

SBTN Glossary of Terms

May 2023



SCIENCE BASED TARGETS NETWORK
GLOBAL COMMONS ALLIANCE

This glossary is designed as an additional resource for users of SBTN's initial methods. As with other resources published by SBTN, this is subject to change pending revision.

Content in this glossary is organized by the method in which it is used. Terms that are used in multiple methods are repeated in all relevant sections. Where possible, citations are provided for terms to clarify how SBTN builds from existing material, and indicate when terms are new and have been created for use in the SBTN methods.

General terms

AR³T: SBTN's Action Framework is named AR³T because it covers actions to avoid future impacts, reduce current impacts, regenerate and restore ecosystems, and transform the systems in which companies are embedded.

Avoid (within AR³T): Prevent impact happening in the first place, eliminate impact entirely.

Biodiversity: The variability among living organisms from all sources, including, inter alia, terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species, and of ecosystems. (Convention on Biological Diversity (1992), Article 2)

Composition of an ecosystem: This refers to the biotic constitution of ecosystems—the pattern of the makeup of species communities and the interactions between them. It refers to the identity and variety of life.

Dependencies: Aspects of nature's contributions to people that a person or organization relies on to function, including water flow and quality regulation; regulation of hazards like fires and floods; pollination; carbon sequestration.

DPSIR Causal Framework: Describes causal relationships in social-ecological systems between driver (D), pressure (P), state (S), impact (I) and response (R) indicators.

Ecosystem: A dynamic complex of plant, animal, and microorganism communities and the non-living environment interacting as a functional unit. Within this definition, the term "unit" relies on the identification of a distinct function as well as a "dynamic" grouping of biotic and abiotic factors. When using an ecosystem approach to conservation, the United Nations Convention on Biological Diversity (CBD) suggests an ecosystem can refer to any functioning unit, regardless of scale. Thus, the term is not necessarily synonymous with "biome" or "ecological zone" and is better determined by the problem that is being addressed.

Flexible approach: An approach that allows companies to meet only specified requirements for validation, with flexibility on tools and datasets used.

Impacts (within DPSIR): Can be positive or negative contributions of a company or other actor toward the state of nature, including pollution of air, water, or soil; fragmentation or disruption of ecosystems and habitats for nonhuman species; and alteration of ecosystem processes.

Indicator: A measurable entity related to a specific information need, such as the state of nature, change in a pressure, progress toward a target, or association between two or more variables. Example: Red List Index (SDG Target 15.5; Aichi Target 12).

Metric: A quantitative measure of data, relevant to what you are trying to measure or analyze.

Nature: “All non-human living entities and their interaction with other living or non-living physical entities and processes (IPBES Global Assessment 2019³). This definition recognizes that interactions bind humans to nature, and its subcomponents (e.g., species, soils, rivers, nutrients), to one another. This definition also recognizes that air pollution, climate regulation, and carbon are part of “nature” more broadly—therefore, when we talk about acting for nature, we are talking about acting on issues related to climate change as well.” (SBTN 2020, Abridged Glossary for Initial Guidance).

Nature loss: “The loss and/or decline of the state of nature”, as defined above (SBTN 2020, Abridged Glossary for Initial Guidance).

Nature positive: “A high-level goal and concept describing a future state of nature (e.g., biodiversity, nature’s contributions to people) that is greater than the current state.” (SBTN 2020, Abridged Glossary for Initial Guidance).

Planetary boundary: The framework following Steffen et al. (2015) that defines a “safe operating space” for humanity, based on nine key natural processes that regulate the stability and resilience of the Earth system as a whole. The assumption underlying the concept is that remaining within these boundaries can help humanity to avoid unacceptable global environmental change.

Prescriptive approach: An approach that must fully adhere to all aspects of the specified method.

