SCIENCE-BASED TARGETS *for* NATURE

Initial Guidance for Business

September 2020

SCIENCE BASED TARGETS NETWORK
GLOBAL COMMONS ALLIANCE

FOREWORD

We are at a turning point. We can either choose a future where the goods and services we need are produced in ways that regenerate and revive the natural world, or, we can choose a pathway that takes us to a bleak future, where we have continued to produce in a way that destroys nature without putting enough back to keep it, and ourselves, alive.

The transformation required to reach a nature-positive future is immense, but it is possible, and it is not only nature that would gain. Stopping nature loss and halting climate change are two of the biggest business opportunities of our time. The World Economic Forum's Future of Nature and Business report estimates nature-positive transitions could generate up to US$10.1 trillion in annual business value and create 395 million jobs by 2030.

Stopping nature loss and halting climate change are two of the biggest business opportunities of our time.

Why now?

The COVID-19 pandemic has exposed our vulnerability to nature-related risks like never before. As we look to regain global stability, we have a unique opportunity to adopt new business models, build new partnerships across industries, and reimagine our relationship with nature. After crises, there can be a tendency to double down and focus only on emergency recovery. In the wake of the pandemic, we must create momentum to act in the interest of nature, and ourselves.

2020 was billed as "the super year for nature"—and it still can be.

In this moment of rethinking and reconfiguration, businesses are called upon to show their ability to adapt and willingness to lead. It is time to recognize that business models and practices that were the norm for so long are no longer viable.

Systemic challenges require systemic solutions. Our aim is to break down silos—between organizations, between issues, between approaches—to solve the interrelated challenges facing the global commons, including climate change and the degradation of ecosystems critical for human well-being.

The over 45 partner organizations working with the Science Based Targets Network (SBTN) are united by a common purpose: to equip companies with guidance for what it means to move from doing "a little less bad" to "doing our fair share" to maintain the global commons, the interrelated Earth system that underpins the health and well-being of humans and all life.

We know that to achieve a nature-positive future requires unprecedented collaboration

We intend to provide resources that build on what companies are already doing to ensure that they can adapt and strategize in the most efficient way to incorporate action on nature into the way they do business.

This is uncharted territory we find ourselves in, and we know that to achieve a nature-positive future requires unprecedented collaboration. This initial guidance is a starting point, meant to encourage action and collaboration with our intended users—companies—and the stakeholders necessary for driving uptake at scale. Together we can commit to a safe and just future, where we avoid further destruction of ecosystems, halt climate change and species extinctions, regenerate the soil on which our food systems depend, and restore the landscapes in which we live, work, and belong.

Erin Billman
Executive Director of the Science Based Targets Network

SCIENCE BASED TARGETS NETWORK
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READING GUIDE

SBTN is publicly issuing this initial guidance on science-based targets (SBTs) for nature, as a first step toward integrated SBTs for all aspects of nature: biodiversity, climate, freshwater, land, and ocean (expected in 2022). This is draft content and is open for public consultation as of September 2020.

This guidance covers the following questions: What is an SBT? Why are SBTs important? How will they work? This guidance also identifies steps companies can take immediately and enables "no regrets" actions consistent with the urgency of the challenges we face.

In reading this guidance, you will be introduced to the following:

- the concepts and definitions at the core of SBTs for nature as well as the business case for setting SBTs for nature (Section 1)
- our proposed step-by-step process of setting SBTs for nature (Section 2)
- the next steps for companies and SBTN (Section 3)

Different readers may wish to skip directly to content most relevant to them.

All the content in this guidance is kept at a high level and is intended to provide target setters with direction for how to get started on the journey. For a summary of the points of this guidance, see the Executive Summary.

Key terms will be introduced and defined throughout the document, with a full glossary also made available here. Further, additional detail is available for many sections in the Technical Annexes.

Questions for consultation:

1. *What did you find most useful about the guidance?*
2. *What did you find hardest to understand about the guidance?*
3. *What approaches, methods, and/or tools might we build on that are not already referenced in the guidance?*
4. *How might we increase the usability of the approach we have laid out?*

Please get in touch by using this form if you have any feedback.

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GLOBAL COMMONS ALLIANCE
A PLAN FOR THE PLANET

WHO WE ARE

The Science Based Targets Network (SBTN) is one of four components that make up the Global Commons Alliance (GCA). The Global Commons Alliance represents the world's most influential and forward-looking organisations in business, advocacy and campaigning, science and philanthropy. For the first time we are identifying a safe and just corridor for humanity, creating science-based targets for all global commons, and building the advocacy and information systems to take this to scale. Our mission is to empower citizens, cities, companies and countries to become stewards of our global commons. Alongside the Science Based Targets Network, which is a network of international environmental nonprofit organizations, international agencies and mission-driven entities working to turn the science into targets for companies and cities to work towards across all the global commons, the other components of the Alliance are:

EARTH COMMISSION
GLOBAL COMMONS ALLIANCE

A group of leading earth systems and social scientists working to identify a safe and just corridor for humanity

EARTH HQ
GLOBAL COMMONS ALLIANCE

A creative agency building driving major media partnerships, new products and advocacy campaigns

SYSTEMS CHANGE LAB
GLOBAL COMMONS ALLIANCE

A lab to provide the alliance with essential intelligence on systems transformation

SCIENCE BASED TARGETS NETWORK
GLOBAL COMMONS ALLIANCE

Science-based targets (SBTs) for nature are the SBTN's contribution to the GCA's long-term vision to empower citizens, cities, companies, and countries to become stewards of the global commons. With our partners at the GCA, the SBTN will work to identify and motivate all actors, from companies and cities to investors and policy-makers to media and social movements, to realize the systemic transformations that are necessary.

By leveraging different groups of actors around the world, the GCA will help drive multi-level ambition loops between regulatory and voluntary action to help secure a safe and just future, as shown in Figure i. The SBTN's contribution toward this vision is the development of methodologies that companies and cities can use to set SBTs for nature, which will enable and engender stronger voluntary action for nature and climate, in turn enabling stronger policy.

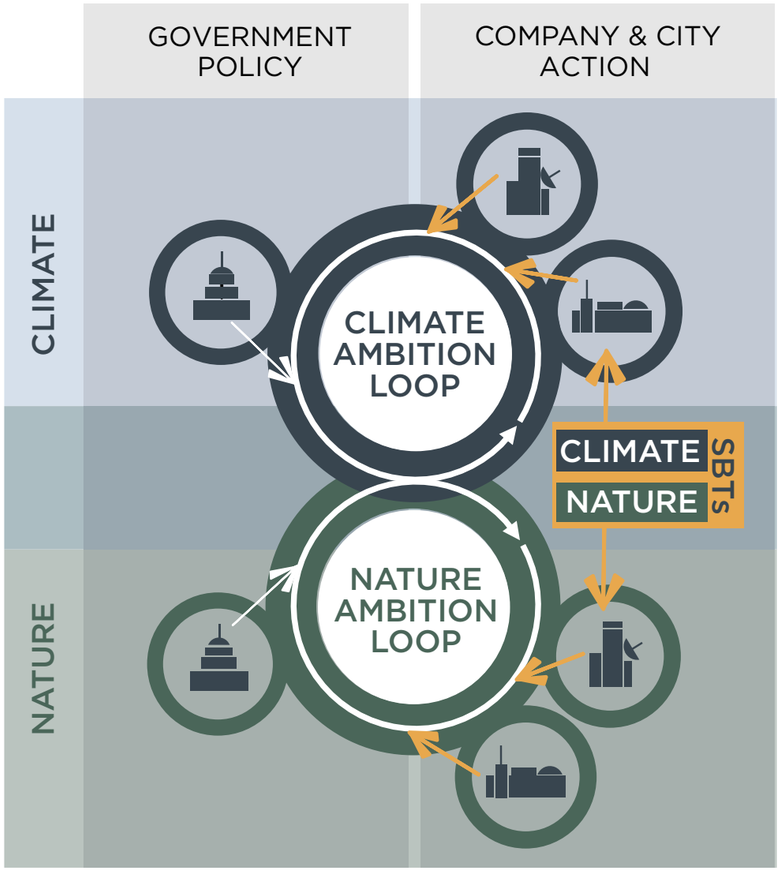


Figure i. Combined 'nature' and 'climate' ambition loops, which collectively create stronger policy and voluntary action for both climate and nature; adapted from the concept of the climate ambition loop, www.ambitionloop.org. Note that although we treat climate and nature as separable issues in this graphic, they are scientifically, politically and economically intertwined.

Why science-based targets (SBTs) for nature?

In this section, we introduce the business case for setting SBTs. We ground it in the environmental and societal imperative for action. Finally, we discuss why and how SBTs offer a key lever for change.

SECTION ONE

1.1. What's at stake for business?

For millennia, humans have relied on the ability of ecosystems to provide services like protection from floods, regulation of diseases and pests, sequestration and regulation of carbon, maintenance of habitats, and provision of food and water (see Figure 1, also Technical Annex 1.2 and Technical Annex 1.6). In recent years, scientists have begun ringing warning bells as they observe declines in intact ecosystem extent and condition, as well as increasing rates of species extinctions throughout the regions of the world (IPBES 2019a; see Figure 2). These indications of the degradation and loss of nature entail a direct risk for human well-being and global economic activities.

The loss of nature poses a direct threat to economic activities currently responsible for generating over half of gross domestic product, or GDP. Each year, ecosystems provide services estimated to be worth more than US$40 trillion (around half of global GDP) (WEF 2020c).[1]

Specifically, PricewaterhouseCoopers found that industries that are highly dependent on nature (like agriculture, fishing, mining, and tourism) generate 15% of global GDP (US$13 trillion), while moderately dependent industries generate 37% (US$31 trillion) (Herweijer, Mariam and Evison 2020).[2]

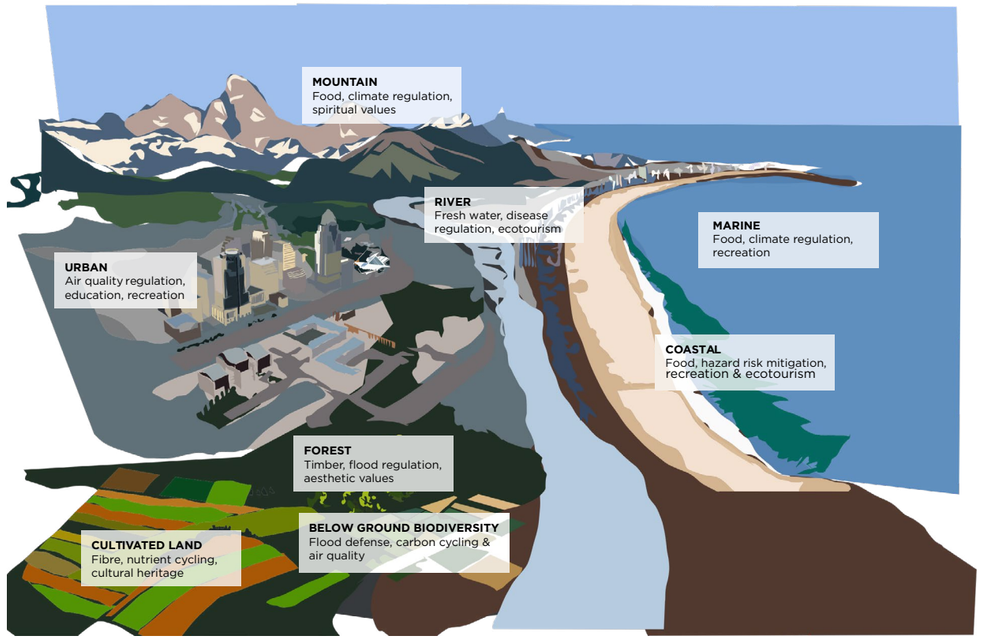


Figure 1. Some of the services and benefits nature provides human societies and economies. Adapted from: Dasgupta et al. 2020. See Technical Annex or TA1.6 for more detail.

Nature

All non-human living entities and their interaction with other living or non-living physical entities and processes (IPBES Global Assessment 2019). 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, and therefore, when we talk about acting for nature, we are talking about acting on issues related to climate change as well.

Local and global pressures on nature are decreasing ecosystems' ability to function and, consequently, their ability to provide contributions to the well-being of human and nonhuman life. Trends like increased nutrient imbalance and increased toxicity of ecosystems threaten water and food security. This can lead to greater vulnerability in the face of disease, shortfalls in the labor force, and economic losses at all levels (with impacts on consumption patterns) and can bring knock-on effects to human health over generations to come.

The activities associated with 'business as usual' are fueling the loss of nature, so we can conclude that our way of doing business must change.

Decreases in biological diversity alongside increases in the severity and frequency of natural hazards will bring further economic disruptions and job insecurity in globally significant sectors like agriculture, aquaculture, fishing, and tourism (one in three people are employed in agriculture, aquaculture, or fishing, and one in ten people are employed in tourism).

Biodiversity loss is increasingly being recognized as one of the most important risks in terms of impact and likelihood, as are climate change and water crises (WEF 2020a). Focusing on biodiversity, scientists have found that the rate of species extinctions—of plants, mammals, fish, and others—is approximately 1,000 times higher than background extinction rates (Pimm et al. 2014). Compared to historical records, total numbers of wild mammals, measured in biomass, have declined by 82% (IPBES 2019). Around the world, vertebrate and insect pollinators are observed to be under threat of extinction—with exceptions where their populations are managed (IPBES 2017). The loss of pollinators alone could cost the global economy upward of US$500 billion per year (Paulson 2020).

The rate and extent of species extinction have been widely acknowledged in the media and scientific literature. But until recently, the disruption and deterioration of the world's ecosystems—upon which our lives and businesses rely—have received far less attention. Trends in ecosystem decline pose immediate and complex risks to human life. While species loss is more abstract and less directly connected to human well-being and corporate operations, the degradation of ecosystems as a whole, with its repercussions for nature's contributions (i.e., ecosystem services), has more tangible, material, and all-encompassing significance for business. Furthermore, biodiversity loss relates to and may exacerbate existing and anticipated risks, like extreme heat waves, health impacts due to pollution, and uncontrolled fires, which are already unfolding around the world (WEF 2020a).

The activities associated with "business as usual" are fueling the loss of nature, so we can conclude that our way of doing business must change.

Given the rate of nature's loss, and the limited window of time to reverse this, change must be immediate and extensive. The longer we wait to act, the more likely we are to face higher costs and irreversible losses.

To meet this challenge, we call on leaders from throughout the business world to join us. Human activities like trade, consumption, and production have created these existential threats. Businesses have a key role to play—and much to gain—by helping to reduce them. Collaboration will be essential given the diverse connections between actors in landscapes and seascapes where economic activities take place.

Conserving nature protects future opportunities for growth. Nature is the backbone of human well-being and the foundation for all economic activity. Without action to halt and reverse the loss of nature, projections of economic growth and visions for a better life are impossible; "there is no future for business as usual" (WEF 2020d).

Science-based targets (SBTs) are built on an understanding of the nature-related risks facing business (WEF 2020d; WWF 2019a). While some of these risks are down the road, the greatest risk facing companies today is inaction.

By setting SBTs today, companies can

- get ahead of regulation and policy changes
- strengthen their reputation among consumers, employees, and society
- increase the confidence of their investors, parent companies, and other stakeholders
- catalyze innovation that's good for the planet, and for business
- open opportunities to collaborate with other stakeholders, including those in their corporate value chain, in the landscapes where they operate or source, and in their sector
- improve their medium-to-long-term profitability

For more information on the risks SBTs can help your company address, and opportunities that setting these can open, please see our Business Benefits document.

1.2 What is behind nature's decline?

Compelling evidence of nature's decline and the role of human activities in this decline was presented in the 50-year review of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).[3] IPBES found that declines in the state of nature (e.g., ecosystems, species, and nature's contributions to people) were the result of five key ***pressures***: *land and sea use; direct exploitation of organisms; climate change; pollution; and invasion of alien species* (IPBES 2019a).[4] These pressures have resulted from **drivers** of socioeconomic pressure, including *production and consumption patterns (e.g., fast fashion and food waste), population growth, trade relationships (e.g., outsourcing environmentally harmful production processes), technological innovations (e.g., the rise*

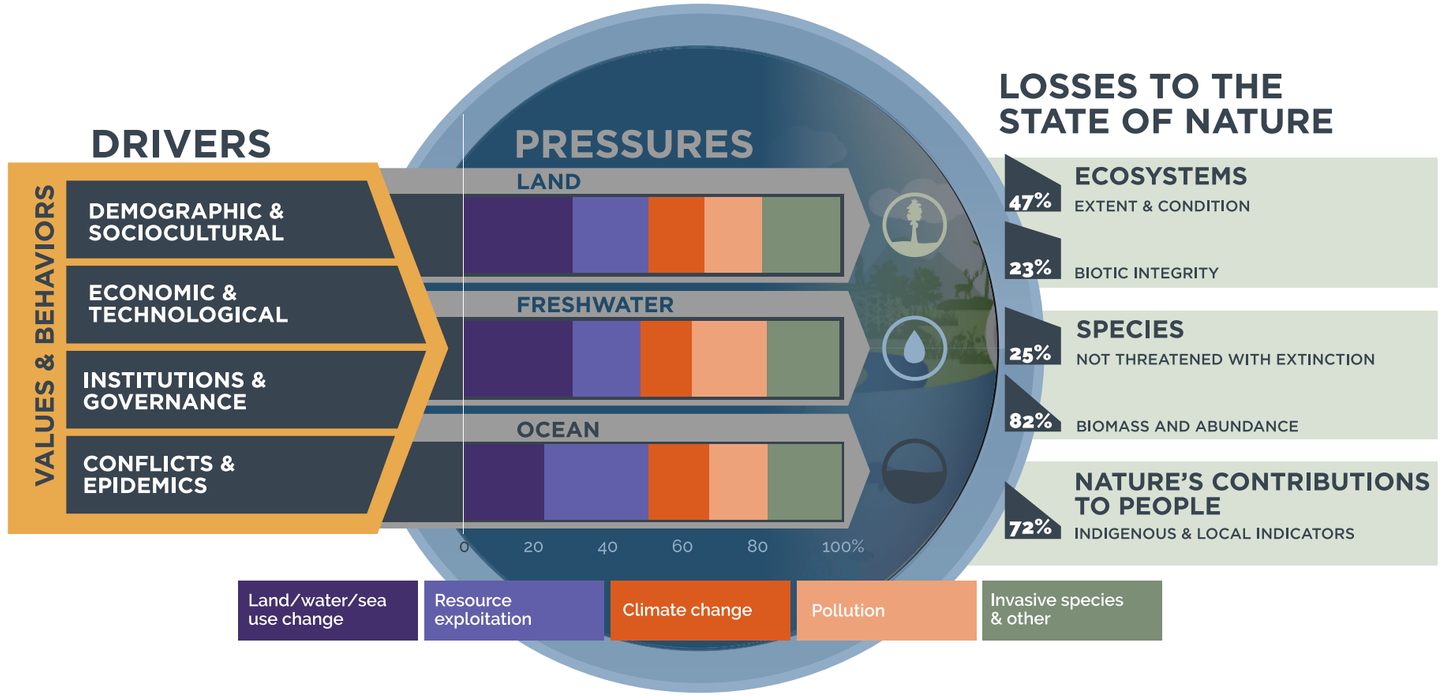


Figure 2. Drivers, pressures, and states of nature loss, adapted from the IPBES Global Assessment, 2019. The "drivers" feed into "pressures," which then fuel the degradation and loss of nature (measured in state variables) within the land, freshwater, and ocean realms. The percentages on the bars represent the approximate global importance of different pressures in each realm; see IPBES 2019a for more details. The right-side highlights some of the key "states" of nature loss related to ecosystems, species, and nature's contributions to people.

of e-commerce), and systems of governance/social institutions (like those that govern access to and ownership over natural resources) (IPBES 2019a; IPBES 2019b) (see Figure 2). These drivers in turn are underpinned by the values and behaviors of individuals, organizations, and society as a whole. We have used insights articulated by IPBES around the pressures and states of nature to organize key pieces of the framework for science-based targets for nature, including the materiality assessment (Section 2.2) and draft measurement framework (Section 2.4). The drivers identified by IPBES orient our understanding about a strategy for transformative action (Section 2.5).

