will also organize your operational and location data accordingly, so as to prepare to set science-based targets for nature in Step 3.

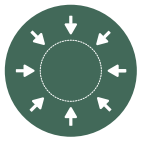


**"After getting the Steps 1 & 2 results, we took quick actions to mitigate risk for some sourcing locations."**

SBTN 2024 PILOT COMPANY

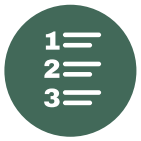
# HOW DO I INTERPRET AND PRIORITIZE MY ACTIVITIES BY THEIR IMPACTS ON NATURE?

## Step 2 is organized in three sub-steps:



### Step 2A

Step 2a, the **target boundary delineation**, is the key part of Step 2. You will define **target boundaries** for four pressure categories, with each of these boundaries consisting of the locations of all material activities in that category and value chain segment (i.e., the direct operations and upstream segments). Eventually, science-based targets will be required to cover the entirety of the target boundaries, although Step 2c will help you make a small selection to start with. Furthermore, any material activities with limited traceability will be set aside for the time being.




### Step 2B

Step 2b, the **interpretation & ranking**, requires you to process the environmental indicators from Step 1 to make their values comparable; this means to normalize their ranges and harmonize their spatial scopes. Then, you integrate pressure and state of nature indicators for all locations into a combined ranking showing the relative importance of taking action in each one, on account of environmental factors.

### Step 2C

Step 2c, the **prioritization**, is the moment where you bring in social justice and stakeholder priorities, business dependencies on nature, and strategic priorities (including risks and financial materiality). You can either apply a cutoff within each individual target boundary, or consider the potential for synergy across target boundaries, to determine top-priority locations to advance for initial target setting.

## STEP 2A: TARGET BOUNDARY DELINEATION

TASK 1

### Determine target boundaries for each pressure category

Delineate the spatial areas that include all your material activities and locations for each pressure category and that will be subject to target setting.

TASK 2

### Place volumes with insufficient value chain traceability in a separate target boundary

Upstream locations known at national level or with less precision will require additional traceability before you set targets for them.

## STEP 2B: INTERPRETATION & RANKING

TASK 3

### Harmonize spatial units

Group all activities into spatial units with compatible pressure and state of nature location resolution. Aggregate the pressure data at each spatial unit.

TASK 4

### Create index values for all pressure categories

Normalize and then multiply the pressure and correspoding pressure-sensitive SoN indicators at each spatial unit.

TASK 5

### Rank locations by their environmental urgency to act

Rank locations into a combined ranking on account of their Index values and biodiversity State of Nature data.

## STEP 2C: PRIORITIZATION

TASK 6

### Understand social and justice priorities through stakeholder engagement

Map stakeholders and identify local needs and relationships in top-ranked locations.

TASK 7

### Assess business dependencies on nature

Identify how your continued operations rely on nature's contributions to people in top-ranked locations.

TASK 8

### Consider strategic priorities, risks, and capacity for action

Evaluate the feasibility to set targets and regulatory or reputational risks to take (or not take) action in top-ranked locations.

TASK 9

### Prioritize within target boundaries

Determine top-priority locations to set targets on account of all factors and the potential for co-benefits across target boundaries.

# STEP 2A: TARGET BOUNDARY DELINEATION

This infographic describes the main actions you will take to implement Step 2a: Target Boundary Delineation where all material activities for each pressure category are placed in separate target boundaries depending on the value chain segment and level of traceability.

**TASK 1** Determine target boundaries for each pressure category:

Include all material direct operations and upstream value chain locations:

**TASK 2** Upstream volumes with insufficient traceability are placed in Target Boundary B


**DIRECT OPERATIONS TARGET BOUNDARY**
*Subnational and more precise locations*


**UPSTREAM A TARGET BOUNDARY**
*Subnational and more precise locations*


**UPSTREAM B TARGET BOUNDARY**
*National, multinational, and unknown locations*

# THE CONCEPT OF TARGET BOUNDARIES

The SBTN guidance requires that you delineate your target boundaries. A target boundary is the set of company activities in a given value chain segment, the locations where they take place, and their associated pressures on the environment, that must be covered by science-based targets. Target boundaries are defined based on the environmental materiality of the activity (as determined in Step 1a), hence they are specific to each pressure category. They are delineated separately for direct operations and upstream activities.

While Steps 2b and 2c will help you to identify in which locations within your target boundary you should set targets first, you will need to develop a plan to continue making progress to set targets for the rest of the activities and locations in the target boundary. SBTN does not have specific requirements on the pace of progression, but this will be integrated in a future version of the methods, after learning from a larger group of companies implementing and validating targets.

# Step 2A. How do I delineate my target boundaries?

TASK

## 1 Determine target boundaries for each pressure category

For each pressure category of land use and land use change, water use, soil pollutants, and water pollutants, identify and group all the direct operations activities that were defined as material in Step 1a, Task 5, along with their associated locations and other information. These activities and the spatial area they encompass are defined as the "[name of pressure category] **direct operations target boundary**."

Similarly, for each of those four pressure categories, identify all the upstream activities that were defined as material in Step 1a, Task 5. Identify the locations, associated with the most impactful value chain stages in Step 1b, Task 7, that are known at least at subnational level. These activities and the spatial area they encompass are defined as the "[name of pressure category] **upstream target boundary A**."

All activities in the direct operations target boundaries and the upstream target boundary A are considered suitable for target setting in Step 3 in the near term. Depending on the granularity of the spatial data, in some cases you may need to refine the data before actually setting targets. Note that since there are four pressure categories in scope, this will result in eight separate target boundaries (corresponding to two value chain segments × four pressure categories).

**Take note:**

- You should never merge or combine the activities or data belonging to different target boundaries.

**Output(s) of this task:**

- Direct operations target boundary and upstream target boundary A delineated for each of the required pressure categories.

TASK
2

# Place volumes with insufficient value chain traceability in a separate target boundary

In Step 2a, Task 1, all upstream activities for which the location was not known at least at the subnational level were left out of the upstream target boundary A. These would be locations known at national level, multinational (regional) or continental levels, or otherwise completely unknown.

Most of Step 3 requires traceability to local or subnational levels. If it is not feasible for you to achieve this level of visibility over your value chains in the short term, you will exclude these volumes from all subsequent tasks in Step 2 and Step 3.

Group these activities, their associated volumes, and locations (including unknown locations), and label them as "[name of pressure category] **upstream target boundary B**."

Separating some upstream activities into target boundary B recognizes existing industry-wide challenges in supply chain traceability. Target boundary B was introduced to increase feasibility given the current realities of companies' traceability. You will not be required to set targets for these locations immediately. Upcoming guidance will provide you with further clarity on actions you may need to undertake to improve your traceability and on specific timelines to complete this exercise.

### Look ahead:

- SBTN recommends that companies increase their traceability of volumes in target boundary B and perhaps implement additional requirements to ensure (near-) full value chain coverage before a new validation. SBTN is developing complementary guidance to support your efforts to increase value chain traceability.

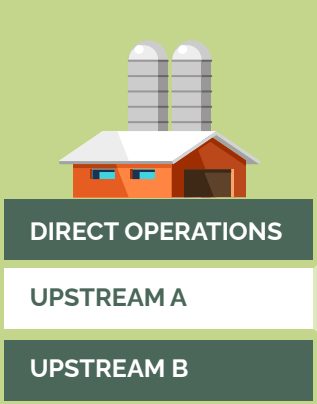
### Output(s) of this task:

- Upstream target boundary B delineated for each of the required pressure categories.

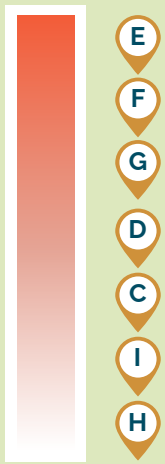
This infographic describes the main actions you will take to implement Step 2b: Interpretation & Ranking and 2c: Prioritization to define the top priority locations in each target boundary on account of a variety of environmental, social, and strategic factors.

## STEP 2B: INTERPRETATION & RANKING

**TASK 3-5** Rank all locations for each target boundary by the environmental urgency to act there

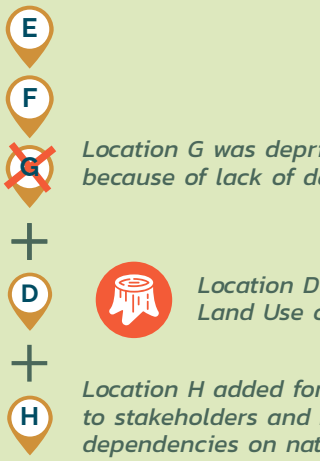



*Water Use Pressure on Nature*




## STEP 2C: PRIORITIZATION

**TASK 6-8** Inform your prioritization by social and justice issues, business dependencies on nature, and strategic priorities and capacity to act in each location.




*Location G was deprioritized because of lack of data*

*Location D added for Land Use co-benefit.*

*Location H added for importance to stakeholders and business dependencies on nature.*

**TASK 9** Make a final selection of priority locations in each target boundary based on the ranking, additional prioritization factors, and potential for co-benefits.

# Step 2B. How do I rank my locations?

TASK

## 3 Harmonize spatial units

The pressure and state of nature indicators associated with each of your activities will likely be defined at different spatial scales. For example, a pressure indicator might be associated with a given coordinate or country of origin, while the associated state of nature indicator might refer to a subnational location or landscape division (such as a water basin). Of the two scales used for the same activity, select the one that is coarser in each case (i.e., less specific or less granular, such as the country level instead of the landscape).

Group all activities that fall within the same locations. For example, if you identified that a water basin is the coarser scale for a given activity, you will make a cluster of all other activities (and their volumes and pressures) that fall within the same water basin.

Aggregate the pressure values of all activities that fall within the same locations. For example, you would add the pressures (water withdrawals) of all activities in the water basin.

### Take note:

- This task, as well as all others for Step 2b and Step 2c, are only applicable for your direct operations and activities in upstream target boundary A.

### Output(s) of this task:

- Tables of your activities, along with their respective pressures and state of nature indicators, with their location data changed to harmonized spatial units (a separate table for each target boundary).

TASK

# 4 Create index values for all pressure categories

In **Task 4**, you will combine the pressure and State of Nature values at each location into a **pressure-sensitive Index Value ($I_p$)**, calculated as follows:

$$I_p = P \times SoNP$$

Before creating the index value, you must normalize the pressure and state of nature indicators. Record the $I_p$ values at each geographical location and associate them with the specific activities in those locations.

The pressure-sensitive index value will allow you to consider the relative urgency of acting in different geographic locations based on the magnitude of your pressures and how fragile the state of nature is in those locations.

Remember that this task applies to each target boundary separately (so there will be separate pressure index values generated for each of the target boundaries).

**Output(s) of this task:**

- Tables from Task 3, with $I_p$ values added for each location (a separate table for each target boundary).

TASK

# 5 Rank locations by their environmental urgency to act

For **Task 5**, you will create two separate rankings, one based on the $I_p$ values and one based on the SoNB values, and then combine them.

For each target boundary, rank the locations based on their $I_p$ values from highest to lowest (where highest denotes the places that are most degraded or at risk). At this point, you will also be able to exclude certain activities and locations from the Freshwater target boundaries (water use and water pollution). This will be the case when the basin represents less than 1% of your total pressures and the state of nature is healthy (meaning that there is little to no need for change there).

Create a second ranking of the (same) locations in the target boundary considering their SoNB values (once again, where highest denotes the places that are most degraded or at risk). As you collected at least two biodiversity indicators in Step 1b (e.g., one at the species level and one at the ecosystem level), you first need to harmonize their spatial resolution and normalize them in the same way as you did with the pressure and SoNP indicators. For each location, keep only the highest of the two SoNB values and create a separate SoNB ranking with these values.