Pressures (within DPSIR):¹ Human activities that directly or indirectly change the state of the environment and ecosystem. Following the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), five key pressures contribute most to the loss of nature globally: land and sea use change; direct exploitation of organisms; climate change; pollution; and invasion of alien species. In the SBTN methods, the following categories are used to describe these pressures: Ecosystem use and ecosystem use change;² resource exploitation;³ climate change; pollution; and invasives and others.

Primary Data: Data source collected firsthand by the company for use in this or other similar sustainability/environmental assessments.

¹ Terminology note: While SBTN uses the term “pressures” in alignment with the DPSIR framework, other initiatives, such as TNFD and the Capitals Coalition, use the term “impact drivers” to describe these same factors within the causal chain of environmental change. SBTN reserves the use of the term “impact” to describe changes in functioning of nature, due to an accumulation in or amelioration of pressures (e.g., decreased pollination due to loss of habitat and food sources for pollinators, and improved regulation of water flows due to restoration of soils and riverine ecosystems).

² We use this term to capture both the current uses of ecosystems and the conversion of these. This broader category also helps us reinforce the relevance across realms (beyond terrestrial, and into freshwater and marine).

³ While we generally follow IPBES definitions for these categories, we take a slightly broader conceptualization of “direct exploitation” to include both biotic and abiotic resources, such as water use. We thus use the term “resource exploitation.”

Reduce (within AR³T): Minimize impacts, from a previous baseline value, without eliminating them entirely.

Regenerate (within AR³T):⁴ Actions designed within existing land uses to increase the biophysical function and/or ecological productivity of an ecosystem or its components, often with a focus on specific nature's contributions to people (e.g., on carbon sequestration, food production, and increased nitrogen and phosphorus retention in regenerative agriculture).

Restore (within AR³T):⁵ Initiate or accelerate the recovery of an ecosystem with respect to its health, integrity, and sustainability with a focus on permanent changes in state.

Science-based targets: Measurable, actionable, and time-bound objectives, based on the best available science, that allow actors to align with Earth's limits and societal sustainability goals.

Secondary Data: Data that were originally collected and published for another purpose or a different assessment.

States (within DPSIR): Unless otherwise specified by SBTN, the term "state" is used to mean "state of nature" in three key categories: species (abundance and extinction risk), ecosystems (extent, integrity, and connectivity), and nature's contributions to people.

Structure of an ecosystem: This comprises the three-dimensional aspect of ecosystems—the biotic and abiotic elements that form the heterogeneous matrix supporting the composition and functioning. Structure is dependent on habitat area, intactness, and fragmentation.

Transform (within AR³T): Actions contributing to system-wide change, notably the drivers of nature loss, e.g., through technological, economic, institutional, and social factors and changes in underlying values and behaviors (adapted from the IPCC and IPBES 2019⁹).

Validation: An independent process involving expert review to ensure the target meets required criteria and methods of science-based targets. Please reference additional resources on the SBTN website for details on our validation process.

Stakeholder Engagement Guidance

Affected Communities: including people or group(s) living or working in the same area(s) that have been or may be affected by an organization's activities or through its value chain relationships. Affected communities can range from those living adjacent to the organization's operations or the site of its activities (Fenceline communities) to those living at a distance but affected, for example, by water or air pollution that the organization generates. Workers can also fall into this category.

Affected Communities are often Indigenous Peoples, who have particular internationally recognized human rights with regard to their lands, cultures, traditional knowledge and the conduct of their affairs. Indigenous Peoples have the right to Free, Prior and Informed Consent before activities affecting their lands may proceed.

⁴ Adapted from FOLU, 2019

⁵ adapted from the Society of Ecological Restoration

Downwinder: a term commonly used in reference to nuclear radiation to describe those exposed by the direction of wind travel, however also applies to a broader environmental justice framework more generally with regard to nature degradation and associated pollutants impacting affected “down wind” communities.