The cumulative impact of these man-made forces has been the loss of biodiversity and the undermining of nature's ability to provide essential services. Since at least the 1970s, reducing costs, maximizing yields, limitless economic growth, increasing efficiency, and a focus on short-term profits have been central tenets of the social and economic discourses around the production of essential and discretionary goods like food, energy, and fiber (e.g., for textiles). Almost 50 years later, we have come to realize this focus has come at an expense: Around the world we can observe a decline in nature's ability to provide critical services such as pollination, regulation of water and air quality, and even the maintenance of ecosystems of cultural value (IPBES 2019a; see Technical Annex or TA1.2 and TA 1.3) The products and services offered to meet every day human needs like eating, transport, and clothing; the systems of government we rely on to protect human well-being; and the technologies that have transformed our world mean that we are all causing the destruction being unleashed onto the "natural world"[5]—and therefore, onto ourselves.

1.3 What are SBTs?

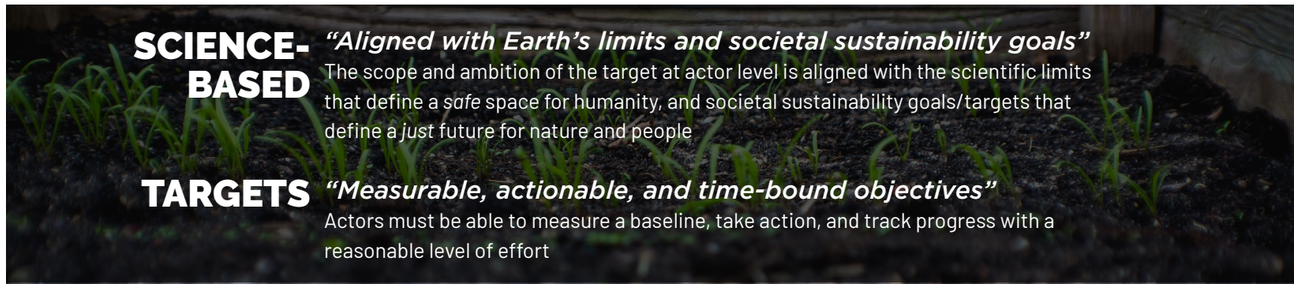
In a future with cascading risks,[6] science-based targets (or SBTs) offer a pathway for sufficiently ambitious corporate action (The Club of Rome 2020).

We define **science-based targets** as *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.*[7] In Section 1.4 we highlight the specific limits and goals companies can start aligning with today.

As the SBTN, we build on the momentum of the Science Based Targets initiative (SBTi), which has spurred nearly 1,000 of the world's largest companies to commit to greenhouse gas emissions-reduction targets in line with climate science as of September 2020. SBTi scaled up the process of corporate action by coming together to create a unified approach. The SBTN builds on SBTi's scope by extending this approach to SBTs beyond climate with an initial emphasis on nature (see nature definition in Section 1.1).

When companies make voluntary commitments to set targets in line with SBTi and SBTN methodologies, this will play an essential part in (a) filling the gaps left by state-level commitments (UN Environment Program 2019; Mace et al. 2018) toward societal sustainability goals and (b) driving governmental action for nature through positive "ambition loops" (Ambition Loop). To demonstrate the potential of companies to help halt climate change, corporate targets set under SBTi have the power to meet 16-21% of the global emissions gap left open by state-level commitments (SBTi 2019).[8]

Action from companies on global sustainability goals is one piece of the puzzle, but SBTs for nature also strengthen voluntary sustainability efforts by explicitly tying target ambition levels to Earth's limits. Societal goals have often resulted in trade-offs between social, economic, and environmental objectives, with environmental objectives often coming up short (Obura 2020; IPBES 2019a). To ensure planetary health and



human well-being, SBTs for nature must be aligned with global goals for sustainability and based on the best available science on Earth's limits. To ensure we achieve this alignment, we are working with our Global Commons Alliance partner, the Earth Commission (see box).

A safe and just corridor for people and the planet: the Earth Commission

The Earth Commission is one of SBTN's core partners within the Global Commons Alliance (see Who we are).

The Earth Commission is a group of leading social and natural scientists convened by Future Earth to provide a global-scale assessment of the conditions that define a stable and resilient planet. The Commission is building on and going beyond previous scientific frameworks, such as the Planetary Boundaries (Rockström et al. 2009; Steffen et al. 2015) and will identify quantitative boundary conditions for biophysical systems such as biodiversity, freshwater, land, ocean, and climate but will also consider socioeconomic aspects, justice, and human well-being. Taking into account the complex interactions between these systems, the Commissioners aim to define and quantify a "safe and just corridor" for human development. They will also assess knowledge about social levers that can bring about a transformation toward a more sustainable world.

The "science" element of SBTs developed by the Earth Commission will provide critical inputs to the whole process of target setting, particularly Step 2: Interpret & Prioritize and Step 3: Measure, Set & Disclose (see Section 2). Further, the "translation" of the science into targets (see Section 2.4.3) will be jointly developed by the SBTN and the Earth Commission.

However, we know action needs to start today—we can't wait for the perfect science. Thus, while the Earth Commission works on defining and quantifying a "safe and just corridor" (see box), SBTN will continue to provide initial guidance on how companies can align with existing societal sustainability goals and existing science, such as the Planetary Boundaries.

1.4 What is the scope of SBTs for nature?

SBTN aims to eventually provide methods for companies to align targets with a number of sustainability objectives. For now, this guidance focuses on SBTs for nature, which will enable companies to align their efforts with global nature-related sustainability efforts, notably the goals set out in the following frameworks for action under the United Nations:

The Convention on Biological Diversity's (UNCBD) Post-2020 Global Biodiversity Framework, with goals including

- area, connectivity and integrity of ecosystems (Zero Draft Goal A)
- species extinction risk and abundance (Zero Draft Goal A)
- nature's contributions to people valued, maintained or enhanced (Zero Draft Goal B)

The Convention to Combat Desertification's (UNCCD), 2018–2030 Strategic Framework, with the headline goal of

- land degradation neutrality

The Framework Convention on Climate Change's (UNFCCC) Paris Agreement, with goals including

- keeping global temperature rise to 1.5ºC this century

The General Assembly's 2030 Agenda for Sustainable Development, with goals including

- freshwater availability and sustainable management (SDG 6)
- sustainable production and consumption (SDG 12)
- action on climate change and its impacts (SDG 13),
- conserving and sustainably using the oceans, seas and marine resources (SDG 14),
- protecting, restoring and promoting sustainable use of terrestrial ecosystems, sustainably managing forests, combat ingdesertification, halting and reversing land degradation, and halting biodiversity loss (SDG 15).[9]

To clearly align with these frameworks, we adopt similar terminology. Typically the objectives of UN frameworks are expressed through three tiers: goals, targets, and indicators (see Table 1). For example, the Sustainable Development Goals (or SDGs) laid out in the UN's 2030 Agenda for Sustainable Development are currently organized into 17 goals, 169 targets, and approximately 230 indicators. The previous strategic plan of the CBD (covering 2010–2020) was organized into 5 strategic goals, 20 targets, and approximately 150 indicators to track these targets.

Key pieces of global goals around nature are currently in flux, as the Convention on Biological Diversity is currently negotiating its Post-2020 Global Biodiversity Framework. The current draft of this framework is structured around high-level goals for the key features of species (extinction risk, abundance) and ecosystems (extent and condition, integrity), as well as nature's contributions to people and the equitable sharing of these contributions.[10] While the ambition of these goals is still under discussion, a group of leaders from many organizations working with SBTN has moved forward to suggest the following global goal for nature: "Nature-positive." As defined by this group, a nature-positive world requires no net loss of nature from 2020, a net-positive state of nature by 2030 , and full recovery

Measurement term	Definition	Example 1: Water use	Example 2: Ecosystems
Goals	High-level statement of ambition, including a time frame	By 2030, ensure access to water and sanitation for all *Source: Sustainable Development Goal (SDG) 6, Water & Sanitation*	By 2030, the area, connectivity, and integrity of natural ecosystems increases by at least 5% *Source: Post-2020 Global Biodiversity Framework (GBF), Draft Goal A*
Targets	More specific quantitative and time-bound objectives, preferably with defined measurement	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity. *Source: SDGs, Target 6.4*	By 2030, protect and conserve through a well-connected and effective system of protected areas and other effective area-based conservation measures at least 30% of the planet with the focus on areas particularly important for biodiversity *Source: Post-2020 GBF, Draft Target 2*
Indicators	Specific metric by which a target is measured	The level of water stress: freshwater withdrawal as a proportion of available freshwater resources *Source: SDGs, Indicator 6.4.2*	Protected area coverage *Source: Post-2020 GBF, Draft Monitoring Framework, Target 2.1, Indicator 1*

Table 1. Measurement terms used in SBTs for nature framework.

of nature by 2050. This high-level goal is aligned with the UNCBD's current draft goal (A.1), which includes a 5% increase in the extent, connectivity, and integrity of ecosystems.

Achieving this "nature-positive" outcome—as illustrated in Figure 4—will require urgent and ambitious action by all stakeholders, regardless of the timeline over which it occurs.[11] This action must address the key drivers and pressures on nature loss from science (discussed in Section 1.2) and reflect the structure of the UNCBD's draft Post-2020 Global Biodiversity Framework. If, as a society, we want to change the state of nature from where it is currently (degraded) and to change the state of nature into the future (projected to continue declining in health), we must allow nature to begin to recover. To change our course, we need to undertake these key types of action at multiple levels of society, starting now:

- **Avoid** and **reduce** the pressures on nature loss (which would otherwise continue to grow).
- **Restore** and **regenerate** so that the extent and integrity of nature can recover.
- **Transform** underlying systems, at multiple levels, to address the drivers of nature loss.

These types of action and our understanding of the dynamics behind the loss of nature give structure to SBTs for nature—both in terms of the actions required of companies and the ambition level of targets that must be set and achieved in order to set us on a course for a 'nature-positive' future.

Our proposed high-level **target categories** to be covered by corporate science-based targets for nature are shown in Table 2. Target categories will directly correspond to more specific issue areas (i.e., a target for pollution could address soil, water, and marine pollution as key issue areas) (see Section 2.4.2). These target categories align with the societal goals introduced at the beginning of this section—laid out in the UNCBD, UNCCD, UNFCCC, and SDGs. They will enable companies to simultaneously begin to take action on the drivers and pressures fueling the degradation and loss of nature.

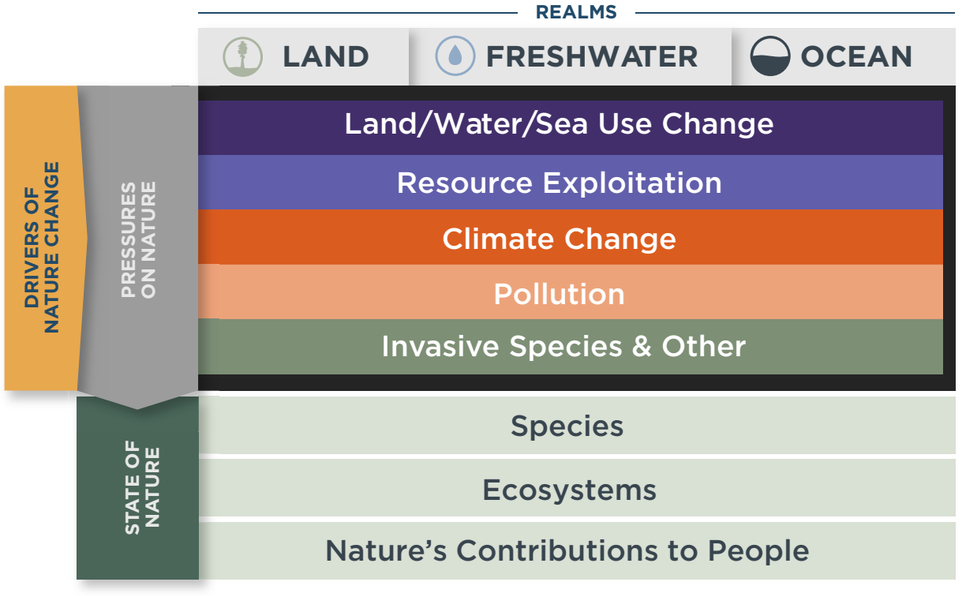


Table 2. High-level target categories for SBTs for nature. How SBTs take aim at the drivers and pressures fueling the degradation of nature, and the state of nature itself.

Introducing SBTN's Action Framework: AR³T

In Section 2.5 we describe in greater detail SBTN's Action Framework. We call this 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.

The AR³T Action Framework is built on the mitigation hierarchy set out in the International Financial Corporation's (IFC) Performance Standard 6. As currently used, IFC PS6 helps companies plan for and address their impacts on biodiversity at a project level. The AR³T Framework is also built on the conservation hierarchy, which expanded the mitigation hierarchy concept to include proactive, positive steps for nature. Please see Technical Annex 5 for a crosswalk of the three frameworks.

*In this paper, we emphasize the actions that companies can undertake on their own, as these are often easier for companies to get started on today. However, the problems we face are system-wide, intertwined, and connected to a broad array of actors. This demands that companies explore **system-level collaboration** and **transformation**. Companies must transform not only their business models but also their way of assessing their impacts and dependencies on nature. The many interrelated **impacts** and **dependencies** that companies share are often overlooked. For instance, coastal tourism businesses rely on pristine, biodiverse ecosystems to attract customers. However, these ecosystems may be degraded by businesses engaged in the over-extraction of fish and other marine resources, or in using harmful technologies or processes that disturb, disrupt, or lead to pollution in coastal zones. Companies that identify shared impacts and dependencies on nature can take collaborative, and more effective, action to address issues of shared interest (WWF & Proforest 2020).*

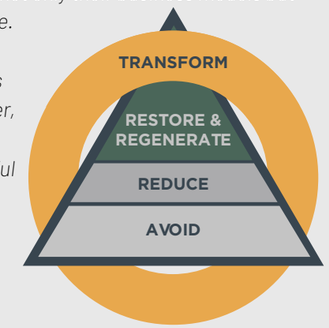


Figure 3. The 'insignia' of the AR³T Action Framework

*Setting SBTs for nature is fundamentally transformative because it requires businesses to understand their impact on the world through a **societal materiality perspective**. Companies setting SBTs for nature must commit to improving the landscapes and seascapes in which they operate, not just their own welfare; they must commit to investing in the future, not just the short term. By taking a societal perspective, companies open the door to internal transformation (e.g., of their business model and decision-making processes) and to external transformation (e.g., of the systems in which they are embedded). Companies joining us in this journey will find that it is possible to create value by maintaining public goods rather than contributing toward their deterioration (Dasgupta et al. 2020; Henderson 2020).*

Different types of actions (identified in the AR³T Action Framework) and different target categories will be more or less appropriate for different companies based on their business, sector, and specific contributions to drivers, pressures, and the state of nature (see Section 2.2). Appropriate actions will also be affected by locally specific factors connected to the company's impacts and dependencies, like the number and/or degree of human or species dependence on a particular function of the ecosystem, like water quality.

In Figure 4, we tie together our Action Framework, corporate target typology, and the societal vision of a nature-positive world.