You will now integrate these two separate rankings into a combined ranking. In this process, you take the highest-ranked location(s) in either of the separate rankings and place them in the first position of the combined ranking. To avoid repetitions, and assuming these were two different locations, cross both of them out from the separate rankings. You will then take the locations in the next highest position (of either ranking) and place them in the second position of the combined ranking. Once again, cross out these locations from the separate rankings, to avoid repetitions.

As you continue with this process, your **combined ranking** will show, in the highest positions, the locations that are ranked as the most important based on either their Ip or their SoNB values, and leave the locations that are not ranked highly on either the Ip or SoNB lists in the lowest positions. This combined ranking will inform your prioritization in the next task.

### Output(s) of this task:

- Tables from Task 5, with the locations reordered by their combined ranking values (a separate table for each target boundary).
- **As intermediate outputs:** You will need to create separate tables for the $I_p$ ranking and the SoNb ranking, but these will not be used beyond this task.

# Step 2C. How do I prioritize my locations for target setting?

TASK 6

## Understand social and justice priorities through stakeholder engagement

Tasks 6, 7, and 8 offer three complementary approaches to complement your ranking based on environmental urgency with additional factors. You must complete at least one of these tasks (or complete any combination of them), before proceeding to Task 9.

**Task 6** allows you to identify what social and justice issues or societal goals are relevant in your higher-ranked locations (from the combined ranking produced in Task 5) and to consider prioritizing those locations for your initial or next round of target setting.

To complete Task 6, you must first undertake a stakeholder mapping process, identifying local stakeholder needs (including their reliance on NCP), existing stakeholder relationships, and opportunities for collaboration with stakeholders as part of the target-setting (Step 3) or achievement (Step 4) process. You should emphasize Indigenous peoples, local communities, and other affected communities in your mapping efforts. SBTN's Stakeholder Engagement Guidance, introduced in the upcoming technical guidance section of this manual will be a useful resource to prepare for and complete this task.

**Output(s) for this task:**

- Documentation of needs, relationships, and opportunities in assessed locations.

TASK

# 7 Assess business dependencies on nature

**Task 7** allows you to identify how your company's continued operations rely on NCP (i.e., ecosystem services) in your higher-ranked locations (from the combined ranking produced in Task 5) and to consider prioritizing those locations for your initial or next round of target setting.

You can use datasets such as ENCORE to quickly screen your activities for their general (i.e., sector-average) dependencies on nature. The methodology offered by the **Nature Risk Profile** can help you calculate your dependencies in specific locations. You can find additional recommended tools in the SBTN methods and toolbox to complete this assessment.

**Output(s) of this task:**

- Assessment (quantitative or qualitative) of dependencies on nature in chosen locations.

TASK

# 8 Consider strategic priorities, risks, and capacity for action

**Task 8** allows you to account for strategic and feasibility factors in your higher-ranked locations (from the combined ranking produced in Task 5) and to consider where those factors warrant adjusting your priority locations for your initial or next round of target setting.

In terms of feasibility, you should consider where you have the data quality necessary to proceed to Step 3 or if you will be able to acquire it. For example, having measurements of your pressures, rather than estimations, and knowing your locations at the right level of spatial granularity will greatly increase your ability to set targets and increase your flexibility to take actions to achieve them. A quick assessment of your options to increase your traceability where data is lacking can be considered as part of this task, for example through your existing certification efforts and established supply chain relationships.

In terms of strategic importance, you can consider regulatory or reputational risks that you may face from (not) acting in certain locations—for example, in jurisdictions where regulation may be changing soon or that are more heavily scrutinized by the public. You can also consider the strategic significance of certain locations, for example through their financial materiality for your operations, their historical significance for your organization, or the prospects for growth and new business opportunities.

**Output(s) of this task:**

- Documentation of feasibility and strategic factors in assessed locations.

TASK

# 9 Prioritize within target boundaries

Having completed at least one of the three preceding tasks, proceed to **Task 9** to select a shortlist of priority locations to set targets on in your first or next round of target setting. All activities within your target boundaries must eventually be covered by targets, but you may wish to prioritize certain locations.

You must take your combined rank from Task 5 as the basis for this selection and review the information gathered for each location in Tasks 6, 7, and 8 next to that rank. You may apply one of two approaches to make your final priority list: a target boundary-specific cutoff or a cross-boundary cutoff accounting for co-benefits.

## Prioritization within individual target boundaries

**For the water quantity and quality target boundaries:**
Define the top 10 (or top 10% if you have more than 100) of the locations in the ranking as top priority in each target boundary. Remember that this is done separately for direct operations and upstream sections.

In the methods for Step 3 Freshwater, top-priority locations are those where you will spend additional efforts seeking to use local hydrological models when setting Freshwater Quantity and Freshwater Quality targets.

**For the land use and land use change and soil pollution target boundaries:**
Designate the top two locations of each of these target boundaries as the top-priority locations. Note what percentage of the spatial area of each of these target boundaries is covered by this location. Your Landscape Engagement targets in Step 3 will cover one or two of these locations (depending on their size).

## Prioritization across target boundaries (for co-benefits)

Certain activities and locations may be highly ranked across multiple target boundaries, without necessarily being in the top-priority selection. You may identify these locations and consider them as high priority (next to the ones previously selected), in order to take advantage of co-benefits from action on multiple-issue areas.

### Output(s) of this task:

- Shortlists of the top-priority locations for each target boundary and (for the land use and soil change pollution lists) the associated land surface of the locations.

# USEFUL RESOURCES

You can find the following materials in the **Step 2 Resources** section of our online target-setting guide:

- Step 2 Technical Guidance V1.1
- Step 1 & 2 Technical FAQ
- ENCORE Dataset
- Stakeholder Engagement Guidance
- Nature Risk Profile Tool
- Illustrative case study – Ursus Nourishment

# GLOSSARY

**Target boundary:** The set of company activities in a given value chain segment, the locations where they take place, and their associated pressures on the environment, that must be covered by science-based targets.

**Pressure-sensitive index value ($I_p$):** An index value that combines the pressure and state of nature indicators at each location, used to consider the relative urgency of reducing pressures at a given location.

**Combined ranking:** An index that combines the pressure-sensitive index value and biodiversity state of nature indicators to define the relative urgency to act in a given location.

**Dependencies (on nature):** These describe the reliance of a company on nature (e.g., natural resources or ecosystem services) for its business operations; for example, agricultural companies depending on pollination from biodiversity or from water catchment areas for underground water withdrawals.

3

# STEP 3:
## Measure, Set & Disclose Freshwater Targets

## AFTER COMPLETING STEP 3 YOU WILL HAVE:

- Identified water quantity or water quality models with which to set targets.
- Calculated your baseline water withdrawals or nutrient pollutant loading in the basins where you are setting targets.
- Calculated targets for water quantity or water quality, in accordance with the needs of nature.

# SETTING FRESHWATER SCIENCE-BASED TARGETS

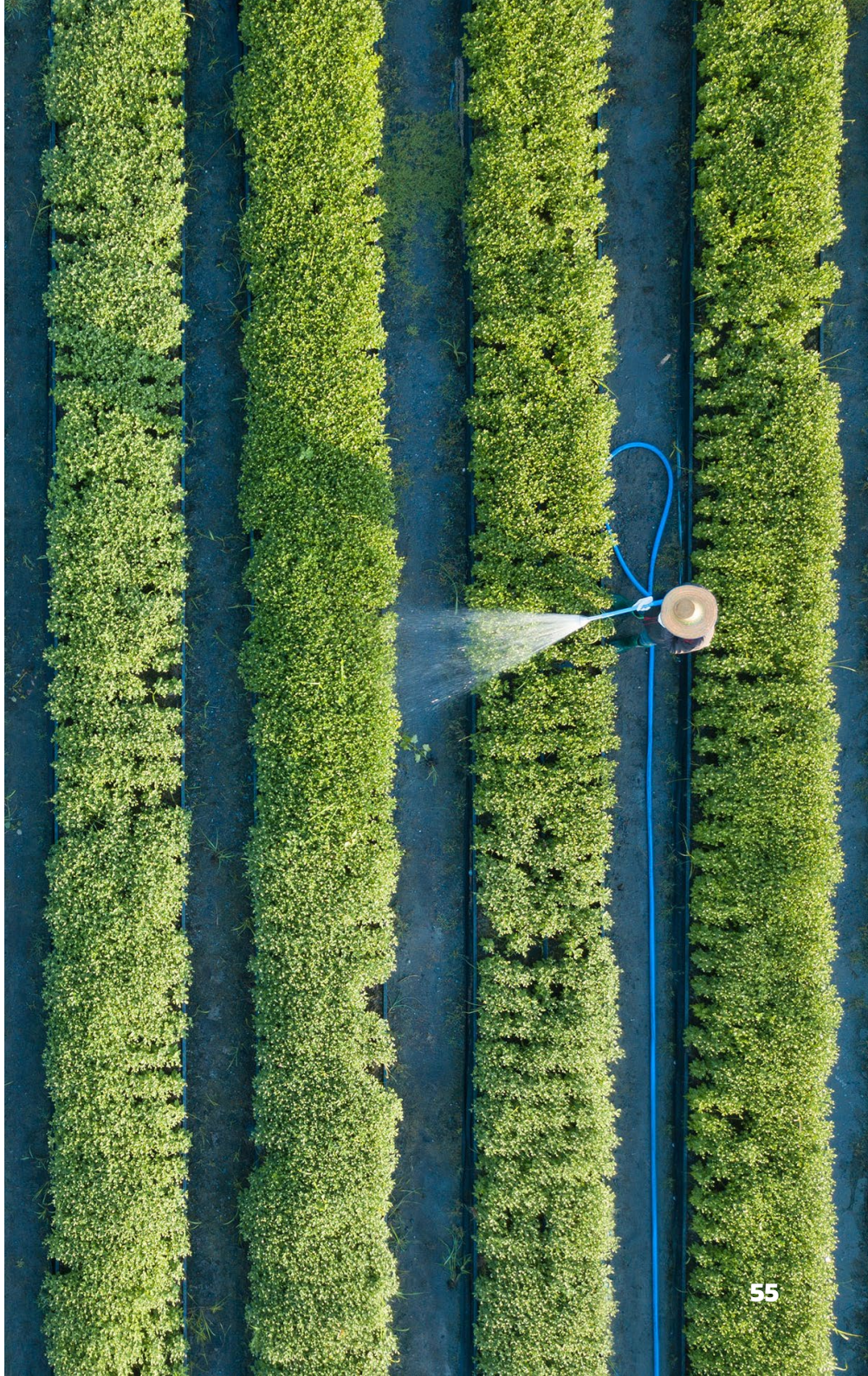
The Step 3 Freshwater methods for **freshwater quantity (water withdrawals)** and **water quality (nutrient loading)** will help you define targets to reduce your environmental pressures on freshwater systems in accordance with the capacity of the environment and the current realities of human pressures on these systems. This approach will result in targets with the right ambition levels, grounded in science, rather than simply providing a general direction of travel.

> **"[SBTN has had] a tremendous change because our water ambition has a lot of legacy in it... it was always driven by reduction, metric efficiency, and regulation, not eutrophication."**
>
> SBTN 2024 PILOT COMPANY

More information on why freshwater science-based targets are important and how they connect to related corporate water stewardship initiatives can be found **here**.

After completing Step 2, you will have identified which of your sites have the most opportunities for positive impacts given several environmental, societal, and corporate factors. These sites will be located in particular basins, with unique hydrological conditions in terms of the volume and quality of the water flowing through the basin. Basins will also have different capacities to sustain environmental pressures, such as water withdrawals and nutrient pollutant loading (that you quantified earlier for your own activities), before compromising the health of the environment.