Free, Prior and Informed Consent (FPIC): Free, Prior and Informed Consent (FPIC) is a specific right that pertains to Indigenous Peoples and is recognized in the United Nations Declaration on the Rights of Indigenous Peoples. FPIC is a mechanism that safeguards the individual and collective rights of indigenous and tribal peoples, including their land and resource rights and their right to self-determination. The minimum conditions that are required to secure consent include that it is “free” from all forms of coercion, undue influence, or pressure, that it is provided “prior” to a decision or action being taken that affects individual and collective human rights, and that it is offered on the basis that affected peoples are “informed” of their rights and the impacts of decisions or actions on those rights. FPIC is considered to be an ongoing process of negotiation, subject to an initial consent. To obtain FPIC, “consent” must be secured through an agreed process of good faith consultation and cooperation with indigenous and tribal peoples through their own representative institutions. The process should be grounded in a recognition that the indigenous or tribal peoples are customary landowners. FPIC is not only a question of process, but also of outcome, and is obtained when terms are fully respectful of land, resource, and other implicated rights (UN Food and Agriculture Organization (2016): Free Prior and Informed Consent - An Indigenous Peoples’ Right and a good practice for local communities).

Frontline communities: communities that experience the impacts of environmental impacts and climate change “first and worst.” Overwhelmingly and disproportionately people of color, individuals in these communities have endured the incredible physical, economic, and mental burdens of these pressures. Because of their lived experience, people in frontline communities have become experts on the nature and climate crisis: not just what it’s like to go through, but what solutions actually work on the ground (adapted from The Climate Reality Project)

Fenceline communities: communities that live immediately adjacent to highly polluting facilities – think fossil fuel infrastructure, industrial parks, or large manufacturing facilities – and are directly affected by the traffic, noise, operations, and most-concerningly, environmental impacts e.g. chemical and fossil fuel emissions of the operation (adapted from The Climate Reality Project)

Marginalized: people or groups that are historically underprivileged, underrepresented and disempowered based on their identities.

Stakeholder engagement: Effective and equitable stakeholder engagement must be an interactive and holistic process—grounded in rights-based approaches—and requiring ongoing communication, listening, learning and collaboration.

Stakeholders: organization's stakeholders are typically defined as the people who can affect or be affected by the organization's projects or activities either directly or indirectly.

Step 1: Assess

Commodities : Basic economic goods that can be bought, sold or exchanged with other goods of similar value.

Direct operations: All activities and sites (e.g., buildings, farms, mines, retail stores) over which the enterprise has operational or financial control. This includes majority-owned subsidiaries.

Double materiality:⁶ Double materiality is a concept which provides criteria for determination of whether a sustainability topic or information has to be included in the undertaking's sustainability report. Double materiality is the union (in mathematical terms, i.e. union of two sets, not intersection) of impact materiality and financial materiality. A sustainability topic or information meets therefore the criteria of double materiality if it is material from the impact perspective or from the financial perspective or from both of these two perspectives.

Downstream: All activities that are linked to the sale of products and services produced by the company setting targets. This includes the use and re-use of the product and its end of life, including recovery, recycling, and final disposal.

Economic Activities: The production activities where labor and assets are used to transform inputs of goods and services into outputs of other goods and services that can be sold on markets or transferred between units in other (non-market) forms. This excludes non-productive activities such as those performed by financial corporations, governmental units, non-profit organizations, and households that focus on the distribution, redistribution, consumption, saving, and accumulation of income.

Embedded or highly transformed commodities: Volumes of high-impact commodities that are integrated into complex products. In this case, companies do not purchase a commodity in its raw or processed forms, but they purchase a product that contains them.

Financial materiality:⁶ A sustainability topic is material from a financial perspective if it triggers financial effects on undertakings, by generating risks or opportunities that influence or are likely to influence the future cash flows and therefore the enterprise value of the undertaking in the short, medium or long term but are not captured by financial reporting at the reporting date.

High-Impact Commodities (HICs): Raw and value-added materials used in economic activities that are known to have material links to the key drivers of biodiversity loss, resource depletion, and ecosystem degradation. Activities associated with high impact commodities include: extraction of these commodities (e.g. mining, farming), clearing of lands for extraction, processing of commodities (into refined or value-added forms), manufacturing commodities into complex products (with additional inputs), distribution of commodities, and the procurement of commodities (in their raw, value added, or final form).