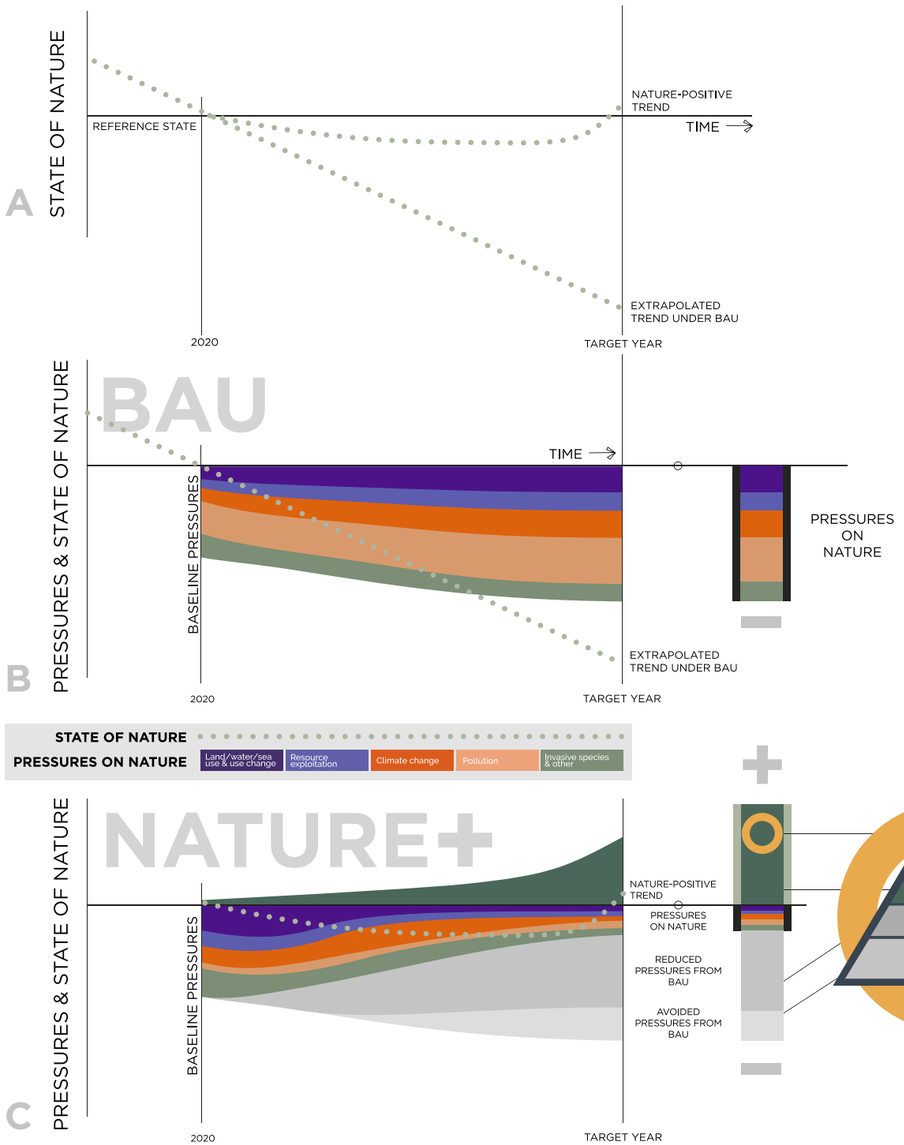


Figure 4. Illustrative scenarios for the state of nature in a target year relative to today, following a business-as-usual scenario versus a nature-positive scenario. Graph A shows the trends in the state of nature historically, and extrapolated under a business as usual (BAU) and nature-positive outcomes. BAU (Graph B) results from a scenario where pressures on nature (areas) continue to increase. A nature-positive scenario (Graph C) where the state of nature is net positive in that target year relative to 2020 occurs when pressures on nature are rapidly avoided and reduced, restoration and regeneration begin to scale, and systems begin to transform to reduce drivers of nature loss. These actions form the basis for the SBTN Action Framework (bottom right), developed further in Section 2.5. Source: Authors, building on Mace et al. (2018), IPBES (2019a).

1.5 Why work with SBTN?

Consolidated approach
The methods and targets designed by SBTN are being built on existing sustainability tools, approaches, and platforms, providing an efficient and effective resource for business users

Practicality
We are working with end users to "road test" draft methods and ensure that SBTs are practical and intuitive for businesses, irrespective of industry and where they sit on the value chain.

Credibility
The guidance is being developed by experts from the world's leading environmental NGOs, governmental organizations, purpose-driven consultancies, ambitious businesses, and society-minded business coalitions.[12] The guidance is grounded in the best available science defining what is necessary for business and cities to do their part to stay within Earth's limits.

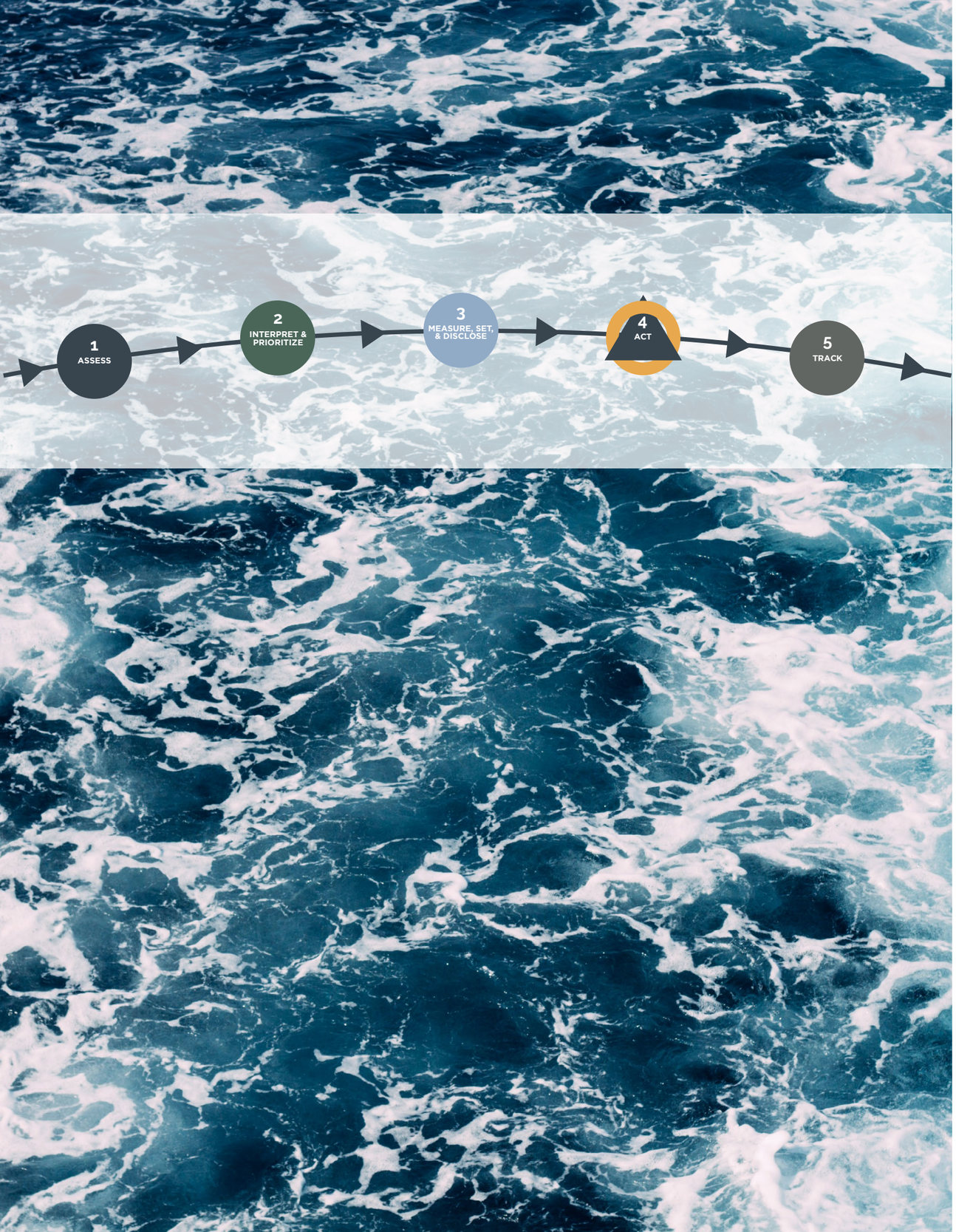
Stability
While the science will continue to evolve, SBTN's framework for setting SBTs will be designed for long-term use. Today, we are proposing a series of principles that we will use for selecting indicators (see Section 2.4.1) and best practices for target implementation (see Section 2.5) that can underpin ambitious corporate action for nature. These can ensure that resources invested by companies have a lasting impact.

Prioritization
The SBTN approach to target setting will help companies prioritize places and issue areas for action, using the best available science, so that companies can confidently address their most urgent impacts and dependencies.

Communication and alignment
The approach to setting SBTs lends itself to straightforward communication about your target-setting journey. Using the terminology of the five-step process (see Section 2), companies can say "I am at Step 1: Assess" or "I am on Step 4: Act and Step 5: Track." This is helpful for internal stakeholders, as well as stakeholders like investors, NGOs, and third-party monitors. Given that the targets companies can set using SBTN's methodologies are explicitly aligned with global societal frameworks for action (see Section 1.3), SBTs can be used to quickly communicate which issues you are contributing toward resolving (e.g., land and sea use change, ocean and freshwater resource exploitation). SBTN's indicator framework (see Section 2.4) will help ensure you are measuring the right indicators and are able to assess how these contribute toward your desired outcome (see Section 2.6). By aligning with society's long-term goals, you can ensure your business is moving in the right direction.

Controlled trade-offs and increased co-benefits
A key advantage of integrated SBTs is that they are being designed to recognize the interconnection of issue areas. This allows companies to take action on multiple issues at once and not create new problems. When designed and implemented correctly, SBTs can help resolve interrelated climate and nature risks, including

- creating resilience to climate hazards like heat waves, floods, and droughts
- conserving freshwater resources and increasing water security
- regenerating land systems
- supporting healthy, diverse oceans
- conserving biodiversity and preventing species extinction
- ensuring equal opportunities for societies to sustain a decent living and to access the benefits of the transition toward a zero emission, nature-positive future.



Step-by-step guide: Setting SBTs for nature

In the section above, we've laid out why setting science-based targets matters. In this section, we explain how companies can take action.

2.1 Overview: how to set SBTs for nature

This section presents a five-step process that companies can follow to supplement their current strategy for addressing environmental issues or to begin exploring these issues for the first time.

Where possible, we draw on existing practice and point to work that companies may have already done that gives them a strong starting point for setting SBTs for nature. For instance, we note the following:

1. ASSESS

To begin, you gather and/or supplement existing data to estimate your value chain-wide impacts and dependencies on nature, resulting in a list of potential issue areas and locations for target setting.

Your company may already be taking action for nature; the phases of this step will help highlight what you are missing.

2. INTERPRET & PRIORITIZE

You then interpret the outputs of Step 1, prioritizing key issues and locations for taking action. You will consider actions across different "spheres of influence"—from your operations to the landscapes surrounding your value chain(s).

Your company may already be taking action in some of these areas, and this process will show you how you can re-prioritize to allocate your resources where they are needed the most.

3. MEASURE, SET, & DISCLOSE

Next, you collect baseline data for prioritized targets and locations. Using the data from this and previous steps, you can set targets aligned with Earth's limits and societal goals, and then disclose these publicly.

Your company may already have collected some of this data through your existing sustainability programs. This step will highlight where you may need to supplement data.

4. ACT

Once targets are set, you utilize SBTN's Action Framework (AR^{3}T)—Avoid, Reduce, Regenerate, Restore, Transform—to make a plan and begin to address your contributions toward the unsustainable use and loss of nature.

Your company may already be taking action on priority issues and in priority places; this step will supplement your strategies using the AR^{3}T Action Framework. If you are looking for a way to start acting for nature, you can begin with avoidance and reduction; see Sections 3.5.

5. TRACK

Finally, you monitor progress toward your targets and report publicly on this progress.

Your company may already be measuring performance against some of these indicators. This step will show you where you need to supplement your existing tracking system.

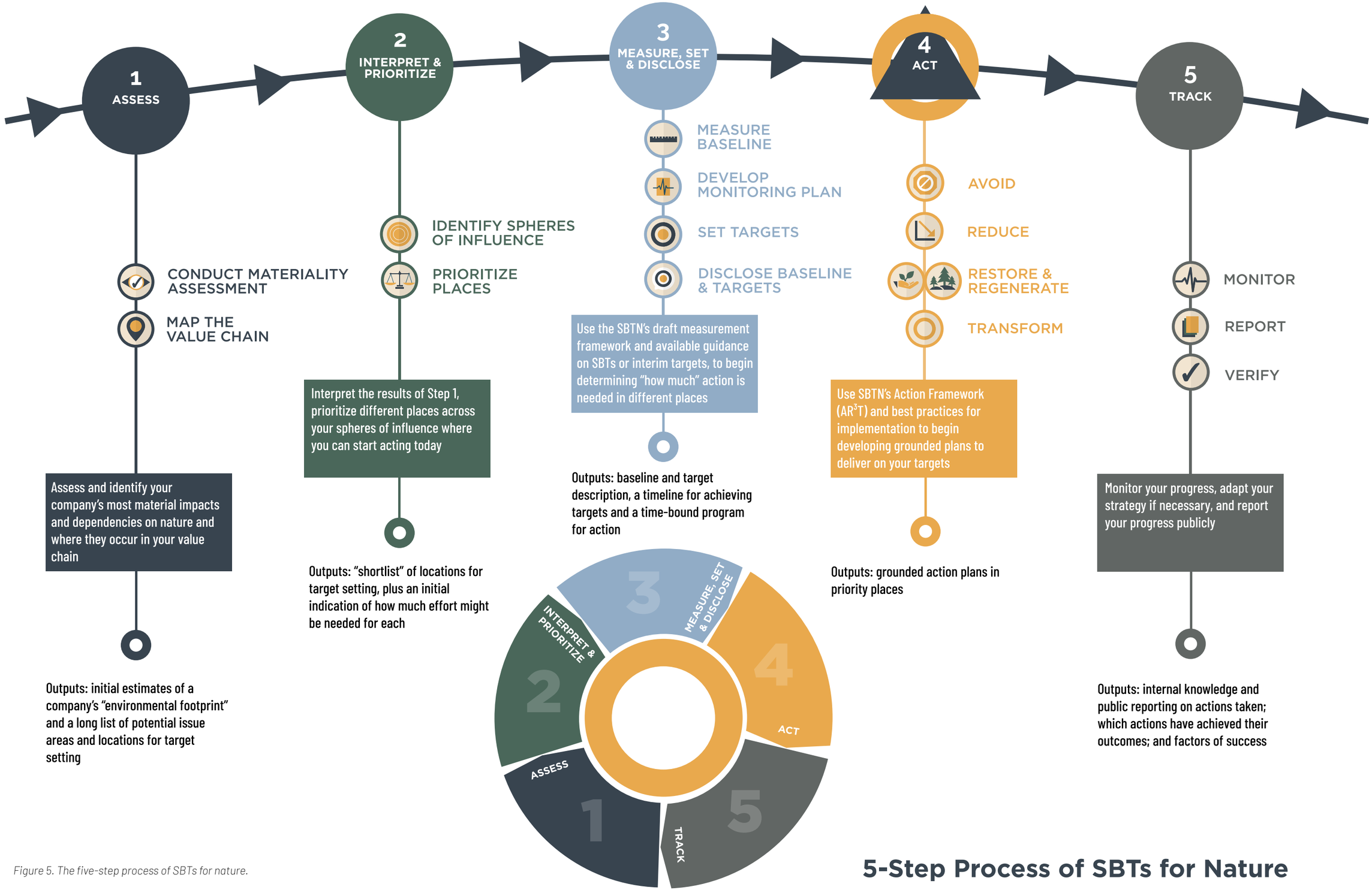


Figure 5. The five-step process of SBTs for nature.

5-Step Process of SBTs for Nature

2.2 Step 1: ASSESS

The first step a company will take in its journey to setting SBTs for nature is to assess its impacts and dependencies on nature by conducting a materiality and value chain assessment. This step will provide critical inputs for the other steps of SBT setting. Because it can take some time and resources, particularly if a company does not know where it sources from, we encourage companies to begin this step today.

Impacts

Can be positive or negative contributions of a company or other actor toward the state of nature, including pollution of air, water, soil; fragmentation or disruption of ecosystems and habitats for non-human species; alteration of ecosystem regimes

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

Most businesses are familiar with the concept of materiality. Materiality is usually defined according to two broad dimensions: importance of an issue to stakeholders and importance of an issue for businesses. We recognize that many companies may be primarily concerned with financial materiality and issues that impact their bottom line in the short term (i.e., in quarterly reports). It is likely SBTs for nature will overlap with many issues of financial materiality and can help mitigate associated risks and generate business opportunities (see Section 1.5). However, the overall perspective we take in SBT setting is one of societal materiality: actors are expected to take voluntary actions (at times above and beyond what is regulated) in order to contribute to a more livable Earth for all.[13] This is an essential change to improve outcomes for nature and to begin changing the corporate values and behaviors that have previously driven the degradation of nature. Over time, issues that are societally material could grow to be financially material as societal factors like consumer preferences and environmental regulation change.

Companies who commit to setting SBTs should note that they will be held to a high standard of performance and societal contribution by the SBTN and other actors.

Companies that commit to setting SBTs should note that they will be held to a high standard of performance and societal contribution by the SBTN and other actors. The purpose of Step 1 is identifying the broadest scope of corporate impacts that should be controlled through targets, therefore, this assessment should capture the totality of a company's impacts, not only those deemed financially material.

Throughout this section, and in our work more generally, we prefer resources and tools that employ a societal materiality perspective. In this section, we draw heavily on the Natural Capital Protocol, existing practices in land conversion-free supply chains, and life cycle (impact) assessment (LC(I)A). In addition, we recognize the following as valuable for helping companies collect and organize data for SBT setting: the Science Based Targets initiative (SBTi) and SBTs for climate; contextual water targets; context-based targets more broadly; CDP; Global Reporting Initiative (GRI);[14] and the Corporate Ecosystem Services Review.

By carrying out Step 1: Assess, companies will define which issue areas are likely to be covered by their SBTs for nature and where in their value chain they will need to focus.