The main objectives of Step 3 Freshwater are: (i) to identify an appropriate hydrological model for the basin and then to use this model to determine the basin-wide reductions to water withdrawals and nutrient loading required to safeguard the health of the basin; and (ii) to define your own company's pressure reduction targets by applying the equal contraction of efforts allocation approach.



# HOW DOES ACTING ON MY FRESHWATER TARGETS CONTRIBUTE TO NATURE AND BIODIVERSITY?

Many pressures from human activity affect the functioning of healthy freshwater systems. In terms of **water quantity**, the current version of the Step 3 tasks focuses on water withdrawals—the extraction of water from surface sources (rivers and lakes) and groundwater sources (aquifers).

Water withdrawals reduce water volumes in the environment and can decrease the capacity of the environment to both sustain plants and animals in the ecosystem and to meet human needs, including drinking water, hygiene, recreation, and transportation. Reductions in water flows or the resulting changes in the ecosystem may also affect the soil structure, the local climate, and even **water quality** by increasing the relative concentration of pollutants, among many other potential impacts.

Science-based targets for water **quantity** are calculated so that **environmental flows** are maintained in each basin; these are the minimum water flows required to sustain ecological processes and safeguard habitat and other requirements for the survival of species. Thresholds for groundwater safeguard freshwater connectivity by averting groundwater depletion.

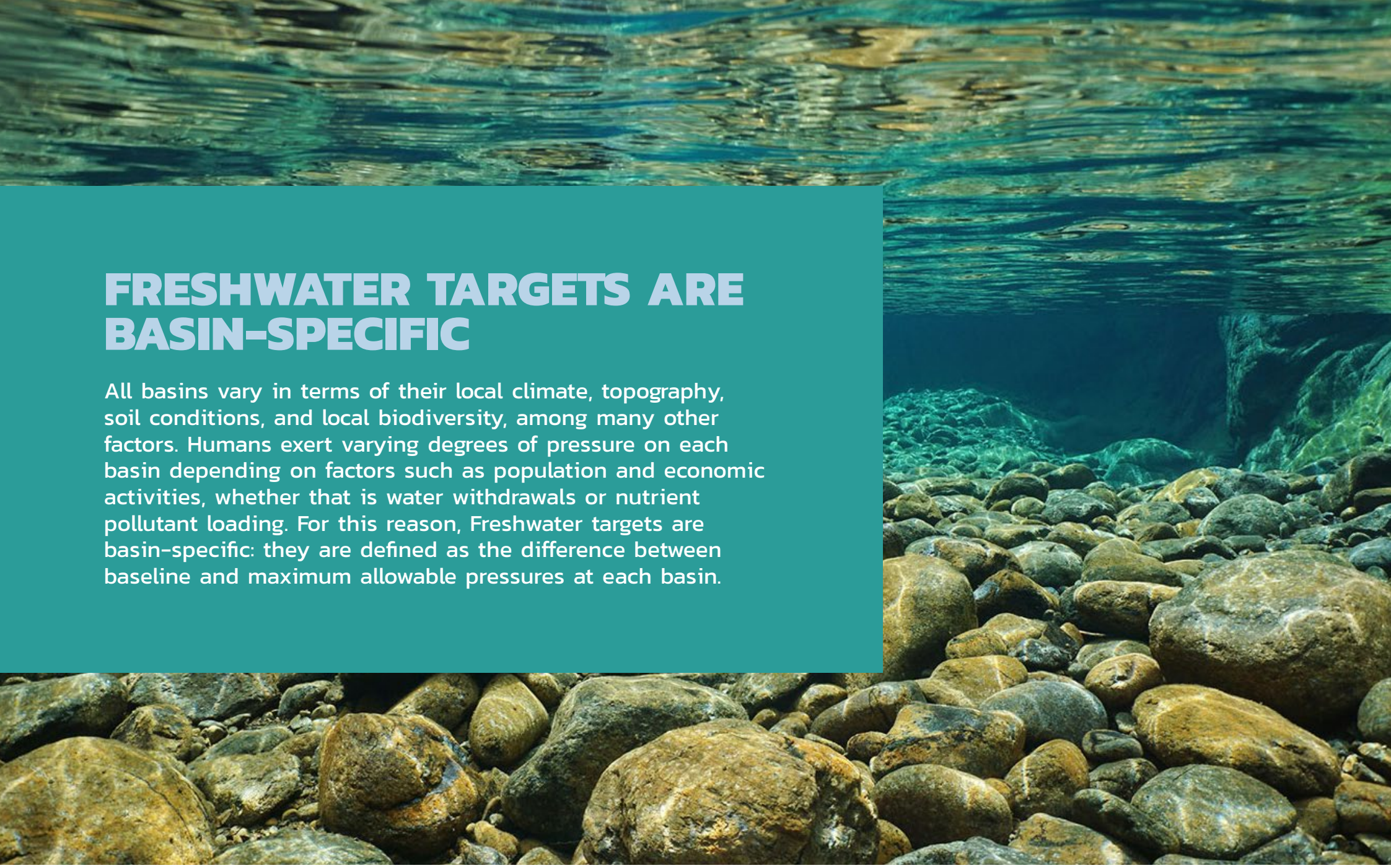
Other pressures on water **quantity**, such as the use of rainwater, disruptions in water systems from infrastructure (including dams), and the diversion of water volumes between basins are not covered by the current version of the methods.

In terms of **water quality**, nutrient pollution is the focus of the current version of Step 3 methods, specifically the loading of nitrogen and phosphorus.

Nitrogen and phosphorus, found naturally in water and soil, are essential for the growth of all living organisms, including aquatic life. However, in large concentrations, these nutrients result in fast and excessive growth of organisms such as algae and cyanobacteria. As these organisms eventually die, the decomposition of their biomass depletes the oxygen dissolved in water systems, leading to the asphyxiation of other aquatic life. This process, called eutrophication, may also release toxins into the environment (if produced by algae and cyanobacteria) and block the sunlight from other aquatic plants. Eutrophication may extend beyond freshwater systems to coastal areas as oxygen-depleted water flows down rivers and into the ocean.

Science-based targets for water **quality** are calculated so that nutrient concentrations in water systems remain below the threshold that leads to excessive growth of algae and cyanobacteria, avoiding the effects of eutrophication.

Other elements and activities that affect water **quality** are out of scope of the current methodology, including loading of other pollutants (beyond nutrients) as well as activities that affect turbidity (e.g., sediment release) or change the water temperature (e.g., release of cooling water).



# FRESHWATER TARGETS ARE BASIN-SPECIFIC

All basins vary in terms of their local climate, topography, soil conditions, and local biodiversity, among many other factors. Humans exert varying degrees of pressure on each basin depending on factors such as population and economic activities, whether that is water withdrawals or nutrient pollutant loading. For this reason, Freshwater targets are basin-specific: they are defined as the difference between baseline and maximum allowable pressures at each basin.

# HOW DO I MEASURE, SET AND DISCLOSE MY FRESHWATER TARGETS?

## Step 3 Freshwater is organized into four sub-steps:

### Step 3A

Step 3a, the **hydrological model selection**, consists of a consultation process with stakeholders resulting in the identification of an appropriate hydrological model, local or global, to use to set targets in the basin. The consultation is facilitated by a decision tree that helps you focus the more resource-intensive parts of the consultation on the higher-priority basins and provides recommendations of what to do when local models are not immediately found.

### Step 3B

Step 3b, the **baseline pressure calculation**, partially draws on the environmental data acquired in Step 1. The main objective is to identify any other activities located in the same basin and to aggregate the pressures coming from all of them so that the targets cover all of your activities in the area.

### Step 3C

Step 3c, the **environmental thresholds identification**, uses the models identified in Step 3a to understand natural (i.e., in the absence of human activity) and real (i.e., observed) conditions of the basin and, based on these data, the models estimate how much environmental pressures should be reduced at the basin level (i.e., beyond your individual activities) to safeguard ecological processes.

### Step 3D

Step 3d, the **freshwater target setting**, is the step in which you define your company's targets. You do this by applying the basin-wide required reductions to your own baseline pressures for the basin.

# HOW IS BIODIVERSITY ADDRESSED IN STEP 3 FRESHWATER?

Although the Freshwater methods do not explicitly cover biodiversity indicators, biodiversity is embedded within the thresholds that inform the target ambition levels for both the quantity and quality targets. Namely, the quantity targets ensure the maintenance of environmental flows, and the quality targets ensure the avoidance of eutrophication, both of which are directly tied to biodiversity.

## STEP 3A.
## HYDROLOGICAL MODEL SELECTION

TASK 1

### Identify the basin of activity or location
Identify the river basin (Pfastetter Level 4 or 5) where your prioritized site is located.

TASK 2

### Consult SBTN threshold tool for local models
Check SBTN's model database for local hydrological models for that river basin. If there is one, select it to set targets and go to Task 6.

TASK 3

### Consult national stakeholders
If no local model was found in Task 2, ask governmental offices and NGO stakeholders in the country for suitable local models to set targets. If there is one, select it to set targets and go to Task 6.

TASK 4

### Consult local stakeholders
If no local model was found in Task 3, ask local communities and experts in the region for suitable local models to set targets. If there is one, select it to set targets and go to Task 6.

TASK 5

### Select global model (as appropriate)
If no local model was found in the previous tasks, use the global hydrological models preselected by SBTN to set targets.

## STEP 3B.
## BASELINE PRESSURE CALCULATION

TASK 6

### Compile company activities in the basin
Check the spatial coverage of the model and aggregate the pressures from all sites in that area.

TASK 7

### Calculate baselines
Aggregate the pressures from all those sites to a total for the area covered by the model.

## STEP 3C.
## ENVIRONMENTAL THRESHOLDS IDENTIFICATION

TASK 8

### Apply modeling approach for the basin
Use the model to obtain information on the current and desired state of nature for the basin in terms of water quantity or water quality.

TASK 9

### Calculate required, basin-wide pressure reductions
Use the data to estimate the required reduction percentage for water pressures in the whole basin.

## STEP 3D.
## FRESHWATER TARGET SETTING

TASK 10

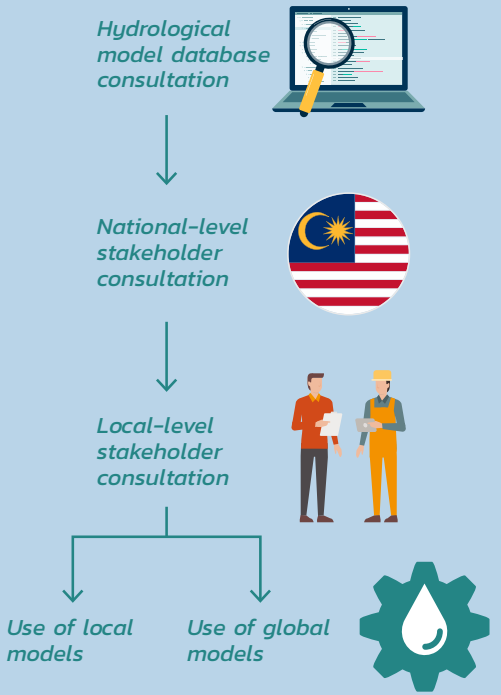
### Set company water quantity and quality targets
Apply the reduction percentage to your own baseline of water withdrawals or nutrient pollutant loading.

# STEP 3A. HYDROLOGICAL MODEL SELECTION

This infographic describes the main actions you will take to implement Step 3a: Hydrological Model Selection where you will search for a local hydrological model for the specific basin where you will set targets, or use the preselected global models if local ones are not available.