Impacts: These can be positive or negative contributions of a company or other actor toward the state of nature, including pollution of air, water, or soil; fragmentation or disruption of ecosystems and habitats for nonhuman species; and alteration of ecosystem processes.

Impact materiality:⁶ A sustainability topic or information is material from an impact perspective if the undertaking is connected to actual or potential significant impacts on people or the environment and is related to the sustainability topic over the short, medium or long term. This includes impacts directly caused or contributed to by the undertaking, and impacts which are otherwise directly linked to the undertaking's upstream and downstream value chain.

⁶ <https://www.efrag.org/Assets/Download?assetUrl=/sites/webpublishing/SiteAssets/Appendix%202.6%20-%20WP%20on%20draft%20ESRG%201.pdf>

Impacts on nature: A change in the state of nature, which may result in changes to the capacity of nature to provide value to business and society and/or instrumental, relational, and intrinsic value. (Taskforce on Nature-Related Financial Disclosures)

Materiality: A way of distinguishing importance or significance.

Organizational scope: Generally the “highest-level, most straightforward boundaries” drawn to delimit the activity scope of a corporate impact assessment and impact management exercise.⁷ The organizational boundary can be determined through one of three ‘control’ approaches outlined by the Greenhouse Gas Protocol (GHGP) Corporate Standard.⁸ Within the organizational boundary, companies can then draw their operational boundary, to distinguish between what are considered to be pressures and impacts associated with their direct operations (Scope 1) vs. their upstream and downstream (Scope 3).

Site(s): Operational locations within a company's value chain/spheres of control and influence (including direct operations). Sites can include operations from any phase of a product's life cycle, from extractive operations (e.g., mines), material processing (e.g., mills), production facilities (e.g., factories), logistics facilities (e.g., warehouses), wholesale and retail (e.g., stores), and recycling/end of life (e.g., material recovery).

Societal materiality: the importance of pressures stemming from economic activities, due to their impacts on the environment (e.g., conversion of natural ecosystems, extinction of species, depletion of water, release of carbon, and other disruptions of ecological processes) and their impacts on human health and wellbeing experienced directly or through degradation of the environment (e.g., toxicity of water, depletion of essential food stocks, removal of natural barriers to disease, and increased exposure to hazards such as fires, heat, and floods). Parameters used to understand significance (e.g. time frame, geographic distribution, potential severity) should correspond to societal preferences and the views and knowledge of those who live and are connected to place.

Spatial Scale⁹: In ecology, spatial scale refers to the spatial extent of ecological processes. The responses of organisms, populations, species or communities to the environment may differ at larger or smaller scales. Choosing the scale appropriate to a given ecological process is crucial to hypothesizing and determining the underlying causes of the processes and effects involved.

State of nature: The quality of the environment in relation to the functions that it fulfills. For SBTs, “state of nature” typically refers to three key categories: species (abundance and extinction risk), ecosystems (extent, integrity, and connectivity), and nature's contributions to people.

State of Nature Indicators: State of nature indicators describe the general conditions of nature in physical, chemical, or biological terms. These state of nature indicators change in response to pressures. This interaction between human activities and the environment can be understood with reference to the DPSIR causal framework, which SBTN utilizes throughout the target-setting methodology. Important state indicators in the SBTN methods include water availability, terrestrial

⁷ <https://www.theshg.com/wp-content/uploads/2017/02/GHG-Accounting-Boundaries.pdf>

⁸ <https://ghgprotocol.org/corporate-standard>

⁹ [IPBES](#)

ecosystem intactness, net primary productivity, soil organic carbon content, water quality, and ecosystem extent or connectivity.¹⁰

Upstream Supply Chain Tiers: This includes Tier 1, the activities or commodities associated with the target setting companies' direct spending. Tier 2 are the activities or commodities that are supplied to Tier 1 in order to make the goods purchased by the target setting companies. This logic continues for Tier 3 and above. Tier 2 and above can also be thought of as the target-setting companies' indirect spending.