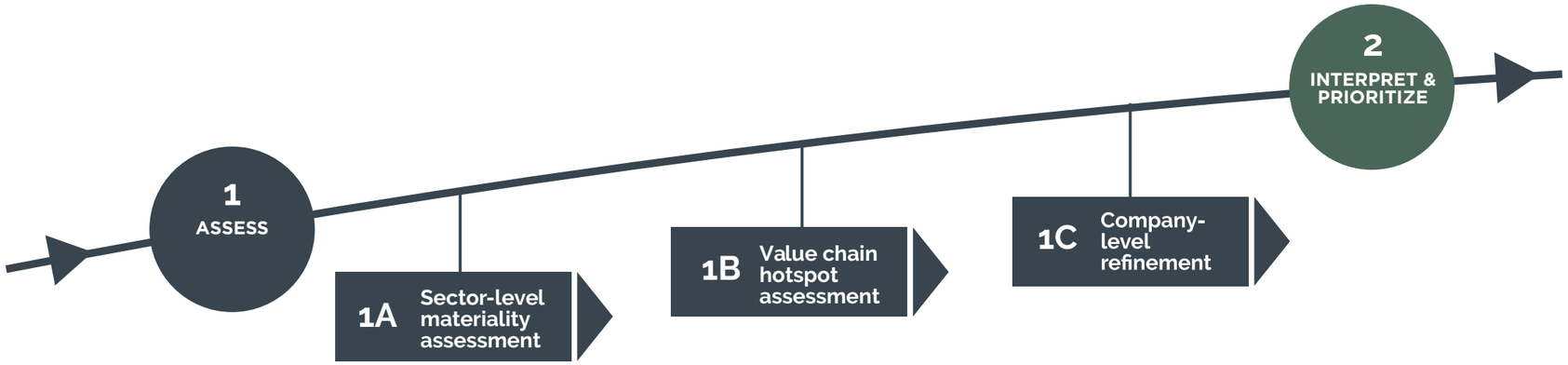
Step 1: Assess follows three phases, in increasing level of detail:

1a. Sector-level materiality assessment
Using SBTN's sector-level materiality screening tool, a company can get a quick overview of the issue areas associated with the economic activities of its sector.

1b. Value chain hotspot assessment
The company then estimates where impacts and dependencies occur throughout their value chain, both in terms of supply chain tiers and places.

1c. Company-level refinement
Using the outputs from the sector-level materiality assessment and value chain assessment, companies identify any additional issue areas based on business priorities or the specifics of their business.
Taken together, these phases will produce a "longlist" of potential issue areas and locations where a company may need to set targets. To support this process, companies will be able to refer to SBTN's draft decision tree (TA2.6). We will be working with companies to iterate this decision tree so that we can best help a company understand the potential tools and resources (including previous or existing work it has done) that it can draw on in order to carry out the phases of Step 1: Assess.

As above, SBTs for nature should reflect a comprehensive (though estimated) understanding of a company's impacts and dependencies on nature in different locations. Therefore, all phases of Step 1 should cover not only a company's direct operations, but also its full value chain and associated "spheres of influence."[15]



Spheres of influence (and control)

We use the following categorization to refer to the four spheres of corporate influence. This has been adapted from the GHG Protocol Scope 3 Standard and Natural Capital Protocol:

DIRECT OPERATIONS

This category covers 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. We refer to this as the sphere of control (with control being one end of an influence spectrum).

VALUE CHAIN

The value chain is a series of activities, sites, and entities, 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. The value chain can be divided into upstream and downstream sites/activities.

UPSTREAM

This covers all activities associated with suppliers (e.g., production or cultivation, sourcing of commodities of goods), as well as transportation of commodities to manufacturing facilities.

DOWNSTREAM

This covers all activities that are linked to the sale of products and services produced by the company setting targets. This includes the use and reuse of the product and its end of life to include recovery, recycling, and final disposal.

Beyond the corporate value chain itself, we also recognize the following spheres where companies may have varying degrees of influence over the state of nature and environmental outcomes more broadly.

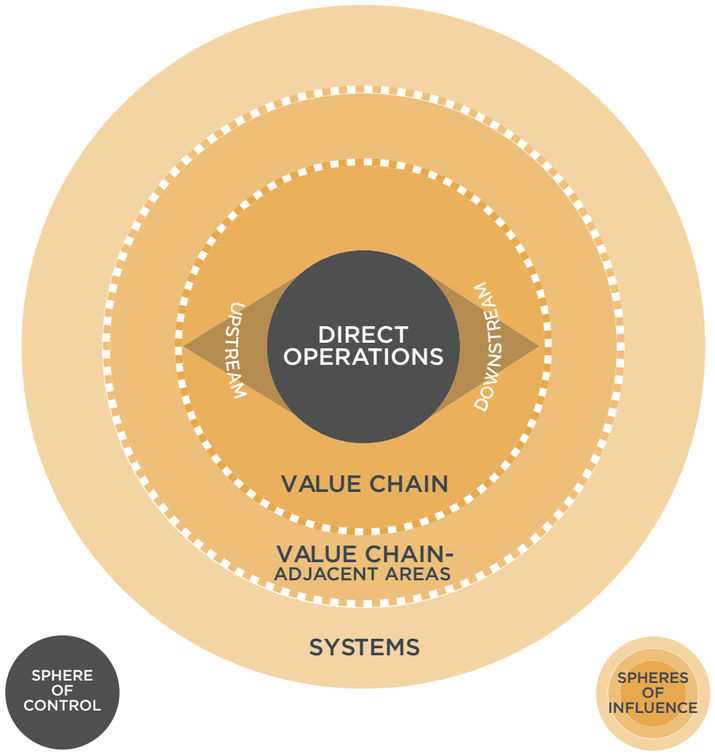


Figure 6: Sphere of control and spheres of influence relevant for corporate target setting. Corporate sustainability has traditionally focused on direct operations (GHG Protocol "Scope 1"; Natural Capital Protocol "direct operations"), followed by upstream and downstream value chains (GHG Protocol "Scope 3"). These are key focuses for SBTs for nature, but to achieve societal goals for nature in the next ten years, action beyond the corporate value chain is necessary. Companies need to engage in collective action in the areas surrounding their operations, upstream, and downstream activities (i.e. in value chain-adjacent landscapes and seascapes), as well as in the systems in which they are embedded.

VALUE CHAIN-ADJACENT AREAS

This covers the landscapes, seascapes, and watersheds that are geographically adjacent to value chain sites. This scope is included because to adequately address impacts and dependencies on nature, a scale relevant to those (e.g., a watershed for water pollution as an impact and water availability as a dependency) is necessary (see Section 2.5).

SYSTEMS

This covers the broadest extent of corporate influence—through direct and indirect channels—on socioeconomic and socio-ecological systems (e.g., the financial system, influenced through corporate disclosures of environmental risk; the food system, influenced by corporate agricultural practices; and the systems related to marine ecosystem use and governance, influenced by companies through lobbying practices).

Science-based targets will in general need to cover different spheres of influence depending on the characteristics of the issue and the company. The sphere of control will need to be covered in all instances. For issues addressed by SBTs, many methods associated with the state of ecosystems and species apply at site level (e.g., applied for a specific farm, production facility, and so on). Site-level methods may be applicable both in the sphere of control and in certain parts of corporate value chains. Value chain-level targets (e.g., climate SBTs, zero conversion supply chains) will often be associated with the upstream value chain (or supply chain), though they may also be rolled out downstream as well.

In general, companies should pursue the highest-ambition targets in their direct operations—where, by definition, they have the highest control over environmental impacts and dependencies associated with economic activities. We recognize that the level of influence the company has over the state of nature in each location and value chain tier will be a function of several different issues, including value chain relationships with both local stakeholders and suppliers. It is, however, critical that companies pursue actions and consider their material impacts and dependencies throughout all four of these spheres of influence. An expansive assessment of materiality and commitment to action (beyond the realm of direct corporate control) is critical to the project of addressing environmental externalities (Power 2018) and is essential for catalyzing the process of internal corporate transformation.

We recognize that companies will have differences in data availability and capacity; therefore, we are currently adopting a flexible stance regarding how companies get started with data collection and action as methods are developed to define the boundaries of targets. At the same time, we encourage companies to be as ambitious as possible in data gathering and target coverage (i.e., covering more of their supply chain sourcing, or more sites), given the urgency of addressing negative trends related to the state of nature, and so that they are prepared when our methodologies are finalized in 2022.

2.2.1 Sector-level materiality assessment

Step 1a starts with a sector-level assessment of material issues associated with nature. Materiality scores shown in Table 3 reflect a societal perspective and were derived using a combination of modeling and primary research (see TA2). Scores shown are averaged across different locations, and thus some adjustments will be necessary to capture location-specific significance of impacts on given issues. Mapping impacts and dependencies throughout your value chain (Step 1b) is a critical step for being able to understand location-specific significance. Note there will be further adjustments and refinements, which will be covered in Steps 2 and 3.

Issue areas are grouped in line with the key pressures on nature loss as described by IPBES (see Section 1.2), as well as the key goals toward which SBTs will help companies contribute. The table is separated by issue areas that are material to direct operations and to upstream supply chains. Currently, we define sectors using the Global Industry Classification Standard (GICS).

The extended version of Table 3—see TA4.1—can give companies an idea of issue areas on which they will need to set targets based on scores of materiality derived using a societal perspective (versus a financial perspective). The table can function as a preliminary screening tool. The key issue areas on which end users will likely need to focus (in their first round of target setting) are assumed to be those labeled 5 (and red) for very high, 4 (and orange) for high, or 3 (and yellow) for medium. Tools like SASB's materiality map (which takes a financial perspective) may be helpful to companies for Step 1c, the company-level assessment, to round out the societal understanding of potential risks.

By 2022, SBTN will develop a more detailed version of this screening tool that includes (a) downstream impacts as well as (b) dependencies across the whole value chain. The advanced screening tool will be used to inform the minimum coverage of corporate SBTs. Initial guidance on minimum coverage of targets is provided in Section 2.4.5.

		Land/Water/Sea Use Change			Resource Exploitation	Climate Change	Pollution				Invasives and Other
Sector	**Sub-Industry**	**Terrestrial ecosystem use**	**Freshwater ecosystem use**	**Marine ecosystem use**	**Water use**	**GHGs emissions**	**Non-GHG air pollutants**	**Water pollutants**	**Soil pollutants**	**Solid waste**	**Disturbance**
Consumer Discretionary	Computer & Electronics Retail	3 | 3	3 | 3	3 | 3	3 | 3	5 | 5	3 | 3	3 | 3	3 | 2	3 | 4	3 | 3
	Footwear	3 | 3	3 | 3	3 | 3	3 | 3	5 | 5	3 | 3	3 | 3	3 | 4	3 | 4	3 | 3
	Home Furnishings	3 | 3	3 | 3	3 | 3	3 | 4	5 | 5	3 | 5	3 | 5	3 | 5	3 | 4	3 | 3
Consumer Staples	Brewers	4 | 4	3 | 3	3 | 3	3 | 5	5 | 4	2 | 2	3 | 1	2 | 1	3 | 3	2 | 2
	Food Retail	4 | 4	3 | 3	3 | 3	3 | 3	5 | 5	2 | 3	3 | 3	2 | 2	3 | 4	2 | 2
	Personal Products	4 | 4	3 | 3	3 | 3	3 | 4	5 | 5	2 | 2	3 | 4	2 | 3	3 | 4	2 | 2
Industrials	Highways & Rail tracks	3 | 3	3 | 4	3 | 3	3 | 4	5 | 3	3 | 2	3 | 1	3 | 3	3 | 3	3 | 4
Energy	Oil & Gas Exploration & Production	3 | 4	3 | 3	4 | 4	5 | 5	5 | 4	3 | 3	3 | 4	3 | 5	3 | 3	4 | 4
Utilities	Electric Utilities	3 | 3	3 | 3	3 | 3	3 | 2	5 | 1	3 | 3	3 | 3	3 | 3	3 | 3	3 | 3
	Water Utilities	3 | 4	3 | 3	3 | 3	3 | 4	5 | 5	3 | 3	3 | 4	3 | 3	3 | 3	3 | 3

VERY LOW 1 · LOW 2 · MEDIUM 3 · HIGH 4 · VERY HIGH 5 · NO DATA

UPSTREAM 3 | 5 DOWNSTREAM

OPERATIONS

Table 3. Outputs based on ENCORE materiality ratings of companies' impacts on environmental issues for selected sectors; full matrix available in Technical Annex or TA3. These values are not yet publicly available in ENCORE but will be available in the tool by the end of October 2020. Supply chain data is sourced from EXIOBASE and ENCORE, and only reflects those impacts occurring from cradle to gate. Downstream impacts are not currently covered, nor are impacts associated with financing (thus, the sector "Financials" is not representative of true materiality). Further work will cover downstream impacts, as well as companies' dependencies throughout their entire value chain (from upstream to direct operations to downstream). The categorization of impacts is ordered to correspond to the target categories (see Section 1.4) and issue areas (see Section 2.4.2) addressed by SBTs for Nature.

2.2.2 Value Chain Hotspot Assessment

A key difference between designing targets for climate versus for nature is that for nature, the impact assessment, response option assessment, and progress assessment need to be location specific. For any particular company, SBTs for nature will be tailored to the places where they operate (e.g., on land, in freshwater, and/or in ocean ecosystems), what activities they undertake, and what they have influence over. This is because most key issue areas for nature, like biodiversity, water availability, land conversion, and deforestation, are extremely location dependent. Therefore, the analysis for this phase of Step 1 must take location into account, or in other words, be "spatially explicit." In this phase, companies estimate their impacts and dependencies on nature to see which are most material. They also identify where these occur along their value chain and in specific geographic locations in comparison to considerations like the proximity of critical ecosystems. The hotspot assessment that will be produced (showing relative intensity of corporate impacts across value chains) will provide critical inputs for Step 2: Interpret & Prioritize.

Depending on where your activities lie along the value chain, different data requirements and data gathering possibilities will arise for assessing each individual impact and dependency. Our decision tree will provide clarity on locations where primary data are preferred (e.g., for sites/direct operations) and where secondary data or models are acceptable (e.g., commodity sourcing, retail

locations, end-of-life fate). See Table 5 for further guidance. At this time, modeled data and tools suffice. To assist companies in getting started, SBTN has compiled a list of tools across key issue areas (see Section 2.2.4). Many such tools only require coarse input data on operations and supply chains.

Because the value chain assessment for nature SBTs connects value chains to actual locations, many tools will require an understanding of the locations of a company's key supply chain inputs and operations. Once you have identified all locations connected to your value chain activities, then you can estimate material impacts and dependencies for each of these particular locations.[16] Figure 8 presents an example of a company's data outputs from this phase.
We recognize that different companies will have different starting points for this phase of target setting. While some companies may not know the countries or districts they are sourcing from, other companies may have already mapped their (upstream) supply chains or even be involved in supply chain-level initiatives to influence their impacts on nature. We also recognize that for many companies, particularly for those with complex value chains, location-specific data may be difficult or in some cases impossible to obtain. However, location-specific or spatial data is at the core of understanding nature risk and impacts (as well as physical climate risk, as per the Task Force on Climate-related Financial Disclosures (TCFD)).

For SBT setting, as stated above, companies will eventually be required to pursue action throughout their entire value chain, from raw material supply to retail, use, and end of life. To make this practical, SBTN will provide guidance on the appropriateness of secondary data in issue-specific SBT methods as they become available in the next two years. Further, SBTN will continue to gather and potentially develop tools (including the creation of a central tools repository) to assist companies with this step. Comprehensive tools for downstream analysis are not yet available but are under development.

	Primary Data	Secondary Data
Definition	*Data collected specifically for the assessment being undertaken. Collected from site-level assessments on a specific impact driver through the use of direct measurement (e.g., volume of freshwater used to irrigate a wheat field each month).*	*Data that were originally collected and published for another purpose or a different assessment. Derived from modeled or proxy-level data. This could include data averaged from commodity sourcing (e.g., kg of pollutants emitted for a given volume of leather purchased, hectares of land use per tons of timber purchased) at the national or regional level, or the use of input-output data models to provide estimates of impact drivers. Uncertainties in the quality of data used will need to be considered and disclosed.*
Site-level assessments and targets	**Collection of primary data** is often the most appropriate approach for site-level impacts and targets (field monitoring for biodiversity state, water flows and scarcity) and pressure measurement (internal company data). **Remote sensing** can be applied for large sites.	**Secondary data** (models of impacts, past assessments, literature values) can be applied in certain cases where primary data are unavailable or measurement is infeasible. The appropriateness of secondary data will vary by issue area and SBT methods will provide further detail.
Company-wide assessments and targets	**Remote sensing** is a suitable approach for some issue areas–e.g., assessing deforestation.	Use of **models** linking economic activities and pressures to state are most appropriate (environmentally extended input-output (EEIO) models, life-cycle assessment (LCA) models) for estimation and may remain the best data source after refinement (see next step)

Table 4. Suitability of measurement approaches for different assessments and targets. See Natural Capital Protocol (see Section 5.2.3) and GHG Protocol Corporate and Scope 3 Standards (see Section 7.2 of Scope 3 Standard) for further details on estimating impacts from primary and secondary data.