**TASK 1** Water targets are basin-specific and cover all company activities in that basin.


**TASK 2-5** A multi-step search and consultation process will help identify an adequate hydrological model.



# HYDROLOGICAL MODELS USED IN STEP 3 FRESHWATER

As explained in the Step 3 Freshwater methods, appropriate models are used to help understand the unique context of each basin regarding its water quantity and water quality. Within each of these pressure categories, SBTN distinguishes two types of models: global models and local models.

Global models allow wider application of the method due to greater spatial coverage. The availability of local models and thresholds is more sparse, but they provide better accuracy when setting targets.

SBTN requires companies to identify appropriate local models for their top-priority basins. Companies need to consult national and local stakeholders to identify these models, and the first tasks of the Step 3 Freshwater methods explain this search process.

SBTN has also identified and provided global models for water quantity and water quality that can be used in locations that are ranked lower in your prioritization and/or do not have local models available (you will find these in Task 5).

# 3A. How do I select a hydrological model for the basin?

TASK

## 1 Identify the basin of activity or location

The first task in Step 3 Freshwater methods is to identify the water basin in which the activity you are setting targets for takes place. In Steps 1 and 2, you used location data at any scale—country, subnational jurisdiction, municipality or coordinates are likely to be in your data.

But at this point, it is necessary to identify the location of the activity in terms of water basins, instead of administrative divisions. SBTN uses the **Pfafstetter Coding System** which employs a hierarchical, nested approach to classify and group river basins. The Pfafstetter system defines six levels, where level six basins are contained within level five basins; level five basins are contained within level four basins, and so on. Identifying either the level four or level five basin where your activity is located is a good starting point for the following tasks in the method, although it is possible that you may need to get further granularity on the river basin location.

**Output(s) of this task:**

- Identification of the basin where you will set targets.

TASK
2

# Consult SBTN basin threshold tool for local models

Consult SBTN's hydrological model database (currently under development) to check whether there are known local models and locally accepted thresholds for the basin where you are setting targets. Every time a company has targets using a local model and threshold successfully validated, they will be added to the database (and indicated on the Target Dashboard), as will their geographic area of application (the river basin).

If you have found a local model and threshold in the database, skip to Step 3b, Task 6, and use this model to set targets. Otherwise, move on to Task 3.

**Output(s) of this task:**

- If successful: Choice of a local hydrological model and thresholds to set targets with.

*Tasks 2 to 5 of Step 3 Freshwater are part of a multistage search process that will guide you in identifying an adequate hydrological model to set targets with—these tasks are part of a decision tree in the Freshwater technical guidance. This approach helps you to focus your efforts on finding local hydrological models only in top priority basins and to move quickly to the use of global models to set targets in all other basins.*

TASK

# 3 Consult national stakeholders

Your search for local hydrological models continues with a national-level stakeholder consultation. SBTN's Stakeholder Engagement Guidance can provide useful advice on how to conduct this consultation, as well as the local stakeholder consultation in Task 4. See the dedicated section in the Upcoming Technical Guidance chapter.

Identify and reach out to experts and other stakeholders based in the basin's country to ask them if they know of appropriate local hydrological models for your basin of interest. The stakeholders you may reach out to include national water authorities or ministries, and country offices of SBTN Freshwater Hub partner organizations. It is recommended that you first identify all basins in the country for which you will set targets, so that you only need to do this consultation once per country.

**SBTN has defined an appropriate local model as one that, among other criteria:**

- Safeguards aquatic ecosystems (i.e., includes environmental flows),
- Accounts for major anthropological disturbances to local hydrology and nutrient levels,
- Accounts for existing water use rights and access needs, and
- Allows for the calculation of local thresholds if one has not been established for the basin.

Save the records of your consultation process—you will need them as part of the target submission for validation. If the national stakeholders recommend a local model for the basin that meets the appropriateness criteria, skip to Task 6 and use this model to set targets. Otherwise, continue to Task 4 if the basin is in the top-priority group defined in Task 9 of Step 2c, or skip to Task 5 for all other basins.

### Output(s) of this task:

- Records of the stakeholder consultation.
- If successful: Choice of a local hydrological model and thresholds to set targets with.

TASK

# 4 Consult local stakeholders

In **Task 4**, you will continue your search for local models with a local-level stakeholder consultation. Note that, for feasibility of the methods, this task is only required for the 10% of your basins that were defined as top priorities in Task 9 of Step 2c, or 10 basins if there are more than 100 basins in the target boundary.

Identify and reach out to local experts and other stakeholders operating in your basin of interest. Appropriate stakeholders to consider in this phase of the consultation process include: water management agencies and basin authorities, governmental regulators, scientists and academics involved in the basin, local water-related NGOs or local chapters of international NGOs, local communities and/or Indigenous groups or their representatives, and local departments involved in water supply.

Ask these stakeholders if any local hydrological model already exists for the basin, considering the same appropriateness criteria mentioned above. It is recommended that at least three different stakeholder types consider the model appropriate, but getting the green light from only one of them is required. If you find an appropriate model, skip to Task 6 and use this model to set targets.

If no appropriate local models are known for the basin, continue the consultation process by asking these same stakeholders if they would consider the global models for water **quantity** and water **quality**, developed by Hogeboom (2020) and McDowell (2020) and referred to in Task 5, to be appropriate for use in the local conditions. This means that the basin (among other things):

- does not have major inter-basin transfers, flow disruptions, or disturbances to nutrient flows that are not accounted for by the global model;
- is not the site of major disputes related to water rights or water access;
- does not have threatened species or ecosystems that are highly sensitive to nutrient or oxygen concentrations.

If the stakeholders consider this global model appropriate for the local conditions, skip to Task 5 and use the global model to set targets.

If you find that there are no appropriate local or global models to set targets with, you may conclude that it is not possible to set science-based targets in this basin. Save the records of your consultation process, because you will need them in the submission for validation.

### Look ahead:

- You will need to check the SBTN hydrological database for updates every year because, since your last search, other companies may have found or developed local models for the basin. If you find that new local models are appropriate for your basin or have been added to the database, you will then need to set and resubmit targets.

### Output(s) of this task:

- Records of the stakeholder consultation.
- If successful: Choice of a local hydrological model and thresholds to set targets with.

TASK

# 5 Select global model (as appropriate)

For other basins that fall outside "top priority" in your target boundary, you can use global models if local models are not identified through national stakeholder consultation. This means you would use the preselected hydrological model to set targets. This will also be the case for top-priority basins where, following Task 4, you were unable to find a local model but local stakeholders concluded that the global one was acceptable.

The global model for **water quantity**, built from **Hogeboom (2020)** and the **Water Footprint Assessment Tool**, can be found **here**.

The results from the global model for **water quality** targets by McDowell (2020) can be found **here**.

### Output(s) of this task:

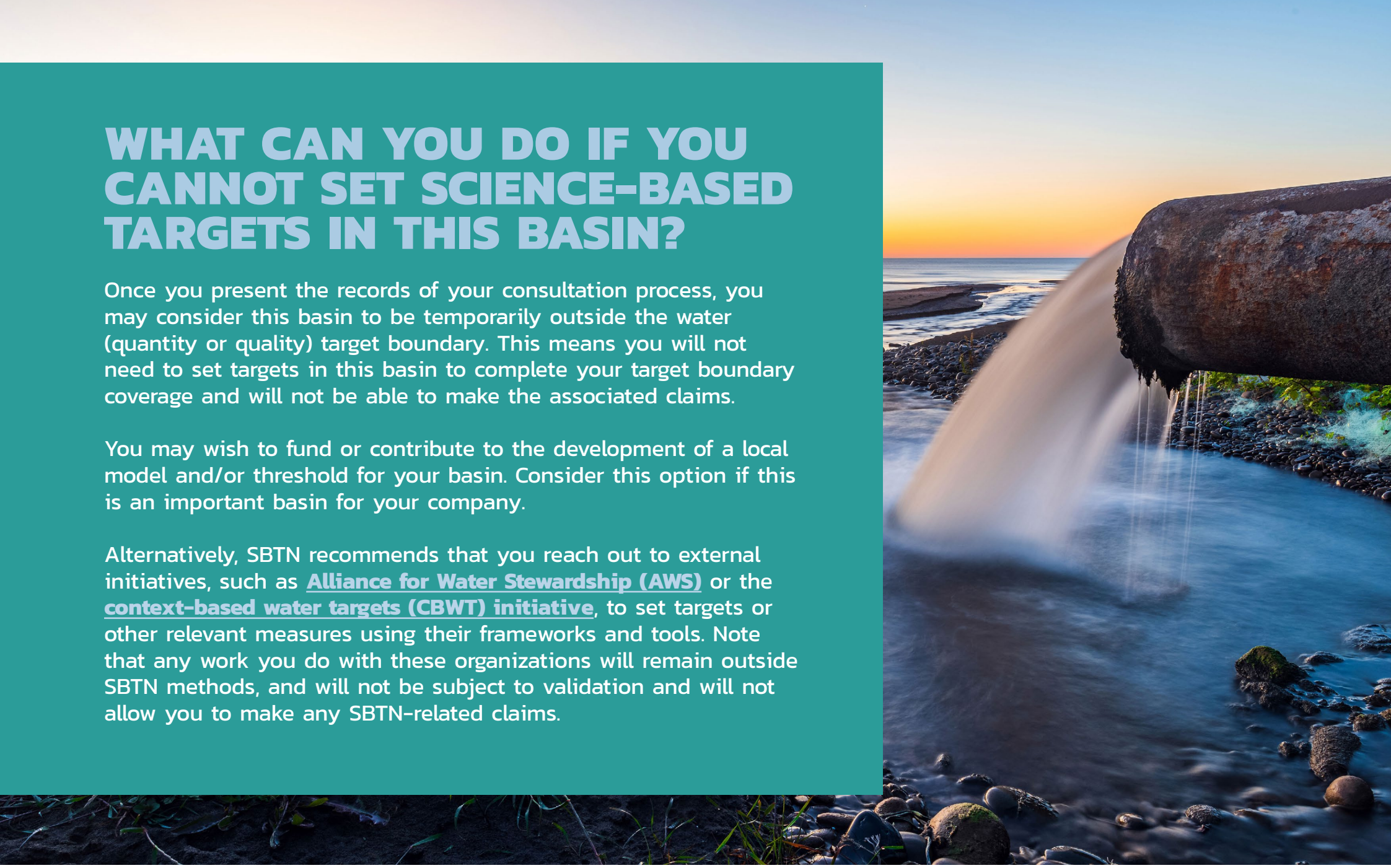
- Choice of the global hydrological model and thresholds to set targets with.

# WHAT CAN YOU DO IF YOU CANNOT SET SCIENCE-BASED TARGETS IN THIS BASIN?

Once you present the records of your consultation process, you may consider this basin to be temporarily outside the water (quantity or quality) target boundary. This means you will not need to set targets in this basin to complete your target boundary coverage and will not be able to make the associated claims.

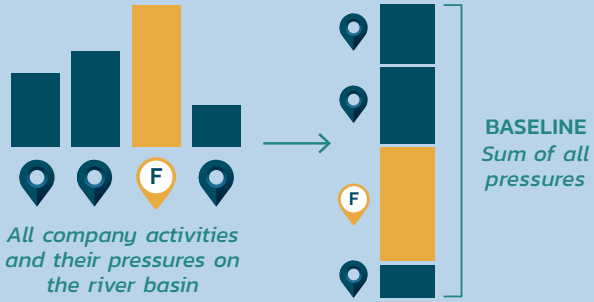
You may wish to fund or contribute to the development of a local model and/or threshold for your basin. Consider this option if this is an important basin for your company.