Transformed goods: Goods that are transformed in some way from their raw states by operations to produce a resulting output to be sold in economic markets

Upstream: All activities associated with suppliers, e.g., production or cultivation, sourcing of commodities of goods, as well as transportation of commodities to manufacturing facilities.

Value chain: Production of 'economic value' along a series of activities, sites, and entities. The value chain can be divided into three 'segments' upstream, direct operations and downstream. Each of these segments involve places where economic activities managed or relied upon by the company occur. Most value chain frameworks cover a suite of activities starting with the raw materials and extending through end-of-life management, that (a) supply or add value to raw materials and intermediate products to produce final products for the marketplace and (b) are involved in the use and end-of-life management of these products.

Step 2: Interpret & Prioritize

Co-benefits: Co-benefits refers to a phenomenon when multiple objectives or interests are met simultaneously as a benefit of company actions. Here, companies using a co-benefits lens in prioritization are looking for locations where their investments in science-based targets can result in reductions to multiple environmental impacts when appropriate actions are taken. There may also be other cases where implementation of science-based targets result in opportunistic co-benefits, e.g. when a company applies a science-based target for land use (Land Footprint Reduction) which results in benefits for freshwater systems like reduction in water use.

Spatial prioritization: Spatial prioritization is a tool used to identify priority areas for action, as an analysis which integrates spatial data about company pressures, the state of nature, and aspects of implementation including the needs and capacity of stakeholders, the needs of value chain partners, and the policy context.

Target boundary: Target boundaries, as defined by SBTN, are the spatial extent of companies' pressure footprints managed through science-based targets. The target boundaries must be defined for each pressure and value chain component as well as the activities and goods that will be addressed by science-based targets over time.

¹⁰ Terminology note: While SBTN uses the term "state" in alignment with the DPSIR framework, other initiatives, such as TNFD and the Capitals Coalition, use the term "changes in natural capital" to describe these same factors within the causal chain of environmental change.

Step 3 : General

Allocation: Assignment of a given company's portion of effort toward issue/impact mitigation.¹¹

Baseline: Value of impacts (on nature) or state (of nature) against which an actor's targets are assessed in a particular previous year or particular previous years.

Desired state of nature: A state of nature consistent with the safe operating space defined by Planetary Boundaries, either for direct indicators (species, ecosystems, and nature's contributions to people) or for surrogates representing these indicators.

Goal: In global (e.g., UN) sustainability framings, a high-level statement of ambition, including a time frame. Example: By 2030, ensure healthy lives and promote well-being for all at all ages (Sustainable Development Goal 3).

Measurement: The process of collecting data for baseline setting, monitoring, and reporting.

Monitoring: The periodic collection and evaluation of data relative to stated targets.

Nature's Contributions to People (NCPs—also known as “ecosystem services”): “All the beneficial and detrimental contributions that humans obtain from and with nature (IPBES Global Assessment: 26). In general NCPs are categorized as material NCPs (e.g., wild-harvested foods), regulating NCPs that govern biophysical processes (e.g., carbon storage, flood regulation), and non-material NCPs that provide cultural services. In total, the different categories of NCP recognized by IPBES are: habitat creation and maintenance (NCP 1); pollination and dispersal of seeds and other propagules (NCP 2); regulation of air quality (NCP 3); regulation of climate (NCP 4); regulation of ocean acidification (NCP 5); regulation of freshwater quantity, location, and timing (NCP 6); regulation of freshwater and coastal water quality (NCP 7); formation, protection, and decontamination of soils and sediments (NCP 8); regulation of hazards and extreme events (NCP 9); regulation of detrimental organisms and biological processes (NCP 10); energy (NCP 11); food and feed (NCP 12); materials, companionship, and labor (NCP 13); medicinal, biochemical, and genetic resources (NCP 14); learning and inspiration (NCP 15); physical and psychological experiences (NCP 16); supporting identities (NCP 17); maintenance of options (NCP 18).” (SBTN 2020, Abridged Glossary for the Initial Guidance).