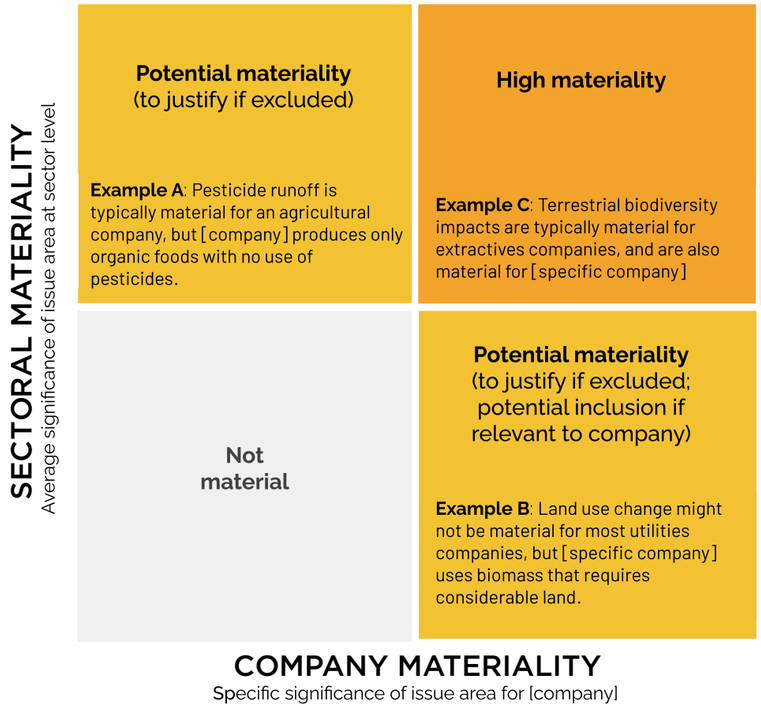


Figure 7. Company- and sector-level materiality matrix.

2.2.3 Company-level refinement

After the value chain assessment, the final phase of Step 1 is revising and refining estimates to produce a comprehensive list of issue areas, using company-specific information. The key reasons for this are twofold. First, many available tools for value chain and materiality assessment are at sector level or utilize secondary data, but a company's impacts and dependencies are not always fully aligned with its sector's or with averaged data. Second, companies may wish to include additional issue areas depending on different business objectives. Figure 7 explains this concept through a matrix connecting the average materiality at sector level (y axis) with the company's specific materiality (x axis).

The upper left quadrant of Figure 7 shows situations where an issue area may be material for a sector but not for the company due to operational or value chain specifics. Many companies will have supply chain and operational data available from related work, such as Scope 3 GHG assessments, natural capital assessments, or deforestation commitments.

If companies already have access to data, they can begin checking the coarser estimates provided by secondary or modeled data used for the value chain assessment directly to ensure it is representative of their business. In some cases, a company may be able to justifiably exclude certain target areas (e.g., a renewable energy company may have different impacts and dependencies than many other energy producers, and an infrastructure developer's key impacts and dependencies will be very place-specific).
The bottom right quadrant shows situations where an issue may be of low importance to a sector but of high importance to the specific company. This may occur, for instance, when a financial materiality perspective is taken, or it may simply

be due to a company's specific product mix, production processes, or supply chain sections, as shown in Figure 7.

This phase will not and should not lead to companies abandoning the societally material issues identified in the first two assessment phases. Instead, the company-level assessment is about identifying additional target areas. A process for exclusion justification will be developed should it be applicable.

In Step 2: Interpret & Prioritize, companies will be able to build on outputs of Step 1 by bringing in other considerations that are key for focusing on potential issue areas and locations where a company can set targets. These include factors related to the state of nature, the policy environments in which companies exert influence, and the preferences and demands of company-level stakeholders.

2.2.4 Tools and data for "Assess"

There are several existing tools companies can use to identify potential risks linked to their business activities. Below, we provide a non-exhaustive, introductory list of tools for Step 1: Assess. These are organized first by the biophysical systems of Earth—biodiversity, water, land, ocean, and climate—and second by more general, cross-cutting tools covering the whole Earth. Please note that many tools to assess corporate impacts and dependencies on nature are still in development and are growing in number. The tools provided below represent a small sample of those available now that can help companies immediately begin Step 1. The criteria we used for tool selection include (1) publicly available and free, (2) updated regularly, (3) global extent, and, ideally, (4) regional granularity available for a deeper dive. In general, we prefer that companies setting SBTs use tools and resources that take a societal materiality perspective for examining and addressing environmental issues.

As introduced earlier in this section, we are in the process of creating a decision tree that companies can use to navigate Step 1: Assess. In particular, the decision tree will help companies understand the potential tools and resources (including previous or existing work companies have already done) they can draw on in order to carry out the phases of Step 1 (TA2.6). Further, we provide additional information about tools for Step 1 in TA2.7.

Importantly, different tools will have greater or lesser utility for different types of targets and issue areas, as well as for levels of target setting (e.g. site-level, value chain-level, company-level). This is largely because these different tools require different types of input data, ranging from coarse company level data such as spend/purchase and activity data to detailed spatial supply chain data. For instance, a recent paper published under the European Commission's Business @ Biodiversity coalition (Lammerant et al. 2019) provides a key summary of different tool types for biodiversity analysis based on the level of analysis and input data types.

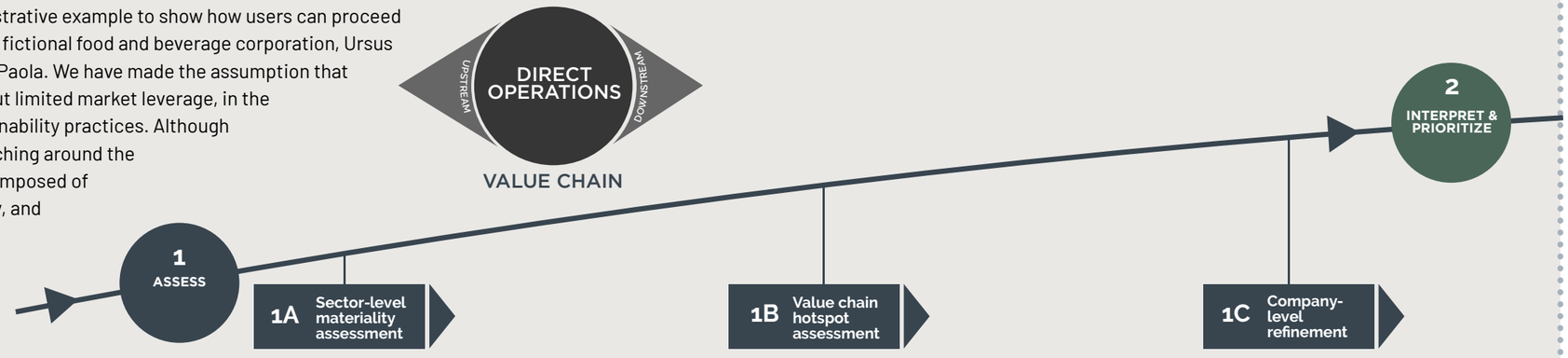
Ultimately, what can be considered acceptable data will vary throughout spheres of influence (as introduced in Section 2.2.2). For instance, the recently proposed WEF International Business Council review of environmental, social and governance (ESG) metrics (WEF 2020b) recommends the use of primary data for operations and estimates for value chain GHG emissions, land use, and freshwater consumption. As of writing, SBTN expects companies to use a combination of primary and secondary/modeled data to ensure practical application (see Section 2.2.2).

		LAND	WATER	OCEAN
Tools by realm		Global Forest Watch	Water Risk Filter	Ocean+
		trends.earth	Aqueduct	Plastic Scan
Issue-specific tools	Climate change	Scope 3 Evaluator		
		GHGP Tool		
	Biodiversity (eco-systems, species, NCP)	Integrated Biodiversity Assessment Tool		
		Global Biodiversity Information Facility		
Cross-cutting Tools	Spatial Analysis	InVEST		
		UN Biodiversity Lab (previously Nature Map)		
		Resource Watch		
	Supply Chain Modeling	(Environmentally Extended) Input-Output Models (e.g., EXIOBASE)		
		trase.earth		
	Materiality Assessment	ENCORE		
		CDP (covering Water, Forests, and Climate)		
	Compiled Tool Databases	Iris+		
		SHIFT		
		Biodiversity Guidance Navigation Tool		
		Metrics Database		

Table 5. Toolbox for Step 1: Assess, including issue- and realm—specific tools, as well as cross-cutting tools

Step 1: ASSESS | *illustrative example*

Throughout the rest of this document, we apply an illustrative example to show how users can proceed through the five steps of setting SBTs for nature: the a fictional food and beverage corporation, Ursus Nourishment, and its Corporate Sustainability Officer, Paola. We have made the assumption that Ursus is a midsize company with a recognized brand but limited market leverage, in the early stages of working to improve its corporate sustainability practices. Although headquartered in Spain, Ursus has supply chains stretching around the world. The company's upstream impact on nature is composed of sourcing and processing activities in Spain, Brazil, Italy, and the USA, and of manufacturing activities in Spain, the UK, Germany, and France. The company's primary sales markets (and downstream impacts) are in the USA and Europe.

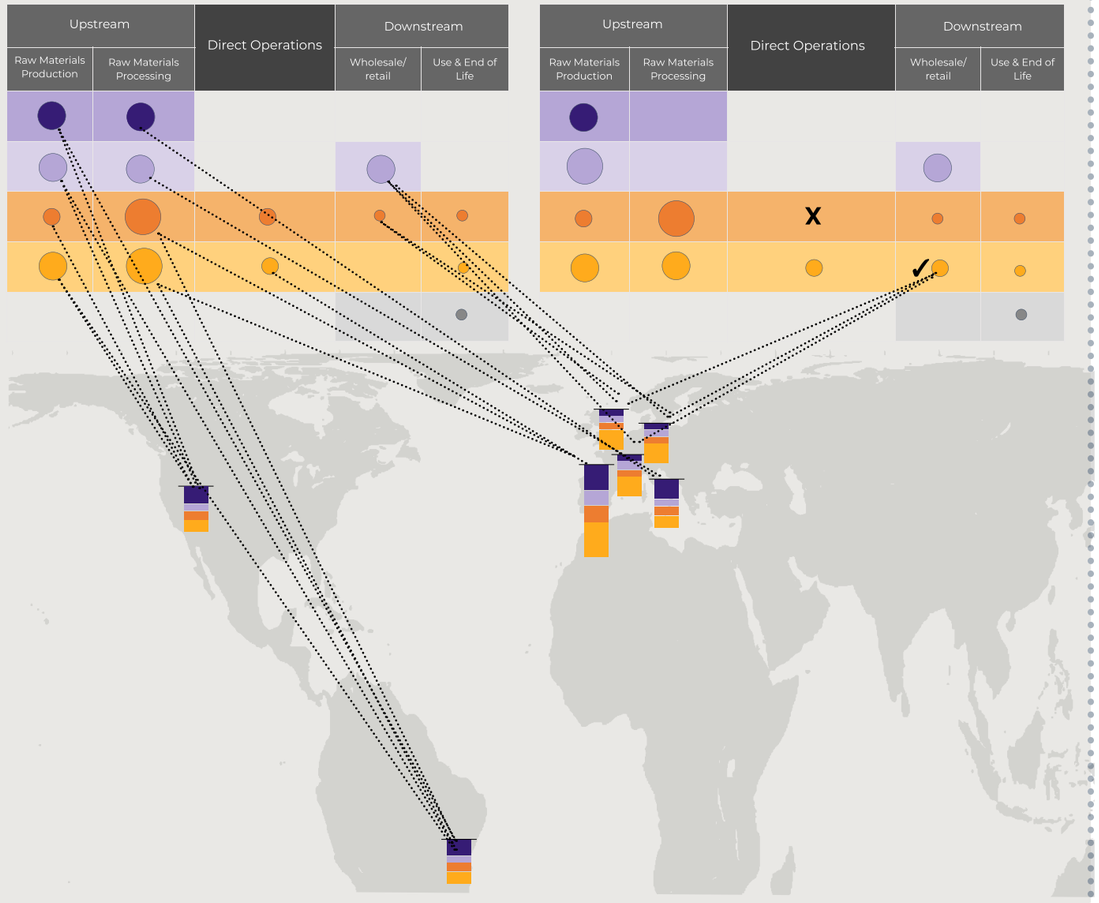


Looking at the materiality screening tool in Section 2.2.1 of SBTN's Initial Guidance, Paola sees her company falling under the Consumer Staples – Food Retail category and reads the values for materiality listed in the cells for that row. From reading the table, she understands it is likely she will have targets on land/sea use change, resource exploitation, climate change, and pollution. She knows this because the matrix showed a Very High (5), High (4), or Medium (3) score for the following pressure categories in the following regions of Ursus's value chain: terrestrial ecosystem use (upstream), freshwater ecosystem use (upstream), marine ecosystem use (upstream), water use (upstream and direct operations), GHG emissions (upstream), non-GHG air pollutants (direct operations), water pollutants (upstream and direct operations), and solid waste (upstream and direct operations).

	Upstream	Direct Operations	Downstream
Land/Water/Sea Use Change	✓		
Resource Exploitation	✓		
Climate Change	✓	✓	
Pollution	✓	✓	
Other			

	Terrestrial ecosystem use	Freshwater ecosystem use	Marine ecosystem use	Water use	GHGs emissions	Non-GHG air pollutants	Water pollutants	Soil pollutants	Solid waste	Disturbance
Food Retail	4	3	3	3	5	3	3	2	4	2

Paola is interested to see how Ursus's existing sustainability activities address the environmental impacts suggested by SBTN, so she uses SBTN's decision tree to guide her through Step 1b: value chain hotspot assessment. Using the decision tree (TA 2), Paola recognizes that she can draw on the work she's done using the Natural Capital Protocol and the data she collected during that process. To complement her existing understanding of material issues, Paola uses the ENCORE natural capital risk assessment tool to gather data on potential risks across Ursus's upstream activities. Using the decision tree and ENCORE, Paola organizes her value chain data around production and sourcing locations. She finds that in some locations, her company's impacts on nature are perhaps even more severe than those estimated for her sector in the materiality screening tool (Step 1a).



Step 1: ASSESS | *illustrative example (continued)*

Based on previous work, Paola and her team knew about a number of their company's impacts and dependencies at different sites throughout their value chain. However, they had not spatially mapped out, beyond the country level, where these impacts and dependencies occurred. She also did not know which sites had the greatest number of impacts or most severe impacts.

Using several of the spatial tools in the Assessment Toolbox (see Section 2.2.4), combined with her commodity sourcing data, Paola first creates a 'hotspot map' of impacts at different sites and sourcing areas, showing what parts of her value chain (like sourcing activities) and where, geographically, Ursus has the biggest environmental impacts, by type of impact (see Figure 8).

Finally, Paola needs to make sure that all potential impacts and dependencies adequately correspond to what she knows to be true about her company's business activities—not all companies' material impacts fit the same profile as the rest of their sector. She was able to draw out some of these differences in the value chain assessment, finding an additional material issue—conversion of natural grassland in Brazil, from where Ursus sources soybeans (see TA2.5).

Figure 8 shows a potential output from Step 1(a, b, c), where impacts (and indications of their intensity) are mapped across a corporate value chain in terms of supply chain 'regions' and locations.

**Note that the example has been anonymised and is theoretical. The dependencies identified relate to the ecosystem services provided by nature for the specific area of the value chain identified.*

2.3 Step 2: Interpret & prioritize

After completing Step 1, companies will have a list of potential issue areas on which they might set SBTs in locations across their value chain. Companies will be expected to eventually act on all issue areas—this is essential in order to move in the direction of having a positive impact on nature. At the same time, we recognize that it is impractical for companies to act on all issues in all of their value chains at once, particularly in their first round of target setting.

Because of this, we're designing tools to help companies prioritize key locations/value chain components (e.g., sites, inputs) for action in Step 2 of SBT setting. To date, we've focused on drafting a list of the key evaluation criteria needed to prioritize between places for target setting (see Section 2.3.1). A number of these are broadly consistent with current reporting standards, such as those under GRI's 100 series and the Natural Capital Protocol (Step 8 and Step 9).

Companies will be able to use the data gathered in Step 1 (activity, purchase, primary impacts data, etc.) to help carry out the evaluation that is at the core of Step 2: Interpret & Prioritize. For instance, data on impacts and dependencies across a company's value chain from Step 1 can be used to determine the relative contribution of different locations to a company's overall contribution toward the state of nature (via extractive and pollutive pressures).

Please note that our guidance on prioritization is under development. Key elements we are working with experts to develop include weighting criteria, order of application (e.g., whether some criteria should be used as screens before others are applied), and controlling for trade-offs between criteria. Representatives from companies, consultancies and business coalitions will be invited to test the feasibility of this step, including considerations of data required and tools needed.

2.3.1 Draft criteria to start prioritizing places for target setting

A. Contribution of different locations, commodities, suppliers to total impact of the company

Companies should consider prioritizing the locations—associated with their operations and/or value chain(s)—where they can have the highest impact. Companies can use the outputs from Step 1b (i.e., the hotspot assessment), as well as established impact assessment methods (see Natural Capital Protocol (Step 7 - Valuation) and Lammerant et al. (2019)), to inform their inputs for this prioritization factor. Financial materiality of different issues or value chain components (e.g., contribution of the related economic activities or products to the company's overall revenues/profits) may also be considered here.

B. State of nature in value chain locations

Companies should consider the state of nature in locations throughout their value chain and surrounding areas. Considerations should include factors like current levels of water scarcity, extent of ecological connectivity, species extinction risk, pollution accumulation, or levels of resource stocks (which all have associated indicators). Spatial data related to many such indicators is available in the toolbox provided in Section 2.2.4, and general data sets may be accessed in reference to SBTN's Draft Indicator Framework in Section 2.4.2. For different issues, different scales of action and impact assessment (e.g., detailed sourcing location, landscape, and broader jurisdiction) may be relevant. Where unavailable, companies may use secondary data (as in Step 1) in order to begin trialing Step 2 while SBTN develops tools and guidance. The state of nature in a place (e.g., severely degraded versus pristine) may make different types of actions used in target setting more or less appropriate (see Section 1.3, box on AR^{3}T or Section 2.5).

C. Relative contribution of the company to the state of nature, compared to other stakeholders

Consideration of the company's current (and, where possible, historical) impacts and contributions, through direct and indirect impacts, should be considered where data exists. Similarly, companies may account for how other stakeholders directly or indirectly influence the state of nature in the places where they have direct operations or value chain activities, and/or in the landscapes adjacent to their value chains. For some issue areas and locations, a company may have a high degree of influence over the state of nature—for instance, in remote locations where the company is observed to be the major driver of pollution. In others, improving the state of nature may require collective action of multiple stakeholders. Understanding relative contributions is a key step toward resolving collective action problems (see Section 2.5.1).