Alternatively, SBTN recommends that you reach out to external initiatives, such as **Alliance for Water Stewardship (AWS)** or the **context-based water targets (CBWT) initiative**, to set targets or other relevant measures using their frameworks and tools. Note that any work you do with these organizations will remain outside SBTN methods, and will not be subject to validation and will not allow you to make any SBTN-related claims.



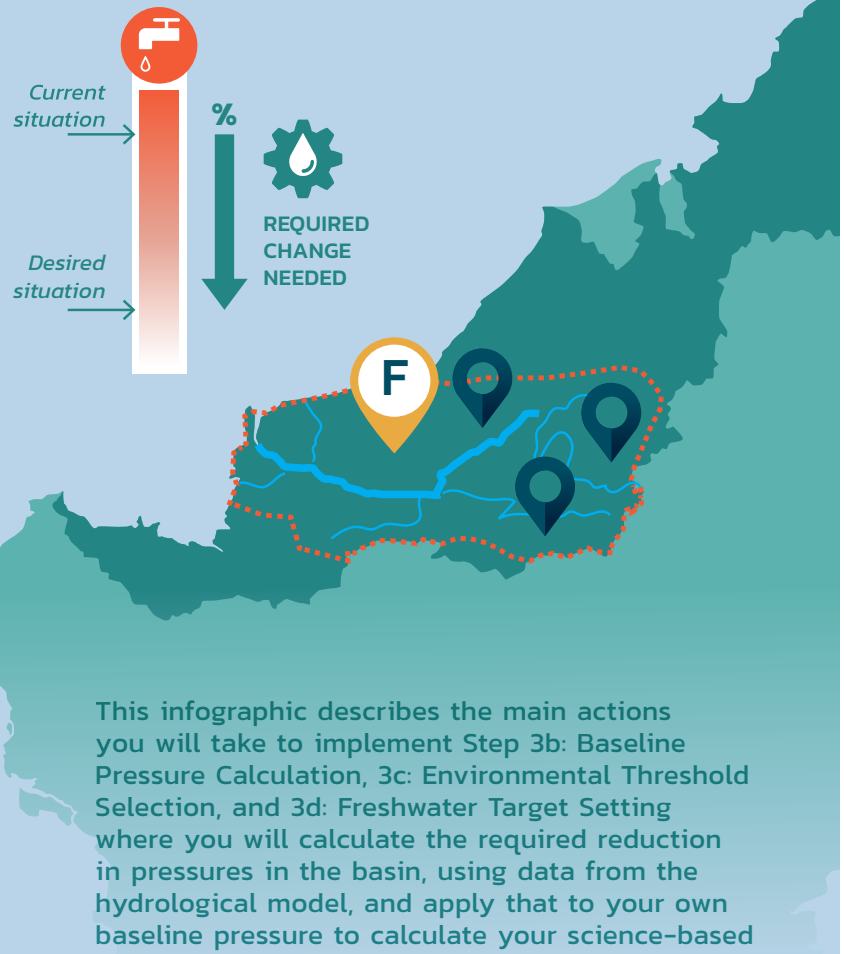
## STEP 3B. BASELINE PRESSURE CALCULATION

**TASK 6-7** Calculate your total baseline pressure (water withdrawals or pollutant loading) from all of your activities in the water basin.



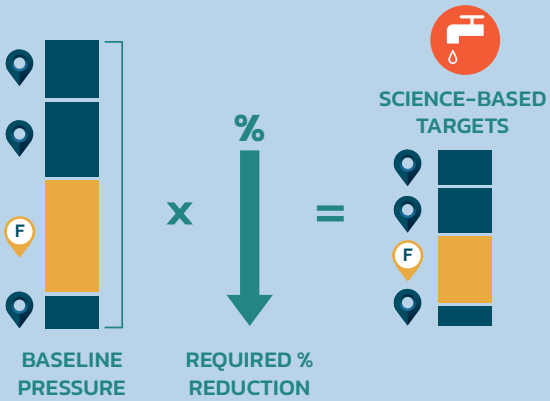

## STEP 3C. ENVIRONMENTAL THRESHOLDS IDENTIFICATION

**TASK 8-9** Use the hydrological model to get scientific information about the environmental changes required in the basin.




## STEP 3D. FRESHWATER TARGET SETTING

**TASK 10** Calculate your science -based target by applying the required pressure reduction in the basin to your pressure baseline.




This infographic describes the main actions you will take to implement Step 3b: Baseline Pressure Calculation, 3c: Environmental Threshold Selection, and 3d: Freshwater Target Setting where you will calculate the required reduction in pressures in the basin, using data from the hydrological model, and apply that to your own baseline pressure to calculate your science-based targets. The graphic depicts the case of water use, but you will follow essentially the same process for nutrient loading.

# Step 3B. How do I calculate my baseline pressures?

TASK

## 6 Compile company activities in the basin

As mentioned, SBTN uses the Pfafstetter system of basin classification. Different models will be built to capture the dynamics of the basin at different scales:

- The global model for water **quantity** targets by Hogeboom (2020) is built to model water flows for basins at Pfafstetter Level 5.
- The global model for water **quality** targets by McDowell (2020) is built to model nutrient concentrations for basins at Pfafstetter Level 4.
- If you are using a local model, you will have to identify the basin level it uses.

While you started Task 1 of Step 3 Freshwater with a single activity or site that you would set targets for, now that you know the spatial scale at which the hydrological model is built, you need to identify all other activities in that area, so that your targets cover all of them. Refer to the water **quantity** and water **quality** target boundaries (direct operations and upstream target boundary A) from Step 2, Task 1. Record any other activities located in the basin. Note that this may include activities and sites that fall anywhere in the ranking (Step 2b, Task 5) and prioritization (Step 2c, Task 9) you defined in Step 2.

### Output(s) of this task:

- Table of all activities (with their associated sites and output volumes) located in the basin where targets will be set.

TASK

# 7 Calculate baselines

Now that you have identified all activities that fall within the basin, you will calculate their (combined) baseline. The baseline is the initial amount of pressure—water withdrawals or pollutant loading—that your activities have on the environment in the defined location (the water basin) before you start implementing any improvements.

Depending on how you completed Step 1b, you may have the baseline information already, but it is also possible you will have to recalculate it at this point with more accurate calculations.

Calculate or estimate the baseline of each individual site or activity in the basin.

Water **quantity** pressures from direct operations and point source water **quality** pressures must be calculated from primary data, which you can get from water meters or sensors. For all other pressures, primary data is recommended but not required (you can use secondary data if needed). Use data from the last five years of operations to calculate the baselines. If data for the whole period is not available, a duration of less than five years can be used. Once you start taking action in the basin to achieve your targets, you can replace any baseline estimated from secondary data with primary data.

Depending on your source of data, water withdrawals and pollutant loading can be measured (or estimated) with monthly data, annual data, or in terms of concentration.

While it may be more time-consuming to obtain, monthly data enables you to set monthly targets, which allows you to focus your actions on the most important months, given seasonal water variability, and use your resources more efficiently.

From this point on, you must keep your primary and secondary data separated because in Step 5 you will use different methods to estimate progress depending on how you have measured your baseline. Remember that direct operations and upstream data must also be kept separate at all times.

Aggregate and record the baseline pressure generated by all activities in the basin.

### Take note:

- You may set up to four separate targets for each pressure category in each basin given that you may now have four separate baselines: direct operations with primary data; direct operations with secondary data; upstream with primary data; and upstream with secondary data.

### Output(s) of this task:

- Records of the individual and aggregated baseline pressure (water withdrawals or pollutant loading) of all the activities in the basin.

# Step 3C. How do I identify the environmental thresholds?

TASK

## 8 Apply modeling approach for the basin

Having recorded your total baseline for the basin, it is time to use the model you selected in Step 3a to understand the hydrology of the region.

In the case of water **quantity** targets, there are three data points that are required: present-day stream flows, natural stream flows, and environmental flow requirements. Depending on the basin and the model you are using, the model may have already included all this information.

- **Present-day stream flows** reflect the observed volumes of water in the basin. In other words, they indicate how much water is carried by a river or held in an aquifer or lake.
- **Natural stream flows** are modeled to display theoretical unaltered flow regimes. They reflect the flow of water that would be found in the basin in an average year and in a natural state where no water was withdrawn for human use.
- From the two points above, it is possible to infer the amount of water that is removed from the basin by human use.
- **Environmental flow requirements** represent the amount of water that should be in the stream to maintain adequate ecological conditions.

In the case of water **quality** targets, there are only two data points that you need to gather for your basin: maximum allowable nutrient loads and current nutrient loads (for the limiting nutrient in the basin).

- **Maximum allowable nutrient loads** describe the maximum amount of nutrient concentration, for nitrogen and phosphorus, that could be present in the ecosystem before they cause eutrophication problems.

  If you are using the McDowell (2020) model, these concentrations are 0.80 mg/L for nitrogen and 0.046 mg/L for phosphorus. If you are using local models, they may consider different concentrations (on account of local ecosystem conditions).

- **Current nutrient loads** refer to the observed concentration of nitrogen and phosphorus in the ecosystem. The methods only require identifying the concentration of one of the two nutrients, whichever is scarcer than the other. This is then called the "limiting nutrient."

  The global model for water **quality** by McDowell, for example, considers that algae and cyanobacteria normally require these nutrients at constant ratios (e.g., seven parts of nitrogen for every part of phosphorus). The McDowell (2020) model will indicate, for each basin, which is the limiting nutrient. Local models may use different ratios on account of local conditions.

### Take note:

- You will only set targets to reduce the nutrient loading of the limiting nutrient, as the remaining amounts of the other nutrient will not lead to eutrophication in the ecosystem.

These different data points should be available in the model you are using. Note that there is an interface that allows you to access the global water **quantity** model by Hogeboom (2020) available **here**. This tool will quickly let you access all three parameters for your basin. For the global water **quality** model by McDowell (2020) you can use **this temporary app** to access the data.

If you are using local models, you may need to rely on hydrology experts to get this data. Note that if the model you are using is unable to provide all of this data, the model might not be appropriate for target setting. You should consult with hydrology experts to see if the data can be found with additional tools or if a different model should be used instead. You may also reach out to the SBTN network and partners, or the validation team, to assess how to overcome any potential data gaps.

### Output(s) of this task:

- Hydrological data for the basin.

TASK

# 9 Calculate required basin-wide pressure reductions

Having collected all the key parameters for the basin, in your next task, you will calculate how much reduction in water withdrawals or nutrient pollutant loading is required to bring the basin back to a healthy state. The methods refer to these quantities as **required basin-wide reductions** and they are defined as a percentage of the current basin-wide pressures.

### Take note:

- In this case, we refer to the total, or basin-wide pressures, which are different from the pressures that your company exerts on the ecosystem. Basin-wide pressures include not only your company's own pressures, but also those of all other stakeholders (including other companies and local communities).

For water **quantity** targets, if you are using the global quantity model by Hogeboom (2020) and have accessed the **online tool**, the required basin-wide reductions in water withdrawals will be automatically provided.