Relevant local stakeholders: Any individual, group, or institution that has a vested interest in or can influence the natural resources of the project area and/or that potentially will be affected by project activities and has something to gain or lose if conditions change or stay the same.

Reporting: The preparation of a formal written document that is typically connected to desired objectives, outcomes, or outputs, such as those connected to targets and goals.

Site-level targets, value chain-level targets, corporate-level targets: Different commonly defined boundaries for SBTs, representing different types of sites within or beyond a value chain. Site-level targets occur at a specific site. Value chain-level targets occur throughout the company's entire value chain. Corporate-level targets can be a mix of site-level, value chain-level, or other levels (e.g., systems- and/or scape-level); this depends on the specific methodology/issue area.

Sustainability goals: Targets that define a just future for nature and people.

¹¹ The use of this term in this guide is not to be confused with the use of “allocation” related to water rights.

Target: In global (e.g., UN) sustainability framings, a more specific quantitative objective, usually nested under a goal, with defined measurement and an associated indicator. Example: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity (Aichi Target 8).

Threatened ecosystems: Ecosystems that are classified as threatened by the IUCN Red List of Ecosystems. This includes "Vulnerable," "Endangered," or "Critically Endangered" ecosystems. While Red List of Ecosystem assessments are not yet global in coverage, they provide an additional buffer against the conversion of threatened ecosystems for those areas that have been assessed.

Threshold: Level of an environmental indicator representing attainment of the desired state of nature.

Verification: Assessment and validation of compliance, performance, and/or actions relative to a stated commitment, standard, or target. With respect to SBTs, an independent third-party confirmation of either or both a) baseline values of a target indicator (e.g., a company's water or GHG inventory) and b) progress made toward achieving the target.

Step 3 : Freshwater

Authorized basin agency: National, regional, state, or local government agency that has the authority to make decisions on the allocation of water resources, including regulating pollutant loads. Examples include basin management authorities, water resource management agencies, and catchment councils.

Back-calculation: The process of determining the required percent reduction in basin-wide withdrawals or nutrient load by examination of existing results from an approved Locally Developed model and environmental thresholds.

Basin: The area of land that provides all surface runoff and subsurface waters to a given waterbody. Also referred to as a "watershed" or "catchment."

Basin management authority: The agency or authority within a basin that is officially designated for the management of the water resources, including decisions on freshwater quality standards and freshwater quantity allocations.

Blue water availability: Natural runoff (through groundwater and rivers) minus environmental flow requirements. Blue water availability typically varies within the year and from year to year.

Blue water footprint: Volume of surface and groundwater consumed as a result of the production of a good or service.

Catchment: The area of land that provides all surface runoff and subsurface waters to a given waterbody. Also referred to as a "watershed" or "basin."

Concentration: The amount of a substance in a given volume of water, specified in units of mass per volume (e.g., mg P/L).

Consumption: The net use of water, i.e., the volume of water withdrawn minus the volume of water discharged/returned.

Cumulative impacts: Impacts that result from incremental changes caused by other actions along with the entity of interest.

Direct application: The process of determining the required percent reduction in basin-wide withdrawals or nutrient loads by directly applying an approved Locally Developed model and confirming that the resulting state of nature is consistent with approved environmental thresholds.

Environmental flows (e-flows): Environmental flows (e-flows) describe the quantity, timing, and quality of freshwater flows and levels necessary to sustain aquatic ecosystems, which, in turn, support human cultures, economies, sustainable livelihoods, and well-being¹².

Effluent: The outflow of water from a structure such as a wastewater treatment plant, sewer pipe, or industrial outfall.