D. Needs and capacity of local stakeholders

The values, needs, and goals of local stakeholders, like government, citizens, and civil society, are crucial considerations for where and how to act, particularly because many types of action will require collaboration and multi-stakeholder efforts at a landscape, watershed, or seascape level using jurisdictional or scape approaches (WWF & Proforest 2020). At the same time, understanding local needs and capacity is a time-consuming process if companies have not already pursued local stakeholder engagement. Where possible, companies should rely on prior knowledge of local stakeholders' needs and capacity. Where such prior knowledge does not exist, it may be difficult to use this as a criterion in the first round of target setting.

E. Company-level stakeholders

In addition to local stakeholders, the preferences and demands of company-level stakeholders, like shareholders and investors, may be relevant. We assume that many companies, if they are reporting according to GRI or have undertaken a materiality assessment (from a societal or financial perspective), will already know some of what these stakeholders prioritize.

F. Needs and capacity of value chain partners and/or subsidiaries

For many companies, the largest impacts and greatest opportunities for action will take place in their value chains, and thus relationships with suppliers and other value chain partners are a key consideration. Similarly, for conglomerates, it will not be possible to achieve material outcomes for nature without the cooperation and support of their subsidiaries. Just as companies may wish to act first where key value chain relationships can be leveraged, conglomerates may wish to act first where subsidiaries are ready and willing to engage in the process of SBT setting.

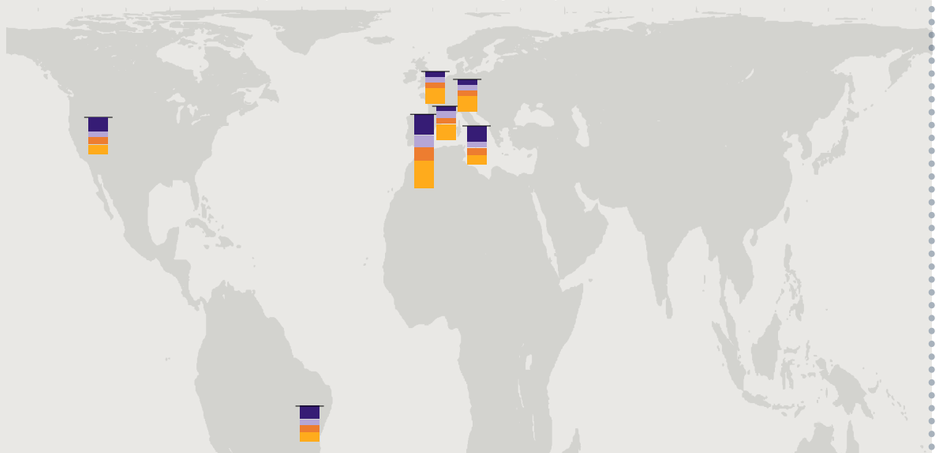
G. Policy environment

Current or changing policies in different locations where your (or your subsidiaries') value chains extend may influence where actions are taken and what kind of actions are possible. For instance, the potential to act ahead of future regulatory changes or the ability to align actions with local or national environmental policy can make it strategically beneficial to prioritize action in specific places.
As stated at the beginning of this section, SBTN will be working on a method to evaluate these prioritization factors, including technicalities with weighting and dealing with trade-offs.

While these criteria are a draft prioritization framework, we recommend companies start addressing needs for high-priority sites, inputs, or product lines. Many companies will already have key insights on the environmental and financial materiality of different issues, sites, and inputs they can apply to this step, and in many cases, prioritization will be relatively clear. Getting started where data are available, where previously identified material issues are present, and in collaboration with key value chain partners or subsidiaries will help companies align with future guidance on prioritization from SBTN.

Step 2: INTERPRET & PRIORITIZE | *illustrative example*

Here we show how Paola can use our draft prioritization criteria to identify locations where she can begin addressing the issue areas identified in Step 1. Not all locations relevant for Ursus's value chain are covered in this example.
Based on the hotspot map, it's clear that a great proportion of Ursus's environmental impacts and dependencies are tied to Spain (Factor A). With corporate headquarters, as well as sourcing, processing, and manufacturing sites all in the same country and within close proximity to each other, it is also likely that Ursus is a moderately significant contributor to the health of the ecosystems where its activities take place, compared to other actors (Factor C). Spanish shareholders and local laborers (Factor E) also increase the importance of Ursus focusing on Spain in the short term.



At the same time, the hotspot map draws Paola's attention to the USA and Brazil as potential sites where she will need to focus (Factor A). Using the spatial tools in SBTN's Assessment Toolbox (Section 2.2.4), Paola sees clearly the urgency of acting to manage Ursus's impacts as well as dependencies on terrestrial and freshwater ecosystems in the USA and Brazil (Factor B). However, for both sites, Ursus is not a major player in those regions (Factor C). A key difference between her approach in the USA versus Brazil is the capacity of her value chain partners—in the USA, Ursus's partners are actively working on improving the sustainability of their operations, while in Brazil, Ursus's partners are interested but underfunded and unsure how to act (Factor F).

Although Ursus's sites throughout Europe were not necessarily those with the highest materiality scores, Paola and her team know they need to create plans for action in all of these, given the ambitious policy environment (Factor G).

For all sites, she resolves to work with SBTN to understand how her company can better understand the needs and capacity of local stakeholders so that these can be factored into her targets' ambition and the actions she takes to meet them (Factor D).

This step provides a consistent rationale for her target selection, which is helpful in conversations with her C-level officers, investors, company stakeholders, and sustainability auditors.

2.4 Step 3: Measure, set & disclose

After identifying priority locations for target setting in Step 2, companies can begin measuring their baseline impacts and setting targets for the issue areas and associated locations on their first SBT 'shortlist'.[17]

In this section, we introduce the principles and indicators companies can use to get started on measurement today while further methodological development continues over the coming two years. After gathering baseline data on their contributions toward pressures causing the decline in nature, and the state of nature itself in their targeted locations, companies will be able to set targets aligned with Earth's limits and societal goals. Whether at Step 1 or Step 3, companies setting SBTs should consider disclosing their data publicly. Greater transparency about your environmental impacts, and greater availability of information about the pressures on and state of nature in different locations around the world can improve the processes of impact assessment and response selection for your company and others.

2.4.1 What to measure? Principles for measurement indicators

Defining a comprehensive and science-based measurement framework companies can use for SBTs for nature will be the focus of our work over the next two years. Given that nature is multifaceted and there is not yet a single set of tools or measures appropriate for every realm, sector, and situation, we are proposing a series of principles that we will use for selecting indicators that can underpin quantitative targets for nature. These principles can also be applied by companies looking to trial SBT methodologies over the coming years.

Location-specific: Since nature is place-specific, measurement must also be place-specific whenever possible. We understand that in some cases, place-specific data may be difficult for companies to gather on their own, and we will be developing guidance on how companies can collaborate with other stakeholders to overcome hurdles and/or use modeled data (secondary data) in place of primary data (see Section 2.2.2). Such guidance related to data requirements will be issue-specific (e.g., for pollution, climate change, sea use change; see above) and covered in SBT methods as they become available.

Practical: Ideally, companies can measure their impacts to set targets and track their performance using existing data sets and methods, accepted standards, and indicators like those set and used by GRI, CDP, SASB, etc. As much as possible, SBTN will work to ensure that future standards and indicators (both voluntary and mandated by regulation) are increasingly aligned with SBT methods and vice versa, particularly in less standardized issue areas like biodiversity, where we will align with emerging accounting frameworks like those under the Biological Diversity Protocol.

Controllable: Companies have control, or significant influence, over the value of the indicator measured, which enhances action planning and target achievement. For instance, a company may be able to track the water its supplier uses from a specific basin. Indicators on larger-scale impacts, like landscape-level state indicators, may be less controllable by a single company but are also important to track. When used, they should be coupled with controllable indicators on activities or pressures.

Companies will be able to set targets aligned with Earth's limits and societal goals

Predictable: It is possible to assess in advance (with relative certainty) how different potential actions will affect the indicator. If an indicator is predictable, it assists companies in planning actions to reduce impacts or help regenerate/restore nature.

Transparent: Companies should, ideally, use open-source and freely available data and tools. Doing so bolsters their accountability, increases chances of replicability, and creates fewer burdens to validation and verification.

Incentives: The indicator incentivizes the right actions in the right locations, or at least does not lead to perverse incentives; this requires that the indicator be sufficiently sensitive with respect to the scale of the company's impacts.

Comprehensive: Collectively, the target and indicator set covers a large percentage of the company's impacts (and dependencies) on nature.

Science-based ambition (Alignment): It is possible to measure alignment of the indicator with Earth's limits and societal sustainability goals (see Section 2.4.3). In practice this often means that the indicator is either the same as or closely related to indicators used to set Earth's limits (e.g., planetary boundary "control variables") or measure societal targets (e.g., SDG indicators).

We recognize that there are likely to be trade-offs between these principles, in particular between the indicators most closely aligned with global goals and planetary boundaries ("science-based ambition") and those that are most practical, controllable, and/or traceable by companies. As SBTN moves into the road-testing phase of methodology development, we will look to technical experts and practitioners alike for input on how to address trade-offs among principles for measurement.

2.4.2 How to begin measuring: Setting a baseline

Combining the principles above and the target categories discussed above in Table 2, Section 1.4, we propose the following indicators for use in collecting baseline data on the key issue areas to be addressed by SBTs for nature.

		REALMS		
		LAND	FRESHWATER	OCEAN
PRESSURES ON NATURE	Land/Water/Sea Use Change	Conversion & deforestation	Conversion & drainage	Conversion & dredging
		Habitat fragmentation		
	Resource Exploitation	Land degradation (net primary production, soil carbon)	Water use (withdrawal / consumption)	
		Overexploitation of land resources, e.g. unsustainable logging	Overexploitation of freshwater resources, e.g. fishing	Overexploitation of marine resources, e.g. fishing
	Climate Change	GHG Emissions		
	Pollution	Soil pollution	Water pollution	*Marine pollution*
	Invasive Species & Other	*Terrestrial invasives*	*Freshwater invasives*	*Marine invasives*
		Accidental mortality		
STATE OF NATURE	Species	Species population and abundance, species extinction rates		
	Ecosystems	Ecosystem extent, connectivity, and integrity		
	Nature's Contributions to People	*Various (e.g. pollination, water filtration, food provisioning)*		

SBTs or interim targets can be set	Baseline can be derived	*Data gathering is possible*

Table 6. Issue areas across realms and target categories where indicators aligned with SBTN's measurement principles have been identified. See key to understand how measurement and target-setting readiness are denoted. Note: Not all issue areas are relevant to all companies/sectors; relevance can be determined by Step 1 ("Assess"). Additional details on proposed indicators given in Section 2.4.4 and TA4.1. Targets for GHGs are set through the SBTi.

We recognize that action is necessary now, and that many companies are eager to get started. For this reason, Table 6 shows several indicators and issue areas where companies can already begin gathering data, setting baselines, or even setting targets. Table 6 is a summary version of a more detailed draft crosswalk available in TA4.1 that connects these targets and indicators to corporate reporting and accounting standards, as well as societal goal frameworks (see also next section).

It is important to distinguish between two related concepts and terms here: **baseline** and **reference state**. While these terms are often used interchangeably, here we distinguish between the two. We define the baseline as the *value of a measured indicator in a given year* and the reference state as *the state of nature to which a target refers*.

Baselines and reference states are effectively the same thing when the anthropogenic reference state is chosen for working lands or the no-use reference state is chosen for protected areas or biologically/ecologically intact areas. For instance, a no net loss target for biodiversity at site-level could use a previous year for both the baseline value of ecosystem extent and for the "pristine" reference state. However, the concepts may also be different, especially when the target or reference state in question is a pressure reduction or restoration target. An example could be restoration of degraded land back to a productive state or even further back to its natural state, pre-human impact.

We recognize that the choice of baselines and reference states can have important implications for companies, as well as important implications for alignment to societal goals. For any of the above issue areas (without initial targets), all targets should be set with as recent a baseline as possible.

2.4.3 Ensuring corporate alignment with Earth's limits and societal goals: Translation

Above we identify the issue areas where companies can already set science-based targets (climate change) or initial ambitious targets that are in line with the best available science (e.g., land use change, water resource exploitation). As described in Section 1.3, we define targets as 'science-based' if they are aligned to societal goals and to staying within Earth's limits. In other words, limits and goals must be "translated" into actionable targets for companies. We describe work on translation in more detail in Technical Annex 4. In large part, translation consists of three key components:

- connecting Earth's limits (e.g., for biodiversity loss, water use/availability) and societal goals (at global level, or other regional, state, or subnational levels, as relevant) at different geographical scales (planetary to local) with companies' specific value chain impacts and dependencies
- allocating issue/impact mitigation burden (measured in terms that correspond to biophysical limits and/or societal goals) to determine companies' fair share of effort
- converting that allocated share of effort into an actionable indicator that can be measured and tracked by companies (i.e., following the measurement principles in Section 2.4.1)

As SBT methodologies are developed (over the coming one to two years), we will work to create as much consistency as possible in how these "translation" steps are carried out for the issue areas listed in Table 6. Such work on translation will be done by SBTN in coordination with the Earth Commission (see Section 1.3) to ensure consistency between the "safe and just corridor" they are working to define and the specific SBT methods under development by SBTN.

To date, our work on translation has been focused primarily on mapping the approaches to measurement used for planetary boundaries/ environmental thresholds, societal goals, and

corporate sustainability reporting, as shown in the indicator crosswalk. The crosswalk in Technical Annex 4.1 can serve as a preliminary resource for companies seeking to gather baseline data and begin to set targets.

2.4.4 Targets you can start setting today

Based on the criteria listed in Section 2.4.1, we identified a selection of issue areas where companies can start setting initial targets today to make contributions toward their overall SBTs for nature once all methods are available (see Table 7):

- Climate change, through the Science Based Targets initiative
- Land use change, specifically deforestation and conversion, using the Accountability Framework Initiative
- Resource exploitation, specifically water quantity and quality, using contextual targets for water
- Ecosystem integrity, specifically on working lands using regenerative agricultural practices in line with the European Commission.

Note that SBTs for climate are the only 'official SBTs' available to companies today (and thus others should not be referred to as SBTs in corporate communications). However, all other initial targets are considered sufficiently ambitious and in line with SBTN's future methodologies. It is important to note that the scope of SBTs for nature is much broader than these targets (see Section 1.4), and an available initial target does not mean this target area is of any more or less importance than targets that are still under development.

Wherever possible, we have attempted to align indicator and target measurement with existing corporate practice, so those who have already done substantial work—such as a Scope 3 GHG assessment, a natural capital assessment, delivering deforestation-free supply chains, or reporting using CDP, GRI, or SASB—can draw on information they've already collected in order to get started with SBTs. At the same time, indicators for SBTs should ideally also correspond to—or be capable of converting to—indicators used for quantifying Earth's limits and societal goals, as discussed in Section 1.4 and Section 2.4.3. Table 7 shows how a number of illustrative targets that companies can start setting now align with existing corporate practices, societal goals, and planetary limits (i.e., planetary boundaries). Table 7 is a subset of such targets, and companies are encouraged to utilize the extended table available in TA4.1 for a comprehensive list of illustrative targets.

Finally, it is important to remember that all content in this document is ***initial***, and that SBTN's guidance will evolve as we receive critical inputs and develop further methods.

2.4.5 Initial guidance on minimum coverage of SBTs

All companies should aim to assess (Step 1) all societally material issues related to their operations, upstream activities (those related to sourcing of inputs needed to create your product or service), and downstream activities (those related to the distribution and consumption of your product or service). Similarly, all companies should aim to address their contribution toward these issues (e.g., marine pollution, accidental species mortality, climate change), throughout their spheres of influence (see Section 2.2.1).

At the same time, we understand that all companies cannot act on everything at once (in terms of issue areas, value chain locations, and spheres of influence). To help companies take action that is in line with the Earth's and society's needs, SBTN is developing tools to help companies identify issues in Step 1 and guidance on how companies can prioritize among these issues in Step 2. Furthermore, we will be working with the Earth Commission to provide target-setting guidance that accounts for the interlinkages and interdependencies of targets (and the related scenarios of impact, response, and impact-response that underpin the process of target setting)(Step 3).

While SBTN works to develop further tools and guidance, we encourage companies to get started on what they can, where they can. This may be on a product line or a landscape where you have preexisting efforts, or in countries where you have easy access to environmental data and/or where barriers to target setting are low. In order to attain the outcomes we need for nature and climate in the next 10 years, we must all begin contributing as much as we can now.

For issue areas with available initial targets (see Table 7), guidance on the minimum coverage needed within the value chain should refer to the existing guidance associated with those targets:

- SBTi
- Accountability Framework Initiative
- Contextual water targets
- European Commission

2.4.6 Disclose

At the time of target setting, companies should disclose their targets publicly. Details on initial guidance for disclosure are given below in Section 2.6 (Step 5: Track).