If you are not using the global model, first, calculate the **excess withdrawals** in the basin as the *environmental flow requirements* minus the *present-day stream flows*. Then, calculate the **present-day withdrawals** as the *natural stream flows* minus *the present-day flows*. Finally, calculate the **required basin-wide reduction** as the *excess withdrawals* divided by the *present-day withdrawals* (expressed as a percentage).

$$\textit{Excess withdrawals} = \textit{Environmental flow requirements} - \textit{Present day stream flows}$$

$$\textit{Present day withdrawals} = \textit{Natural stream flows} - \textit{Present day stream flows}$$

$$\textit{Required basinwide reduction} = \frac{\textit{Excess withdrawals}}{\textit{Present day withdrawals}}$$

For water **quality targets**, calculate first the **excess nutrient concentration** as the *current nutrient concentration* minus the *maximum allowable nutrient concentration*. Then, calculate the **required basin-wide reduction** by dividing the *excess nutrient concentration* by the *current nutrient concentration* (and express this as a percentage). Remember that you will only do this for the limiting nutrient.

$$\textit{Excess nutrient concentration} = \textit{Current nutrient conc.} - \textit{max allowable nutrient conc.}$$

$$\textit{Required basinwide reduction} = \frac{\textit{Excess nutrient concentration}}{\textit{Current nutrient concentration}}$$

### Output(s) of this task:

- Record of the required, basin-wide pressure reduction.

# Step 3D. How do I set my company's freshwater targets?

TASK

## 10 Set company water quantity and quality targets

Finally, you calculate the share of the basin-wide reductions that your company will bear. This is called allocation, and while there are different approaches to it, the first release of the SBTN methods uses only the equal contraction of efforts approach.

With this approach, you assume that you and every other stakeholder withdrawing water or loading nutrient pollutants in the basin will reduce their pressures by the same percentage.

To calculate your company's targets, multiply your aggregated baseline for the basin (from Task 7) by the basin-wide required reduction percentage (from Task 9).

*Company target* = *Baseline pressure* × *Required basinwide reduction*

Your target date, i.e., the moment when you must achieve your reduction, must be five years in cases where the reduction is 25% or less. For more ambitious reductions or in cases where companies wish to align their targets with global societal or policy goals, local or regional policy goals, or critical actions agreed upon with local stakeholders, companies can set up to a ten-year target date.

**Take note:**

- As indicated before, you may have up to four different baselines (see Task 7). This means that you may have to do this calculation up to four separate times.

**Output(s) of this task:**

- Company's freshwater target(s).

# USEFUL RESOURCES

You can find the following materials in the **Step 3 Freshwater Resources** section of our online target-setting guide:

- Step 3 Freshwater Technical Guidance V1.1
- Step 3 Freshwater Technical FAQ
- Stakeholder Consultation for Model Selection Recommendations
- The Alliance for Water Stewardship (AWS) Standard 2.0
- Context-based water targets initiative (CBWT)
- Hogeboom's global water quantity app
- McDowell's global water quality model results
- Illustrative case study – Ursus Nourishment

# GLOSSARY

**Water withdrawals and water consumption:** Withdrawals refers to the amount of water removed from the environment, from any source, for anthropogenic purposes; consumption is similar but describes net removals, once water returns are considered (e.g., from non-consumptive water uses).

**Water availability:** The water flows (in rivers) and levels (in lakes and aquifers) potentially available to meet human and natural needs.

**Environmental flows:** The minimum amount of water flows necessary in the environment to sustain ecological processes and safeguard biodiversity habitats. It is used as the environmental threshold that helps determine the water quantity target's ambition levels.

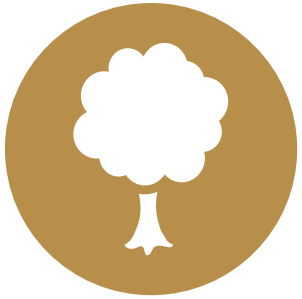
**Nutrient loading to freshwater:** The mass of nutrients (nitrogen and phosphorus) added to the environment from anthropogenic sources.

**Freshwater nutrient levels:** The existing concentration of nutrients (nitrogen and phosphorus) in freshwater systems.

**Eutrophication:** The process of accelerated biomass growth due to excess nutrient availability and the consequent oxygen depletion in the system. It is used as the environmental threshold that helps determine the water quality target's ambition levels.

3

# STEP 3:
## Measure, Set & Disclose Land Targets



# SETTING LAND SCIENCE-BASED TARGETS

## Adoption by companies of these land targets will be a leap forward in voluntary corporate accountability by bringing working lands – 64% of Earth's habitable land – into the environmental agenda.

## The land methods comprise a suite of three targets designed to work together to incentivize synergistic actions that contribute to nature goals in land systems:

- The **No Conversion of Natural Ecosystems Target** addresses land use change. Companies setting this target will avoid all further conversion of lands that were considered to be natural in 2020 after a target year that will vary between 2025 and 2030, depending on the context.
- The **Land Footprint Reduction Target** addresses land use and is focused only on agricultural land. Companies setting this target will reduce the total agricultural land footprint associated with their direct operations and upstream value chains.
- The **Landscape Engagement Target** can address different pressure indicators, including land use, land use change, and soil pollution. Companies setting this target will collaborate with established local partners in priority landscapes toward improving a range of ecological and social indicators defined in alignment with these partners.

Companies will have different requirements for setting these targets, based on the materiality of their land-related pressures (including land-related greenhouse gas emissions), their size, and their designated economic sector.

Version 1 of the Land targets was released in July 2024, following a period of corporate pilot testing between 2023 and 2024. Given the concurrent publication with this corporate manual, the following section is concise. This section provides a high-level overview of the current target-setting approach and requirements associated with the Land targets. Additional explanatory guidance will be provided in subsequent updates to the manual and Version 1 of the Land targets can be found in the **Resources** section on the SBTN website.

# HOW IS BIODIVERSITY ADDRESSED IN STEP 3 LAND?

The Land targets address and contribute to biodiversity goals through different mechanisms. The No Conversion target accounts for ecosystem integrity and condition in the definition of natural lands, and refers to the importance of different regions, such as in the delivery of NCP and the preservation of threatened ecosystems and species when determining the target year. The Land Footprint Reduction target contributes to biodiversity by increasing the land available to restore natural habitats. The Landscape Engagement target affords companies the flexibility to propose the most relevant biodiversity indicators for the local context, for example for ecosystem integrity indicators for the local context, for example for ecosystem integrity.

**"A no conversion commitment is far beyond our current no deforestation commitment and is a huge change that will come through SBTN."**

SBTN 2024 PILOT COMPANY

# NO CONVERSION OF NATURAL ECOSYSTEMS TARGET

To achieve this target, you will eliminate all new conversion of natural ecosystems from your (direct operations and upstream) activities that occur after a certain target year, and you will remediate all accrued conversion of natural ecosystems that occurred between 2020 and this target year. Target years vary between 2025 and 2030, depending on the ecological importance of each natural area, the value chain segment, and the type of commodity you are sourcing.

SBTN considers natural lands as those areas where ecological functions remained equal or similar enough to what would be expected in a relatively undisturbed ecosystem as of 2020. This includes, among other things, secondary forests and semi-natural grazing landscapes. By definition, non-natural lands include all other areas where ecological functions have been considerably altered, including mono-crop agricultural landscapes, forest plantations, and urban areas.

SBTN has published a Natural Lands Map, which combines multiple sources of spatial information to identify which lands meet these criteria. The map will also include a layer indicating conversion hotspots, which have earlier target years given their ecological importance. You will use this map both to identify lands where conversion post-target year is not allowed, and to calculate your accrued conversion by the target year (including your baseline conversion on the year you set your targets).

The methods include specific guidance on how to calculate conversion including options to use statistical data for the assessment, given the challenges of acquiring detailed spatial information for your value chains. The requirements vary depending on the value chain segments and for cases where you source directly or indirectly from your suppliers (e.g., from first points of aggregation in the value chain or downstream from those). In certain cases, such as when previous deforestation or no-conversion commitments existed in specific geographies (e.g., Brazil's soy moratorium), you will need to refer to alternative datasets, with baselines earlier than 2020, to assess your conversion.

You will have the time between the moment you submit your targets and the target year to adjust your practices to halt all post-target year conversion. Any conversion of natural lands for which you are responsible past the target year will end your compliance with the target and your right to any claims associated with it.

We will release additional guidance to help you measure and achieve remediation. Given the considerable costs and timelines needed to return ecosystems to a functional natural state, we strongly advise you to take immediate action to halt conversion as soon as possible, rather than waiting until the target year.

# LAND FOOTPRINT REDUCTION TARGET

This target will require you to reduce the overall agricultural land footprint associated with your (direct operations and upstream) activities. "Agricultural land" here refers to the total amount of land, measured in hectares per year, required to produce or source your products. This does not necessarily include all lands you own or control. The target is only applicable to companies above a certain size and in certain sectors, as defined in the guidance.

You calculate your reduction target using one of two approaches, either as an absolute reduction (i.e., for your total production) or an intensity reduction (i.e., per mass unit of production). You calculate the target as a small and constant annual reduction to your baseline (of 0.35% in absolute terms or 1% per mass unit of production). The methods include guidance on how to choose the most appropriate approach for your case.

The Land Footprint Reduction target is unique among all five current SBTN targets in that it is not necessarily spatially explicit. You calculate your baseline footprint by combining direct, spatially explicit measurements (for example, for your own sites) with estimations based on secondary, statistical data (for example, based on known yields for the commodities you source).

# LANDSCAPE ENGAGEMENT TARGET

To achieve this target, you will need to improve the ecological conditions of one or a couple of key landscapes in your value chains, as defined in Step 2c, through regenerative, restorative, and transformational actions. Your actions will help address local sustainability issues and goals, go beyond individual supply chains, support stakeholder coordination processes, complement existing collective actions and plans, and contribute to broader systems-level change.

The methods include a series of criteria to help you identify landscapes for this target. Among other things, these criteria consider the materiality of the landscape for your activities, the potential synergy with other SBTN targets (e.g., co-benefits with other land, water, or climate targets). You may decide to support an existing initiative in the landscape, and to consider its scale, level of multi-stakeholder involvement, existence of collective actions and goals, and presence of transparent reporting and information systems; alternatively, you may decide to set up a new initiative that meets these criteria.

At the onset of this target-setting exercise, you will agree with local stakeholders on which indicators and metrics are relevant for the landscape—these indicators must be relevant for land use and change and soil pollution. Together with partners, you will measure the existing baseline for the landscape and agree on what the target year and ambition level should be.

# USEFUL RESOURCES

You can find the following materials in the **Step 3 Land Resources** section of our online target-setting guide:

- Step 3 Land Technical Guidance V1
- Step 3 Land Supplementary Materials
- Step 3 Land Technical FAQ
- Natural Lands Map

# GLOSSARY

**Natural lands:** Areas where ecological functions remain equal or similar enough to what would be expected in a relatively undisturbed ecosystem.

**Agricultural land:** The total amount of land, measured in hectares per year, required to produce or source your products.

# TARGET VALIDATION

**Validation is a critical step in the process of setting science-based targets for nature – safeguarding the credibility of corporate targets through adherence to a standardized compliance evaluation that delivers comparable results across companies.**

# INTRODUCTION TO TARGET VALIDATION

Once you have completed Step 1: Assess, Step 2: Prioritize, or Step 3: Measure, Set & Disclose, you can submit for validation. You must submit each Step sequentially; it is not possible to submit Step 3 without first passing Step 1 and Step 2 validation. This process ensures that you have correctly followed the requirements, in the right order, before implementation (Step 4: Act) or associated public claims on your progress (Step 5: Track).

From mid-2023 to mid-2024, SBTN piloted its target validation function with an initial group of companies to ensure validation requirements are robust, feasible, and clear. A full list of learnings and method changes can be found in SBTN's Summary Report of the Validation Pilot.

Complemented by a comprehensive benchmarking of other voluntary corporate sustainability mechanisms, and research on best practices for assurance and claims (including ISEAL Codes of Good Practice), the primary structural change resulting from these pilot learnings is SBTN's decision to transfer the validation function to the Accountability Accelerator for an interim period.