Freshwater: Water containing less than 1,000 mg/L of dissolved solids, most often salt.¹³

Grey water footprint: the volume of freshwater that is required to assimilate the load of pollutants based on natural background concentrations and existing ambient freshwater quality standards. It is calculated as the volume of water that is required to dilute pollutants to such an extent that the quality of the water remains above agreed freshwater quality standards.

Load: The rate at which a pollutant such as nutrients is delivered to a receiving water, specified in units of mass per time (e.g., kg P/day).

Nonpoint source: Sources of pollution that are delivered to the receiving water in a diffuse manner, i.e., not through a confined channel or discharge pipe.

Pfafstetter Coding System: A hierarchical method of coding river basins such that Level 1 basins correspond to continental scale basins draining to the ocean. Higher levels (Levels 2, 3, 4, etc.) represent ever-finer divisions of the landscape into smaller basins. HydroBASINS is rooted in the 'Pfafstetter' coding system, and has been implemented in the HydroBASINS product offering 12 hierarchically nested sub-basin breakdowns globally.¹⁴

Point source: Any single identifiable source of pollution from which pollutants are discharged, such as a confined channel or discharge pipe.

Spatial domain: The specific land area (i.e., basin) being covered by the target, which includes all company activities occurring in the basin. In the case of this method, the spatial domain is the basin.

Water challenge: Water-related issues including physical water scarcity, insufficient freshwater quality, and/or regulatory restrictions on water use.

Water use: A general term that can represent either gross or net consumption (i.e., water withdrawn minus volume of water discharged/returned).

Watershed: The area of land that provides all surface runoff and subsurface waters to a given waterbody. Also referred to as a "basin" or "catchment".

¹² Arthington et al., 2018

¹³ <https://www.usgs.gov/special-topics/water-science-school/science/freshwater-lakes-and-rivers-and-water-cycle#overview>

¹⁴ <https://www.hydrosheds.org/products/hydrobasins>

Step 3: Land

Agricultural land: Cropland and land under permanent meadows and pastures.

Bare land: Areas with exposed rock, soil, or sand with less than 10% vegetated cover.

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

Core Natural Lands: Places with acknowledged ecological importance that require immediate action to prevent conversion due to:

- Existing legislation and/or initiatives, which include commitments to deforestation and conversion-free commodities.
- Extinction/collapse risk, irreplaceability, or natural uniqueness.
- Maintaining natural ecosystem contiguity or intactness.
- The provision of critical natural assets or contributions to people.

Cut-off dates: The cut-off date provides a baseline for the target. After this date, any conversion of natural ecosystems on a given site renders the materials produced on that site non-compliant with a no-conversion target.

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

Ecological/habitat connectivity: The degree to which the landscape facilitates the movement of organisms (animals, plant reproductive structures, pollen, pollinators, spores, etc.) and other environmentally important resources (e.g., nutrients and moisture) between similar habitats. Connectivity is hampered by fragmentation (IPBES 2019).

Ecosystem condition: The quality of an ecosystem, measured by its abiotic and biotic characteristics. Condition is assessed by an ecosystem's composition, structure, and function which, in turn, underpins the ecological integrity of the ecosystem, and supports its capacity to supply ecosystem services on an ongoing basis (UN SEEA (2021) System of Environmental Economic Accounting - Ecosystem Accounting: Final Draft).

Ecosystem function: The flow of energy and materials through the biotic and abiotic components of an ecosystem. This includes many processes such as biomass production, trophic transfer through plants and animals, nutrient cycling, water dynamics, and heat transfer (IPBES 2019).

Ecosystem integrity: Ecosystem integrity encompasses the full complexity of an ecosystem, including the physical, biological, and functional components, together with their interactions, and is measured against a “natural” (i.e., current potential) reference level. It is the extent to which the composition, structure, and function of an ecosystem fall within their natural range of variation.

Forests: Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10%, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or other land use.

Land cover: The observed physical and biological cover of Earth's land.