Target	Illustrative target wording	Initial guidance on target ambition for companies	Indicator	Alignment (with corporate reporting, global goals and Earth's limits)
Use Change (Land)	***Reduce*** to X by 2030 activities causing deforestation / conversion in your supply chain	***Zero deforestation from 2020 / Zero conversion of natural habitats in value chain by 2030;*** following Accountability Framework Initiative ***No net loss of non-forest natural habitats from 2020;*** following IFC Performance Standard 6	Deforestation / Conversion of natural ecosystems (ha)	Accountability Framework Initiative; CDP Forests SDG 15 (Life on Land) Planetary Boundaries on land use and biosphere integrity
Resource exploitation (Freshwater)	*By 2030,* ***reduce*** *water use in high water impact parts of the value chain by x%*	***Locally dependent;*** following Contextual Water Targets	water withdrawals (m^3)	GRI 303; CDP Water SDG 6 (Clean Water and Sanitation) Planetary Boundary on water
Resource exploitation (Ocean)	***Avoid*** sourcing from fisheries with stocks outside biologically sustainable levels	Ambition guidance coming soon	Proportion of fish sourced (%)	SDG 14 (Life Below Water) Planetary Boundary on biodiversity
Climate Change (Cross-Realm)	***Reduce*** value chain GHG emissions by X% by 2030	***>4.2%/year reductions for 1.5°C alignment;*** following Science-based Targets Initiative	GHG emissions (tons CO_2e)	GRI 302; CDP Climate; GHG Protocol UNFCCC; SDG 13 (Paris Agreement) Planetary Boundary on climate change
Climate Change (Land)	After prioritizing GHG reductions, ***remove*** X tons CO_2 by 2030 through forest landscape restoration	Ambition guidance coming soon	CO_2 sequestered (tons CO_2e)	GHG Protocol UNFCCC; SDG 13 (Paris Agreement) Planetary Boundary on climate change
Ecosystems (Land)	***Regenerate*** ecological integrity in supply chain by ensuring X% ecological focus areas per km^2 for all sourced agricultural inputs	***10%*** per km^2; following European Commission definitions	Fraction of agricultural land in ecological focus areas at 1 km^2 scale (%)	UNCBD Post-2020 goal on area, connectivity, and integrity of natural ecosystems; SDG15 (Life on Land) Planetary Boundaries on land use and biosphere integrity European Commission policy
Ecosystems (Land)	Increase soil organic C by X%/year through ***restoration and regeneration*** in critical value chain sourcing locations by 2030	Ambition guidance coming soon	Soil C (tons C/ha)	Accounting for Natural Climate Solutions Guidance; Gold Standard UNCCD; SDG 15 (Life on Land) Planetary Boundary on climate change
Ecosystems (Cross-Realm)	Through **restoration**, increase the area, connectivity and integrity of natural ecosystems by X% by 2030	Ambition guidance coming soon	Extent, connectivity, and integrity (realm-specific indicators)	UNCBD Post-2020 goal on area, connectivity, and integrity of natural ecosystems; SDG 14 (Life Below Water); SDG 15 (Life on Land) Planetary Boundaries on land use and biosphere integrity
Species (Cross-Realm)	***Avoid*** sourcing from areas of high species extinction risk **Reduce** by X% extinction threat to species	Ambition guidance coming soon	Species Threat Abatement and Recovery (STAR)	IFC Performance Standard 6 UNCBD Post-2020 goal on species extinction; SDG 14 (Life Below Water); SDG 15 (Life on Land) Planetary Boundary on biosphere integrity

Table 7. Key illustrative and initial targets that are part of the SBTs for nature framework. This list is a subset of a broader crosswalk available in Technical Annex TA4.1, and examples are chosen for illustrative purposes—not to denote relative importance. Each target is shown along with the aligned measurement framework, including illustrative target wording, target indicator, and alignment to corporate accounting/reporting frameworks, societal goals, and planetary boundaries.

Step 3: MEASURE & SET | *illustrative example*

ursus NOURISHMENT

After Steps 1 and 2, Paola has a reasonable idea of which sites she's prioritizing and the issues that should be addressed there. For instance, in Spain she will definitely be addressing land use and land use change, freshwater ecosystem use and use change, water resource exploitation, and pollution (air, water, and solid waste). She will also be addressing climate change throughout her value chain, by working with suppliers and manufacturers at different sites. Because of both high impacts and high dependencies on terrestrial ecosystems throughout her value chain, she also resolves to work with value chain partners to implement a value chain-wide zero land conversion target.

Looking at SBTN's draft measurement framework (Section 2.4.2), Paola sees that she can begin collecting baseline data for

- value chain-wide land use/land use change target on conversion and deforestation
- site-level water use (resource exploitation) targets throughout her value chain
- value chain-wide climate change target

Based on SBTN's crosswalk, she can start to see how her targets will help her company align to local and global sustainability goals, such as in her contextual water targets:

1 **Connect**
Because the relevant planetary boundary and SDG indicators are estimated at basin level, she will look to the SBTN to provide thresholds on water use relevant to the local-watershed scale where Ursus operates in order to quantify sustainable levels of use.

2 **Allocate**
The level of action required to meet watershed-level goals (e.g., sustainable level of river flow) must be allocated to specific users in a multi-stakeholder setting upon considering factors such as historical use, current and projected dependencies of the company and other landscape-level stakeholders, and local priorities.

3 **Convert**
The indicator used for baselining and assessing progress on targets—level of water withdrawal as a fraction of overall water resources—will align with the planetary boundary for water and SDG indicator 6.4.2.

For each issue area where she will set targets, Paola consults Section 2.4.4 to understand what the ideal ambition level for targets should be. For these targets, she begins to think about appropriate intervals for assessing and reporting progress, as well as the indicators to use. This will ensure she has a robust plan for monitoring and reporting throughout the life cycle of Ursus's targets.

To increase accountability, Paola and her team share their targets, the data collected, and the rationale used during Steps 1–3 by publishing a document on their company's website and by composing a section for Ursus's next company-wide sustainability report. They pledge to provide annual updates on progress publicly (though they will assess progress more regularly on an internal basis).

2.5 Step 4: Act

This section provides guidance on relevant actions companies can take for nature, using SBTN's Action Framework (AR³T): Avoid, Reduce, Regenerate, Restore, and Transform. This framework is based on the well-known mitigation and conservation hierarchies (see Technical Annex TA5).

We extended these hierarchies to cover transformative action, which covers the ways companies can contribute to needed systemic change inside and outside their value chains. This contribution toward positive change is shown as the circle surrounding the process of minimizing, eliminating, and making up for negative impacts.

AVOID
Prevent impact from happening in the first place; eliminate the impact entirely.

REDUCE
Minimize impacts, but without necessarily eliminating them.

REGENERATE
Take 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 a few specific nature's contributions to people (e.g., regenerative agriculture often focuses on carbon sequestration, food production, and nitrogen and phosphorus retention) (adapted from FOLU 2019).

RESTORE
Initiate or accelerate the recovery of an ecosystem with respect to its health, integrity, and sustainability, with a focus on permanent changes in state (adapted from Society of Ecological Restoration).

TRANSFORM
Take actions contributing to system-wide change, notably to alter the drivers of nature loss, e.g. through technological, economic, institutional, and social factors and changes in underlying values and behaviors (adapted from IPCC 2012 and IPBES 2019c).

Some clarification is important regarding some elements of the Action Framework:

- Avoid applies to new or potential impacts, whereas reduce applies to existing impacts
- The framework should not be interpreted as a strict hierarchy, but rather as a typology of actions available to companies (see the Illustrative Example for Step 4), which are more or less appropriate depending on corporate baselines (including how historical impacts are treated) and the reference state one is working to attain (see glossary and Section 2.4)
- Transform actions can happen before, during, and after other types of action; transform is not a final consideration; rather, it is additive to the other elements of the AR³T framework
- Applicability of different types of action differs throughout spheres of influence (see Section 2.2.1)

As first mentioned in Section 1.4, companies setting SBTs will need to pursue action not only at the corporate level but also at a level that corresponds adequately to the systemic issues at hand. This is in part why we emphasize the expanding spheres of influence concept; companies must consider their impacts and pursue actions throughout all spheres. Uncoordinated, non-collaborative action among companies and other stakeholders in the areas where companies operate (including governments and other companies) can lead to environmental degradation in places that are not immediately targeted for action.[18] By working with others, companies can bring about an absolute reduction in negative environmental impacts that benefits

the world as a whole, rather than attaining smaller, relative reductions in environmental impacts according to metrics of their own success (i.e., reducing their own footprint).

To understand where and when actions should be taken, see the factors introduced in Steps 2 and 3 and the following section.

2.5.1 Best practices for target implementation

Below, we list best practices for target implementation. We have aligned these closely with the IUCN Global Standard for Nature-based Solutions given the focus of that standard on actions that benefit nature, people, and climate. In the absence of a process for target validation (see Section 2.6), these practices can function as a reference/checklist for companies to ensure consistency with best practices as they begin target setting.

Design of targets is informed by scale
SBTs for nature should account for known interactions among people, the economy, and the environment and be set in accordance with expected time lags and spatial displacements between actions, outcomes, and benefits.

There may be time lags between negative impact on the environment and repercussions for your business, as well as between your efforts to improve the environment and your ability to attain benefits from these actions. Build a culture of precaution, prevention, risk screening, and proactivity across your value chain: Impacts on nature are easier and less expensive to prevent than to remediate. Start acting now, with the recognition that although some actions can deliver immediate benefits, it may take years or even decades for desired results to manifest.

There are too many global issues—hunger, health, equity, biodiversity loss, and climate change, to name a few—to solve only one at a time.

Because targets may influence pressures and states across systems (e.g., urban, food, finance) and scales (e.g., global to local), targets must be set in a way that is realistic about potential outcomes of actions, so that they are grounded in current conditions of those systems and contexts, and which account for their projected cumulative impacts and potential trade-offs. Initial milestones can be helpful for assessing progress.

Take a preventative/precautionary approach
Impacts on nature are often harder to remediate than they are to prevent. Further, because of our limited understanding of environmental/biophysical dynamics (particularly in the ocean), companies should proactively adopt a precautionary approach—avoiding impacts first, and starting early.

Targets result in net gains in biodiversity and ecosystem integrity
Corporate targets should address the most pervasive threats to biodiversity and ecosystem integrity instead of the most expedient potential targets. To ensure this, companies should set Avoid and/or Reduce targets (targets to do "less bad") and Restore and/or Regenerate, as well as Transform, targets (targets to do "more good").

Targets consider the full extent of costs and benefits
Potential targets should be associated with costs and benefits that account for externalities and for prevailing regulatory and subsidy frameworks. This means it may not be possible to achieve planned SBTs for nature without exploring novel business models. In some cases, assigning costs and benefits will be challenging, especially for non-market services like biodiversity or cultural value and the distribution of costs not associated with labor (e.g., unpaid household work). Considering the full range of costs and benefits in target setting, even if challenging, can help you begin correcting system-wide issues (like inability to price environmental goods/capture the cost of externalities) and will lead to more robust and equitable results. This is a transformational practice that companies can get started on today.

Target setting and implementation effectively address societal challenges
Following a corporate-level assessment of impacts and dependencies on nature (throughout the value chain and the places companies affect), companies should also assess how their targets address prevailing and proportional societal challenges in the landscapes or seascapes they are focusing on. A just world that values and conserves nature is a vision that can only be achieved through a focus not only on safe operating space but also on the social and cultural implications of target setting, aiming, and execution of actions. How these targets are planned, executed, and achieved will have differing impacts on different groups of people. Companies engaged in target setting must understand the structural and historical impediments to equal and representative participation in decision-making processes and use this work to unseat historically inequitable and socially damaging power structures. Taking a just and responsive approach to target setting will not only help ensure that targets met are targets kept, but it will also guarantee a higher degree of equality in terms of bearing the costs of action, as well as better distribution of the benefits created through SBTs for nature.

Targets are based on inclusive, transparent, and empowering processes
Where possible, targets should be created in consultation and collaboration with value chain stakeholders, using participatory processes that uphold equity and rights-based approaches (especially including the rights of Indigenous peoples) and adhere to the principle of free, prior, and informed consent (FPIC). Those groups of society that have been historically marginalized, discriminated against, or persecuted must be given fair opportunities to participate in decision-making related to benefits generated by the company and its operations, and to accessing these benefits (where applicable). An orientation toward equity requires giving attention to other forms of knowledge beyond that in the technical, hard, or natural sciences. Target decision-making processes must be documented and include a verified stakeholder grievance mechanism prior to target implementation.

Targets emphasize value-chain and multi-stakeholder collaboration and are set with an appropriate understanding of context
Your business, like the economy, is embedded within a complex system involving human and nonhuman stakeholders all over the world. The targets set should be aligned with the long-term sustainability goals of landscapes and seascapes your business affects. Strive to understand and empathize with actors in your value chain, including other companies, smallholders, and government agencies that are operating or living in your priority landscapes and/or seascapes. This will help you and other actors understand how your actions influence each other and work toward collaborative solutions where issues currently exist.

Collaboration will shape your ability to formulate efficient solutions that can deliver multiple benefits to multiple actors, rather than create consequential trade-offs among them

Within your value chain and associated landscapes or seascapes, you should incentivize the action of others—invest in initiatives to build the capacity of others to take environmental action. Where SMEs and smallholders are involved, actions that provide a living wage have been demonstrated to shift practices effectively for the long term (see Meridian's work). Work with other stakeholders, like governments, but also the companies that share pieces of your value chain to align communication, incentives, and actions.

Collaboration will shape your ability to formulate efficient solutions (including through processes of collaborative assessment and co-creation of targets) that can deliver multiple benefits to multiple actors, rather than create consequential trade-offs among them. It will also help form effective coalitions for target implementation.

Targets are based on an equitable approach to balancing trade-offs between sustainability objectives
Companies should pursue strategies for operating that help resolve multiple problems at once and generate multiple types of benefits. In some

cases, company targets may be at odds with local objectives. Companies should look to engage stakeholders to avoid such conflicts where possible, or modify targets based on local realities. In other cases, there may be several "no regrets" actions. For instance, the IPCC's Special Report on Climate Change and Land (SRCCL) found over 20 practices that benefit climate mitigation and adaptation, land degradation, and food security all at once (IPCC 2019a). Many of these practices are referred to as nature-based solutions (IUCN 2020; IPCC 2019a; IPCC 2019b; WWF 2019b; Naturvation). There are too many global issues—hunger, health, equity, biodiversity loss, and climate change, to name a few—to solve only one at a time.

Targets are managed adaptively, based on evidence

Regular monitoring and evaluation of science-based targets and a target evaluation plan will help ensure that targets set can continue to be relevant. Anticipate and manage risk of failure. Use an experimental approach, potentially trialing multiple approaches in case one does not work. In some cases, the lack of prior experience (e.g., in restoration) means it may be difficult to assess the probability that a specific approach will succeed. Build in a target review process that encourages learning and allows you to stay ahead of the curve.

2.5.2 Avoid

We list avoidance first in the Action Framework because any environmental impact that can be avoided, prevented, or minimized should be. Avoiding impacts on nature is critical for several reasons:

- Some consequences of human impacts are irreversible. Species extinction, release of carbon stored in peatlands, extraction of fossil water, and destruction of culturally significant sites create impacts that cannot be restored or regenerated on a meaningful timescale; they can only be avoided. To stay within Earth's limits and ensure a future where people from all cultures can thrive, some impacts must be avoided.
- Some impacts are currently poorly understood. Where the consequences of impacts on nature are unknown due to lack of information but are likely to be substantive based on what we do know, avoiding impacts is the appropriate, precautionary approach until the situation is better understood. This may be particularly relevant for the high seas.
- In some instances, it will be impossible to achieve societal nature and broader sustainability goals if further impacts occur. Conversion of natural habitats, loss of species, or depletion of resources (or nature's contributions) must in some geographical locations be completely avoided.
- Avoidance is the most effective ecologically, it is the least likely to fail, and it can be much more cost-effective than remediating impacts after they have occurred. Avoiding impacts from the outset removes the need to repair or compensate for damage and minimizes the uncertainty inherent in restoration or regeneration. All in all, avoidance is usually the most cost-effective and reliable form of mitigation.

		Types of avoidance actions		
		Spatial *Avoid implementing activities within or sourcing from a particular area or landscape/seascape*	**Technological** *Avoid impacts on nature through employing alternative project design, using a different process or using different chemical inputs (like pesticides or fertilizers)*	**Temporal** *Avoid implementing activities during a particular season or time period*
Scale	**Site**	• Rerouting a road to avoid natural habitat. • Preventing development in a wetland to retain water quality and reduce flood risk. • Siting a wind farm to avoid seabird feeding routes.	• Using underground rather than open-pit mining. • Elevating your infrastructure (*e.g.* a goods conveyor) to avoid impacts to flood defense and carbon storage function of mangroves. • Not using bottom trawling in fishing.	• Not conducting harmful activities during turtle nesting season. • Not extracting water in months of water stress. • Not disturbing the ground in the wet season to avoid excessive soil erosion.
	Corporate	• Commiting to not develop within internationally recognized areas of biological importance (e.g. World Heritage Sites.) • Declaring watershed protection areas, zones of irrecoverable carbon, or sacred cultural sites as no-go zones. • Creating a policy of no dams on remaining free-flowing rivers.	• Exclusively using regenerated cellulose fibers from post-consumer cotton-waste instead of newly harvested cotton. • Eliminating use of broad-spectrum insecticides in order to support pollinators.	• Not sourcing or selling fruit and vegetables grown out of season or in periods of water stress. • Not harvesting fish during spawning season.

Table 8. Illustrative examples of the three types of avoidance at site and corporate scales.

Avoidance of impacts to nature is the clearest indication that a company is committed to meeting societal expectations. Above all, avoidance is the mark of a responsible global citizen. Seeking to avoid negative impacts to nature in the first place provides clear, tangible evidence that a company is committed to meeting societal sustainability goals. Within the context of science-based targets, avoidance underpins a company's credibility and demonstrates that other measures taken by a company (reduce, regenerate, and restore) are not a "license to trash."

The most obvious type of "avoid" action is forgoing an impactful activity altogether, where it is feasible. However, many production processes are a necessity, and thus companies can continue with the activity but avoid impacts to nature in one of three ways, shown in Table 8.