During this interim period, validations will be performed independently by the Accountability Accelerator, while continuing to calibrate validation processes and guidance. This will be supported by the creation of two new governance bodies: the Integrity Council and the Learning Committee. The Integrity Council will act as the highest governance body for the validation function, ensuring that due process is followed in all validation activities, approving strategic validation decisions, and playing an active role in complaints and appeals processes. The Learning Committee will act as the connecting web between the Accountability Accelerator and SBTN, ensuring that validation learnings are passed on to method developers and vice versa—this body will be SBTN's primary interaction with the validation function.

SBTN will use the learnings from the Accountability Accelerator in this interim phase, together with further exploration of the validation model option space, to inform its long-term validation model.

# HOW DOES THE TARGET VALIDATION PROCESS WORK?

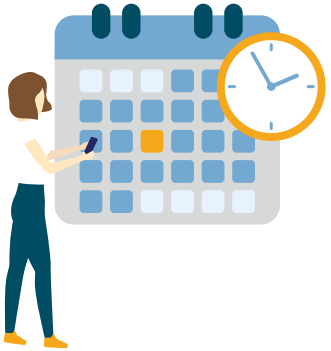
Validation of science-based targets is an independent process involving expert review of corporate submissions, ensuring they meet all requirements outlined in the SBTN methods.

This is primarily carried out through a desk review of evidence provided by your company in its submission forms and supporting documents. Query logs and clarifying calls between your company and the validators are used to solicit additional information to inform validation decisions.

All information is submitted online.

The new validation service has a cost-recovery fee per step paid by companies, linked to the capacity and resources required to conduct the assessment. These funds are ring-fenced within the Accountability Accelerator validation function and are entirely separate from SBTN method development activities. Further details on validation services will be released in due course.

SBTN and the **Accountability Accelerator** are working together on the governance for the validation process, to be launched later in 2024.



## Apply for validation:

- The application and submission process going forward will be formalized and announced in due time, once the validation service is fully established.
- The Accountability Accelerator is setting up the service, and will announce in due course how you will be able to submit for validation.

## Complete validations forms and submit:

- After being accepted for validation, you should complete your company's submission forms, use data templates to organize your information per method, and gather all necessary supplementary evidence to submit for validation. The Accountability Accelerator is working on a validation platform to make this process easy for companies and overall support the validation process from end to end—all your communication with their validators will occur on this system, to ensure data security and confidentiality.
- You are encouraged to refer to existing SBTN tools and supporting documentation to ensure compliance with requirements before submission, maximizing your chance of passing the validation::
  - SBTN Requirements & Recommendations
  - SBTN Self-Assessment Tool

## Validators assess the submission:

- An assigned member of the validation team will first conduct an initial screening of your submission for completeness, before embarking on a thorough desk review of your company's submission forms and supplementary evidence.
- After passing the screening, a validator will be assigned to your company, based on available capacity and the criteria outlined in SBTN's conflict of interest policy (in development).

- Once validation has started, a query log will be hosted on the validation platform and bilateral calls between validators and your company will take place to ensure that queries are addressed in a timely manner—potentially soliciting additional information/clarification necessary to complete the validation assessment.

## Validation result is communicated to company:

- The outcome is an extensive validation report outlining where your company fulfilled the requirements (and passed the validation) or feedback on where it did not fulfill the requirements (and as a result, did not pass the validation).
- If your company has not fulfilled all the requirements, you will need to use the resubmission service.

## Once validation is passed, your company can make claims:

- Approved targets will be posted publicly on SBTN's forthcoming target tracker—this is the moment at which your company may announce its targets externally.
- You must use SBTN's forthcoming claims guidance to ensure accuracy, consistency, and transparency of external communications—a key function to help mitigate real or perceived risk of greenwashing.
- You must announce your company's approved target publicly on the SBTN website within six months of the approval date—targets unannounced after this period must be resubmitted.

# TARGET RECALCULATION

## Mandatory target recalculation:

To ensure consistency with the most recent science and best practices, your targets must be reviewed, and if necessary, recalculated and revalidated at a minimum of every five years.

## Triggered target recalculation:

Your targets should be recalculated, as needed, to reflect significant changes that could compromise relevance and consistency of the existing target.

The following changes should trigger a target recalculation:

- Significant changes in your company's structure and activities (e.g., acquisition, divestiture, merger, insourcing or outsourcing, shifts in goods or service offerings).
- Significant adjustments to baseline(s) resulting from data quality improvements or changes in data sources or calculation methodologies. This includes the discovery of significant errors or a number of cumulative errors that are collectively significant.
- Significant changes to growth projections used in the target language for intensity targets. This is currently only applicable to the Land Footprint Reduction target.
- If your company could not find an appropriate Freshwater local model and threshold after stakeholder consultation, and you used the global model for target setting and validation, you must consult the SBTN basin threshold tool every year to see if a local water model and threshold have been included. If you find a new model and threshold, you must use them to set targets and substitute pre-existing ones, unless you can prove that your current targets are more ambitious than those resulting from the application of the local model and threshold.

## Significant changes:

You should apply a policy of 5% change as the threshold to trigger a target recalculation (also known as a significance threshold). This is consistent with best practice in GHG accounting, reporting, and target setting.

## Recalculation and revalidation:

You should aim to recalculate and revalidate your targets within a maximum of one year from the moment the change or adjustment occurred.

## Method validity:

Please note that SBTN methods have a 6 month grace period upon release of updated methods, whereby companies can submit for validation the previous version if they have been working on this before the new method release date.

# DISCLOSURE OF PROGRESS

## Frequency of disclosure:

You will publicly report your company's pressure indicators and progress against published targets on an annual basis.

## Where to disclose progress:

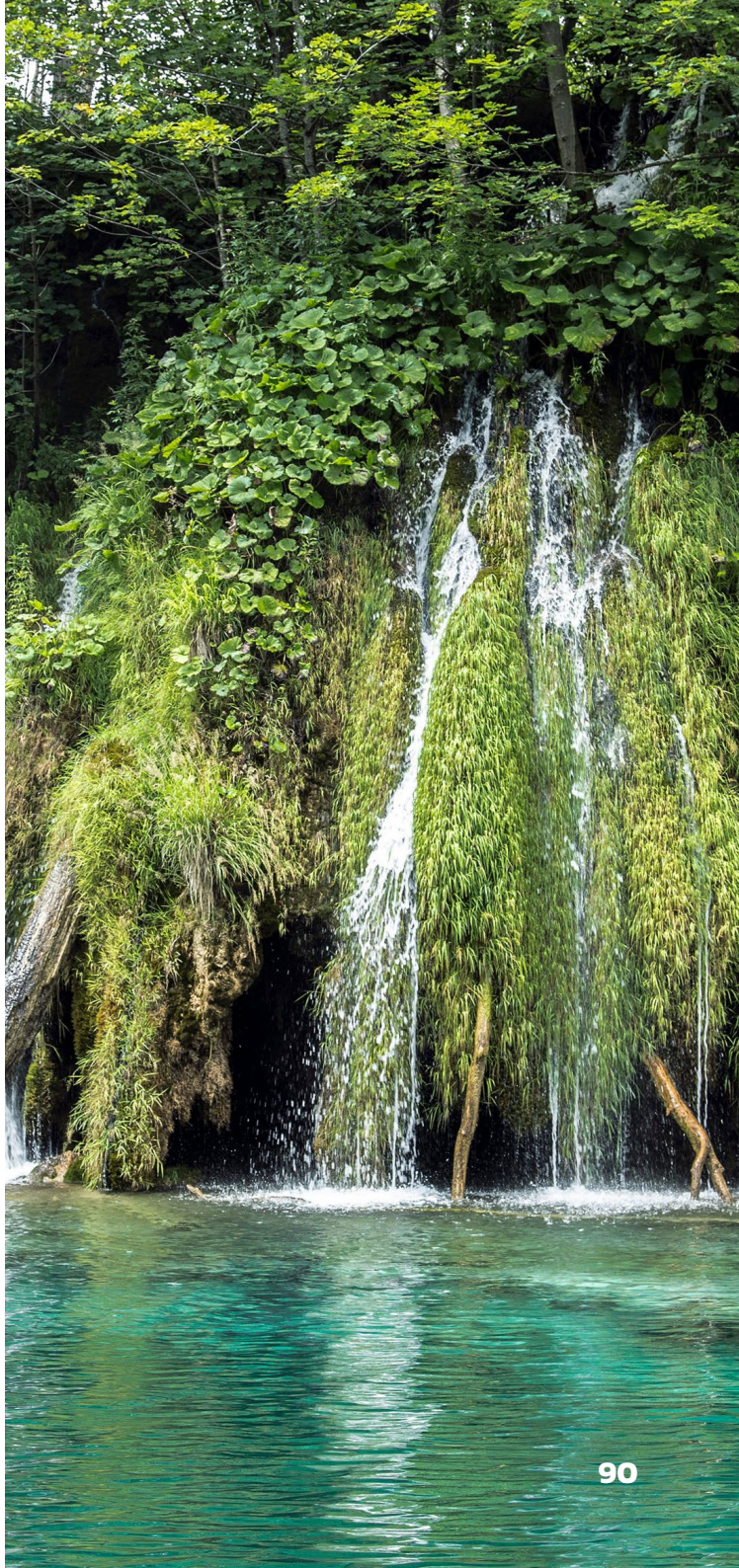
There are no specific requirements regarding where progress against published targets should be disclosed, as long as it is publicly available. SBTN recommends disclosure through standardized, comparable data platforms such as CDP's Water Security and/or Forests annual questionnaire, through annual reports, sustainability reports, and your company's website are acceptable.

## Disclosure guidance:

You should use disclosure guidance from reputable sources, including but not limited to:

- **Accountability Framework initiative**
- **Draft Greenhouse Gas Protocol Land Sector and Removals Guidance**
- **ISEAL guidance for making jurisdictional claims**
- **AWS International Water Stewardship Standard**
- **UN Global Compact CEO Water Mandate**

Disclosure of 2025 targets achievement: The earliest target date in current SBTN methods is 2025 to ensure the no conversion of natural ecosystems in direct operations, natural forests, and conversion hotspots. This requirement is aligned with the **Accountability Framework initiative**, the **SBTi FLAG** requirements and the **European Deforestation Regulation (EUDR) (EU 2023/1115)**. You must prepare to disclose your achievement of this target, and should use future guidance developed for this purpose.



# USEFUL RESOURCES

You can find the following materials in the **Target Validation Resources** section of our online target-setting guide:

- 2024 Validation Pilot Summary Report
- Validation Submission form – Steps 1 and 2
- Validation Requirements & Recommendations v1.0
- Validation Requirements & Recommendations v1.1

# UPCOMING TECHNICAL GUIDANCE

# STEP 3: MEASURE, SET & DISCLOSE OCEAN TARGETS

**SBTN is currently developing Step 3 methods to set targets for ocean realm pressures. The first version of the targets will focus on the seafood sector, with plans to expand to pressures in the ocean realm from other key industries such as maritime transport, coastal and marine tourism, marine offshore renewables, and coastal development. SBTN will focus on ocean guidance for companies throughout the whole value chain, specifically including retailers and wholesalers, and will develop guidance for companies to both reduce their impacts and also engage in meaningful improvement initiatives.**

In 2025, SBTN will release Step 3 Ocean (v1.0) containing an initial suite of three targets:

- The **Avoid and Reduce Overexploitation target** covers wild fisheries, helping companies avoid reliance on commodities derived from overexploited stocks and engage in seascapes and jurisdictions to improve fishery conditions and reduce overfishing.
- The **Protect Marine Ecosystems target** covers wild fisheries and aquaculture, helping companies avoid and reduce impacts on structural habitats in marine and transitional environments.
- The **Protect ETP Species from Fishing Impacts target** covers wild fisheries to address impacts to endangered, threatened, and protected (ETP) marine wildlife from wild capture fishing. It will likely form a foundation for future target guidance addressing impacts on all marine wildlife from a broader range of ocean industries.