Land footprint/land occupation: A company's land footprint, known in life cycle assessment terms as “land occupation,” is defined for the land footprint target as the amount of agricultural land required per year to produce the products produced or sourced by a company, and it is reported in hectares per year.¹ For crops, land occupation is also referred to as “harvested area” in the Food and Agriculture Organization's data portal FAOSTAT. Importantly, “land footprint” or “land occupation” for the purpose of target-setting related to Land science-based targets refers to “working lands” used to produce agricultural products in corporate supply chains—not necessarily all land owned or controlled by companies. Please note as well that “land footprint” and “land occupation” are referred to as *terrestrial ecosystem use* in the SBTN Technical Guidance for Steps 1 and 2. Terrestrial ecosystem use is one of the eight main environmental pressures that SBTN companies are required to assess in Step 1.

Land footprint intensity/land occupation intensity: Land footprint (or occupation) intensity is essentially the reciprocal of yield, referring to the amount of land needed to produce a given unit of product. The unit of product in the denominator of this calculation can vary (e.g., weight, kilocalories, protein).

Landscape: A socio-ecological system that consists of natural and/or human-modified ecosystems, and which is influenced by distinct ecological, historical, economic, and socio-cultural processes and activities. For the purpose of this guidance, the landscape is the area where a landscape approach is being implemented. In ideal cases, the landscape will have been defined through a broad stakeholder-led process in which a company may begin its participation. This may not always be the case for areas that are relevant for companies. In these cases, a more prescriptive approach to landscape identification may be required. Here it may be possible to utilize water basin boundaries identified through the SBTN Freshwater target methodology or through SBTN's Step 2: Prioritize process.

Landscape approach: Collaboration of stakeholders within a defined natural or social geography, such as watershed, biome, or company sourcing area. This approach seeks to reconcile competing social, economic, and environmental goals through “integrated landscape management”—a multi-stakeholder approach that builds consensus across different sectors with or without government entities.

Land use: All the arrangements, activities, and inputs undertaken in a certain land-cover type (a set of human actions) or the social and economic purposes for which land is managed (e.g., grazing, timber extraction, conservation).

Land use change: Land uses can change over time due to both natural and anthropogenic causes. Such changes can be represented by land use change categories (e.g., forest land converted to cropland). Where the land use category remains the same but the land use subcategory changes, for example conversion from a primary forest (natural forest) to a plantation forest (planted forest), this should be accounted for as land use change.

Natural ecosystem¹⁵: An ecosystem that substantially resembles—in terms of species composition, structure, and ecological function—what would be found in a given area in the absence of major human impacts. This includes human-managed ecosystems where much of the natural species composition, structure, and ecological function are present. Following AFi, natural ecosystems include:

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

Natural forests: Natural forests possess many or most of the characteristics of a forest native to the given site, including species composition, structure, and ecological function.

Short vegetation: Areas of land with vegetation shorter than 5 meters, and can include areas of land dominated by grass or shrubs.

Snow/ice: Areas covered by permanent snow or ice.

Sourcing area: a known area or region where a material/commodity was produced or extracted, but where the specific production unit of origin is not known. This could include a sourcing radius from a first point of collection or processing facility (e.g., a radius from a palm oil mill), a defined production landscape (e.g., the area covered by a smallholder cooperative), or a subnational jurisdiction (e.g., municipality).

Target dates: Target dates are the time by which companies must achieve their Land targets.

Water: Surface water present 20% or more of the year, outside wetlands.

¹⁵ <https://accountability-framework.org/the-framework/contents/definitions/>

Wetlands: Transitional ecosystems with saturated soil that can be inundated by water either seasonally or permanently, and can be covered by short vegetation or trees.

Working lands: Human modified lands that can include farms, forests, rangelands, and infrastructure that are managed to provide goods and services for humanity.

Yield: Intensity of production per unit of land area. It is defined as the amount of product produced in a year divided by the amount of land occupied by that product. For crops, it refers to the amount produced divided by the harvested area. For livestock products, it refers to the amount produced divided by the total area needed for livestock production (both to house the animals and to produce the crop- and/or pasture-based animal feeds).