The Step 3 Ocean methods will be built on the existing guidance for Steps 1 and 2, other SBTN resources, external standards, certifications, and corporate ambitions. They will be accompanied by clear guidance for companies on operations that may cross other SBTN realms, such as coastal and estuarine environments. These targets will also cover some Freshwater realm pressures relevant to seafood and, as with the other methodologies, will address direct operations and upstream value chains.

# STAKEHOLDER ENGAGEMENT GUIDANCE

Stakeholder engagement is critical for the success of any effort to address nature loss and degradation. SBTN released its **Stakeholder Engagement Guidance (v0.1)** in 2023 to support companies setting science-based targets with guidance and resources based on best practices to include in the implementation of the target-setting methods. In 2024, SBTN is releasing a revised version of this guidance, incorporating expert reviewer feedback and other stakeholder input.

The guidance focuses on how to engage with and recognize the knowledge and potential contributions of Indigenous peoples, local communities, and other stakeholders who are (directly or indirectly) affected in positive and negative ways by your company's activities and value chains. Crucially, affected stakeholders include your workforce as well as workers in all other segments of the value chains.

Engaging Indigenous peoples and other affected stakeholders in target setting and evaluation also allows you to meet your responsibilities as laid out by the **UN Guiding Principles on Business and Human Rights (UNGPs)** and the **OECD Guidelines for Responsible Business Conduct**: the global, authoritative standards of responsible business conduct with regard to impacts on people and planet. The guidance will help you to uphold the rights of Indigenous peoples as set out in the **UN Declaration on the Rights of Indigenous Peoples** and to contribute to global frameworks such as the **CBD Kunming-Montreal Global Biodiversity Framework**. This will in turn enable you to align your practice with the growing number of due diligence regulations and reporting requirements based on these international standards (e.g., the European Sustainability Reporting Standards and the Global Reporting Initiative).

The guidance explains key considerations for engaging with these stakeholders, always recognizing the value of their knowledge and potential contributions in the target-setting process. Implementing the guidance will help you to:

- Establish targets that are seen as credible by those most directly affected by the outcomes.
- Form partnerships with stakeholders on data collection, analysis, and learning.
- Establish relationships with Indigenous peoples and other affected stakeholders that contribute to building collective action for the achievement of science-based targets.
- Build accountability for outcomes of target setting based on clear and transparent measurement and evaluation.
- Reduce reputational, ethical, legal, operational, or regulatory risks in your nature and climate strategies.

It is highly recommended that you use the Stakeholder Engagement Guidance as a companion to your target-setting journey. The guidance is structured into four sections:

**1** Guidance on how to identify the different groups of stakeholders to engage with and to understand factors such as intersectionality and the heterogeneity internal to each of these groups.

**2** Key concepts and approaches supporting SBTN's Steps 1, 2, and 4, related to preparatory work, stakeholder mapping, design and execution, and enabling participation.

**3** Advice on how to integrate the voices of affected stakeholders as you implement Steps 3 and 5, and on how to identify and navigate potential conflicting interests and trade-offs that may arise in the process.

**4** Guidance on how to evaluate your stakeholder engagement process, including indicators to assess its potential contribution to reaching your targets and guidance on how to identify learning and improvement opportunities.

# 4 STEP 4: ACT

If we wish to live in a nature-positive world, we need urgent and ambitious action by everyone. In SBTN's Initial Guidance for Business (2020), we introduced the Action Framework (AR3T). The AR3T framework was developed on the basis of the mitigation hierarchy, set out in the International Financial Corporation's Performance Standard 6, and is used as a general framework for company action. We call this AR3T because it covers actions to:

- Avoid and Reduce pressures on nature loss;
- Regenerate and Restore so that nature can recover; and
- Transform underlying systems in which companies are embedded to address the drivers of nature loss.

Detailed guidance on target implementation (Step 4: Act) is not part of 2023's release. The Freshwater and Land methods, however, explore some examples of corporate response options for target implementation, given the potential for unintended consequences for nature and people as a result of some corporate actions. In this context, response options refer to the actions that a company could take when implementing science-based targets for nature to make progress toward its achievement—likely reflected in the target indicator—that results in improvements in the state of nature.

The **Response Options Database** provides initial resources for companies to take actions that make a difference for nature on the ground. This is a preliminary effort; a more comprehensive Step 4: Act guidance is under development.


In terms of corporate response options, the Step 3 Freshwater targets for quantity and quality, as well as the Step 3 Land targets on No Conversion and Land Footprint Reduction, focus primarily on avoidance and reduction actions, while the Landscape Engagement target primarily drives regeneration and restoration actions. In all cases, implementing the full AR3T framework will help companies reach their targets more effectively and generate positive, long-lasting changes in the landscape. Use SBTN's interactive framework **here** to see the types of actions companies can take when implementing science-based targets for nature.

While Step 4 guidance is being developed, companies participating in the SBTN initial target validation pilot are informing the development of location-specific Corporate Action Plans. These plans explain how companies intend to meet each of their targets and include four sections: prioritization of actions, interaction with local stakeholders, tracking and reporting key performance indicators (KPIs), and resourcing for the whole implementation.

These action plans are a recommendation for companies to meet their targets as they help ensure that companies have sufficient resourcing and planning to achieve their targets. The Corporate Action Plans will inform, and potentially become part of, the upcoming technical guidance for Step 4: Act.

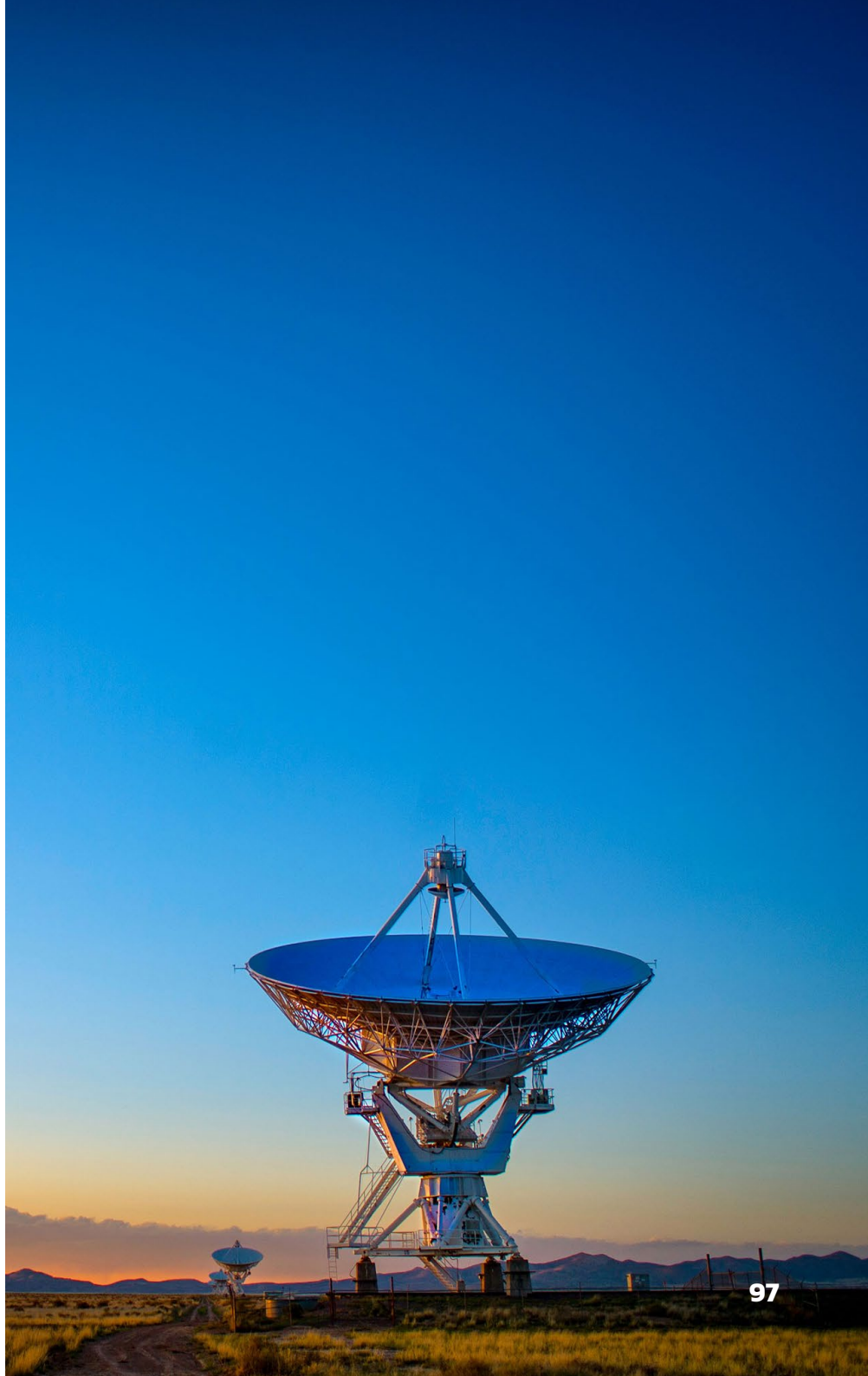
# 5 STEP 5: TRACK

Step 5: Track will focus on measuring, reporting, and verification (MRV) activities. These activities occur all through the five steps of the SBTN process, and guidance for indicator selection and baseline measurement is part of the existing guidance for Step 1, Step 2, Step 3 Freshwater, and Step 3 Land.

SBTN is currently developing claims guidance linked to the validation of Step 3 Freshwater and Step 3 Land. However, public disclosure is critical for company accountability and the integrity of the targets, and we encourage it throughout all steps of the process. Companies participating in the SBTN 2023 pilot are proposing solutions to MRV, specifically KPIs, data collection, data analysis, and potential disclosure of progress, as part of their Corporate Action Plans.

As the technical guidance expands to include additional pressures and states of nature, and additional realms such as Ocean, the suite of indicators and methodologies will expand. SBTN is working with partners to scope an MRV system to serve these needs, building on the existing reporting and disclosure infrastructure. Once this is standardized, SBTN will publish specific technical guidance for Step 5: Track.

More information can be found **here**.



# WHAT'S NEXT?

By reading this manual, we hope you now have a clear understanding of how to set science-based targets for nature, and the confidence to brief technical staff or external consultants to start the target-setting process in detail. You should refer to the technical guidance for a full understanding of the methods and requirements for setting and validating your targets (**SBTN's Resource Library**).

You can also explore an interactive version of this corporate manual through our **online target-setting guide**. This includes additional content in our **How to get started** section to help your organization get ready to set science-based targets for nature.

To help shape future science-based targets for nature, we invite companies, consultancies, and industry coalitions to **join SBTN's Corporate Engagement Program**. You will be leading the way in a transformational shift that helps companies strengthen environmental and social resilience within the communities they are based and contribute to a nature positive future.

## Further information and support:

- Start with the **SBTN Resource Library** to access all core documents and tools.
- Explore additional content in our **online target-setting guide**.
- Consult the **Technical FAQs** on the website, organized by method.
- You can contact the SBTN Corporate Engagement Team at **corporate-engagement@sbtnetwork.org**
- Work with SBTN's **global network of expert advisors** if you need more dedicated support.

**“Setting science-based targets for nature is at the very core of how we all come together to halt and reverse the dual crises of the climate emergency and biodiversity loss.”**

**JENNIFER MORRIS**
CEO, THE NATURE CONSERVANCY

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## ATTRIBUTION