In locations where the status of nature is close to, or below, known societally agreed and ecologically safe thresholds, it will normally be appropriate for a company to set a prescriptive target for zero new conversion of natural ecosystems or extraction of natural resources. Examples could include a mining company adopting a policy to avoid any activities that would involve clearance of Atlantic Rainforest, a city plan that explicitly avoids any development on fynbos vegetation in South Africa's Cape region, or a farm committing to no further water extraction from a water-stressed river system in the dry season. As introduced at the outset of this section, companies should work with local stakeholders to ensure absolute reductions in the negative pressures being placed on nature in those places where the status of nature is trending outside of "safe" levels. This is necessary to ensure that further impacts (overall) are prevented (to the extent possible) in the landscapes/seascapes in question. Drawing on science-based and societally agreed

precedent, businesses setting SBTs should always avoid impacts that would individually or cumulatively, directly or indirectly

- cause species extinction or ecosystem collapse, for example by disrupting migratory routes or polluting nesting grounds
- cause adverse effects on internationally recognized no-go areas (for example World Heritage Sites, see TA6 for further details)
- cause negative impacts on a Key Biodiversity Area (KBA) to the extent that it would no longer meet the criteria for a global KBA
- render land degradation neutrality goals (e.g., those under the UN Convention to Combat Desertification) infeasible
- cause surface or groundwater stress that exceed environmental flow limits
- cause species or ecosystems to be listed as threatened or to move into a higher category of threat, according to the criteria of the IUCN Red List of Threatened Species and the IUCN Red List of Ecosystems
- entail an insurmountably negative effect on ecosystems' abilities to generate nature's contributions to people (NCP) including cultural or spiritual contributions
- sever crucial ecological connectivity functions in a land/seascape, for example by converting the only remaining ecological corridor between two areas of natural habitat

In addition to avoiding impacts on biodiversity, it is critical to avoid impacts on NCP. In general, NCPs are categorized as material NCPs, like wild-harvested foods, regulating NCPs, which govern biophysical processes (e.g., carbon storage, flood regulation), and nonmaterial NCPs, which provide cultural services (see TA1.6 for details). Most material and nonmaterial NCPs tend to be locally specific, and the people who benefit from them are well defined, so avoidance strategies must focus on local contexts.

Any environmental impact that can be avoided, prevented, or minimized should be

Regulating NCPs are more varied in their scope and scale. For example, carbon storage has global beneficiaries; flood regulation may often be most relevant at a watershed scale; slope stabilization can be local. The type of regulating service will therefore determine how impacts can be avoided.

It is important to point out that avoidance actions, particularly spatial avoidance, can have unintended consequences that can only be managed through broader systems approaches. As noted above, simple spatial avoidance actions do not guarantee impacts to nature are avoided in an absolute sense if one company leaves a land/seascape and another moves in right behind them. For certain types of impacts—notably land/water/sea use and use change—spatial avoidance should be considered alongside more transformative actions, such as engaging local stakeholders (communities, governments, local NGOs) through jurisdictional or scape-based approaches that can ensure long-term benefits for nature. Rather than interpret avoidance guidance as requiring companies to divest or move entirely, companies can work with local stakeholders to create a plan for investment that results in long-term options for sustainable use of the landscapes and seascapes where they operate.

Please see TA1 and TA6 for further detail and examples of concepts, tools, resources, and data sets that you can use to set and apply avoidance targets.

2.5.3 Reduce

When a company cannot entirely avoid negatively impacting nature through spatial, technological, or temporal techniques, its impacts must be reduced from their baseline value (i.e., the value in the year impact is measured for target setting) in line with associated known Earth's limit(s) or societal goal(s) (see Section 2.3). Many of the impacts and indicators in the SBTN draft measurement framework are already tracked by corporate sustainability reporting, so leading companies will already be well versed in reduction strategies for some key impacts, like GHG emissions, water use, natural ecosystem conversion (e.g., deforestation), and nutrient pollution.

Conceptually, strategies taken toward reduction can be very similar to those taken for certain types of avoidance, and the difference between Avoid and Reduce can be just a matter of baseline. For instance, using pollution control technology or using recycled inputs could be seen as technological avoidance of future impacts or as the reduction of impacts from a previous baseline of no control technology or using virgin input. Thus, the line between avoiding and reducing impacts can be difficult to draw in some cases; for this reason, we group Avoid and Reduce together as the first priority in the AR^{3}T Action Framework.

Specific actions taken to reduce impacts from baseline will vary across issue areas, jurisdictions/locations, value chain positions, and the sphere of control or influence where the impact occurs. In general, the types of relevant actions are well known, as impact reduction is a key tenet of corporate sustainability. Some key categories of impact reduction strategy are as follows:

Production process changes

- changing the production process in some way to reduce impact, for example by optimizing the use of inputs like irrigated water or nutrients in agriculture, and controlling for outputs like water and air pollution
- reducing lighting levels during construction to minimize light pollution
- experimenting with other eco-efficient technologies and techniques to increase material and energetic efficiency

Product design changes

- changing the source materials to more sustainable ones or designing for less material use overall; for instance, companies may reduce their reliance on virgin or nonrenewable materials (when impact of material production has a greater impact than alternatives)
- reducing packaging waste, particularly single-use plastic

Product stewardship

- extended producer responsibility models to control end-of-life waste

Business model changes

- changing business models to sell the function of a product or a service (e.g. lighting rather than lights as with Philips) rather than the product itself
- moving from ownership to leasing/sharing economy models, e.g., Airbnb
- using digitization to minimize material intensity, e.g., Spotify/Netflix

Sourcing/supplier engagement

- encouraging more sustainable practices in the value chain through direct supplier engagement (e.g., CDP's Supply Chain program)
- preferential sourcing (e.g., using sustainably certified inputs)
- moving production to a lower-impact location—as noted above, changing suppliers should be a last-resort option requiring careful consideration, given the risk to livelihoods caused by a sudden shift in business and the risk of leakage

As with avoidance, reducing impacts to nature must include impacts to NCP as well as to biodiversity. The Technical Annex (TA1.4) discusses key strategies for managing and reducing impacts to NCP. In many places, reduction of impact to NCP may lead to performance improvements. For example, reducing fishing effort in overexploited fish stocks can increase catch per unit of effort, while the reduction of grazing pressure in overgrazed systems can improve both livestock yield and soil carbon sequestration. Reduction opportunities can be identified by juxtaposing maps of anthropogenic pressure, like ecosystem intactness and human footprint, with maps of NCP (see TA1 for more details).

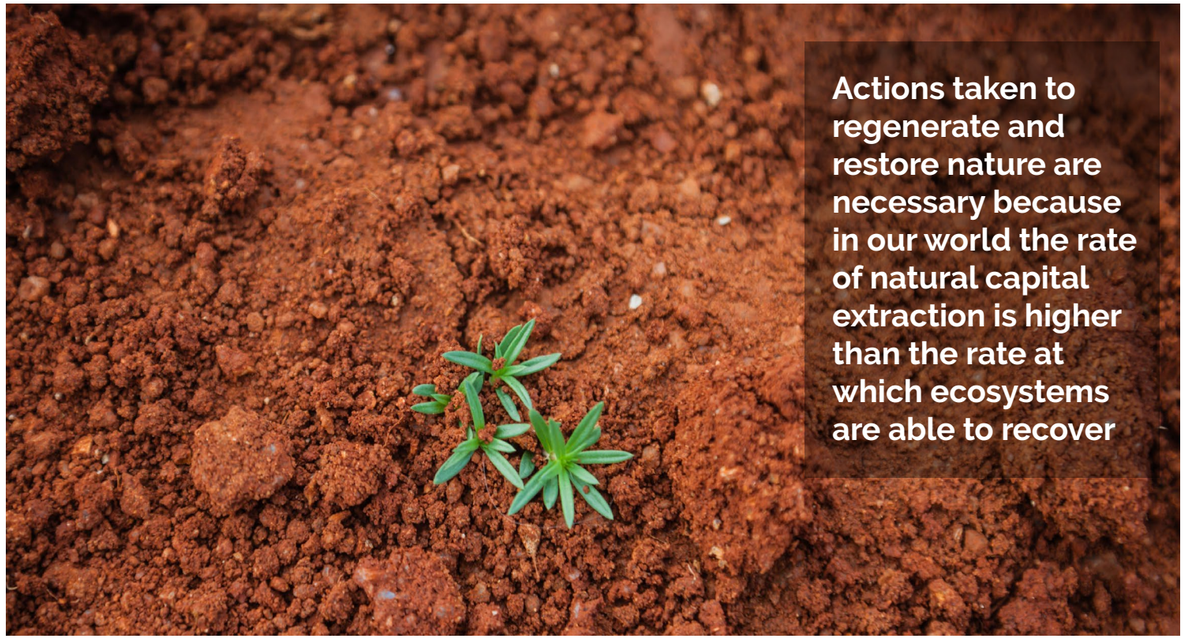
2.5.4 Regenerate and Restore

Regenerate and restore are the actions needed to (1) remediate impacts on nature that cannot be avoided or reduced, and (2) achieve measurable positive outcomes for nature, as part of achieving societal goals.[19] In short, they are the "positive" of achieving a nature-positive future compared to today.

As defined above, these related concepts can be distinguished by their objectives: Whereas Regenerate actions are particular to increasing ecological productivity in terms of nature's contributions to people (e.g., carbon storage, food production), Restore actions focus on returning degraded ecosystems to more ecologically natural land/sea use. Regeneration is more compatible with ecosystems that are currently being used by humans and does not necessarily imply changes in this use classification (e.g., for agriculture, aquaculture, or agroforestry), whereas restoration is aimed at changing from a degraded state (due to current or previous human use) to a more natural state.

Actions taken to regenerate and restore nature are necessary because in our world the rate of natural capital extraction is higher than the rate at which ecosystems are able to recover (Dasgupta et al. 2020). In other words, we are as a society taking more from the Earth than can naturally be replenished. Actions taken to regenerate and restore the ecosystems we operate and live in are necessary investments to ensure that critical contributions from nature to people, like the regulation of pests, diseases, and water quality and the mitigation of natural hazards, continue into the future.

Outcomes from regeneration and restoration are much more uncertain compared to actions related to avoidance and reduction, and will take time to achieve. The recovery of different natural stocks, species, and ecosystem functionality can be slow processes, and strategies may need to be updated based on initial indications of effectiveness. It is therefore essential that companies first avoid and reduce to bring total impacts as low as possible before focusing on regeneration and restoration.



Companies can set Avoid, Reduce and Regenerate/Restore targets at the same time, but they should not set Regenerate/Restore targets without also committing to avoiding new detrimental impacts on nature or to reducing their existing footprint.

The science around regeneration and restoration is evolving, so guidance for companies seeking to participate in these activities should approach target setting with flexibility and a willingness to adapt. Actions that companies take to regenerate and restore might include the following, depending on whether they are looking at land, freshwater, oceans or biodiversity:

- ecological restoration
- supporting individual species recovery
- regenerative agriculture, aquaculture and agroecology
- rehabilitation of degraded lands
- replenishment of freshwater systems
- management of production areas
- allowance for ecological permeability[20]
- compensatory conservation/target-based ecological compensation[21]

The restorative measures and the degrading impact a company aims to reverse could be inside or outside its value chain depending on opportunities and constraints. Companies will have more authority and influence to undertake restoration in areas over which they have jurisdiction or influence and the ability to convene stakeholders or participate in restoration consultations as stakeholders themselves. Ideally, restoration and regeneration actions should be aligned with existing commitments. For example, Bonn Challenge commitments exist in many countries and aim to have 350 million hectares of degraded land under restoration by 2030. This may provide a potential framework within which companies can plan or align appropriate restoration and conservation strategies. Companies setting targets may also seek to leverage corporate or municipal proximity to historically degraded geographies represented in their value chains to contribute to targets.

Environmental areas that are degraded and do not currently generate much NCP or store/sequester significant amounts of carbon might be able to do so if they were restored/regenerated. For example, vegetation restoration can improve water availability and quality by increasing rainwater infiltration into the soil, reducing erosion and sedimentation, and slowing nutrient transport, all while also sequestering carbon. Such zones could be identified using maps of restoration potential, models of ecosystem function/NCP generation, and/or historical knowledge (including that gathered through stakeholder engagement) about pre-degradation NCP generation. Please see TA1 for further detail.

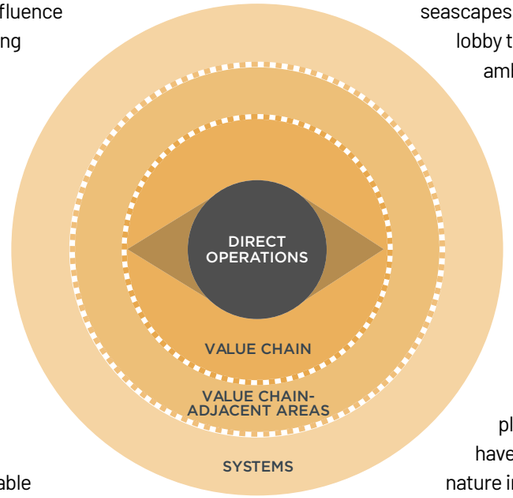
It is essential that companies first avoid and reduce to bring total impacts as low as possible

2.5.5 Transform

In the previous sections, we described how companies can contribute toward societal goals for nature through the whole process of setting SBTs: measuring their impacts on nature (Step 1), collecting and disclosing environmental data (Step 1 and Step 3), prioritizing areas for target setting based on environmental and societal criteria (Step 2), and taking action to reduce their "pressures" on nature while starting to restore and regenerate nature (Step 4). In this section, we aim to make clear that companies must also transform in order to enable positive outcomes for nature.

While it is critical to minimize and contain the pressures fueling nature loss—by avoiding, reducing, regenerating, and restoring—transform actions are necessary to tackle the fundamental drivers of nature loss. As described in Section 1.2, by drivers we mean the dominant belief and value systems of individuals and organizations, which influence everyday and long-term decision-making (e.g., in the processes of cost-benefit analysis), investment and business models, economic partnerships, and approaches to societal and environmental responsibility (IPBES 2019b). These transformational changes can allow companies to act as the environmental stewards the world needs, protecting nature and human well-being and improving the functioning of the real and financial economies.[22]

The science is clear: In order to avoid runaway climate change and irrecoverable nature loss while meeting development goals, we as a society must begin to transition or transform entirely the systems that give structure to our world (IPCC 2019a, IPCC 2018, IPBES 2019a). Businesses have a key role to play in these transformations. Not only can they contribute by transforming their business models and the way they value nature, but they can also create new partnerships across supply chains and sectors, invest in the landscapes and seascapes where they operate, and, critically, lobby the government to raise its policy ambition for nature and climate change.

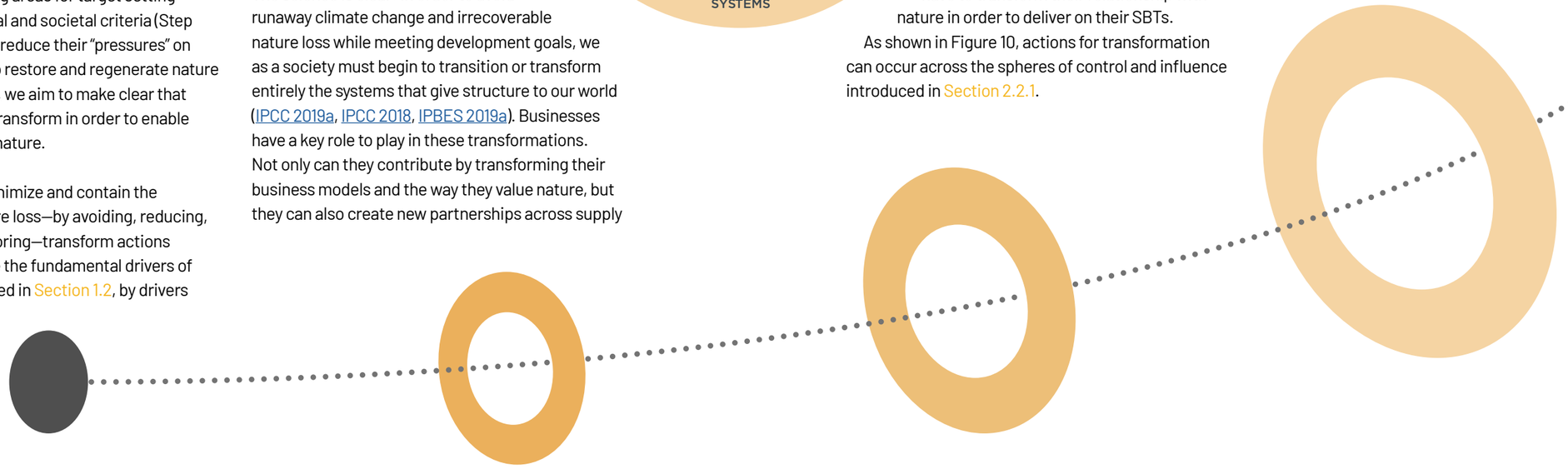


Importantly, because transformation must occur at the system level, even the most ambitious individual actions will not be enough to halt the loss of nature—companies must work collectively with others in the places where they operate. As stated in Section 1.2, business as usual is no longer feasible if we want to avert the continued decline of planetary health; most businesses will have to transform their relationship with nature in order to deliver on their SBTs. As shown in Figure 10, actions for transformation can occur across the spheres of control and influence introduced in Section 2.2.1.

Because of the systemic nature of transformation, measurement and target setting are difficult to conceptualize, let alone measure, set, and track. Thus, there are a number of methodological questions we're going to be tackling over the months to come, including the following:

- how to count actions/targets on Transform as they relate to other targets/actions (e.g., on Reduce, Restore)
- what key performance indicators for Transform (across all scopes of corporate influence) might look like

We welcome feedback from readers on these issues. For more on Transform, please see our Technical Annex TA7.



DIRECT OPERATIONS

- Establish new measures of performance and incentives/KPIs for executives and employees,
- Create an internal culture of learning around sustainability aligned with SBT achievement
- Improve transparency and disclosure of environmental and social impacts
- Reimagine corporate strategy and business model in line with Earth's limits and societal goals

VALUE CHAIN

- Mobilize value chain partners to set and achieve SBTs for their sites and adjacent landscapes and seascapes
- Provide financial support, incentives, and technical assistance for suppliers to meet desired standards and transition to improved practices
- Adopt circular economy and extended responsibility models for your products

VALUE CHAIN-ADJACENT AREAS

- Lobby local governments to ensure they support and increase the effectiveness of your SBT actions
- Invest in jurisdictional/landscape initiatives
- Engage in integrated multi-stakeholder planning for water, land, and ocean resources
- Support the enforcement of local tenure rights and social safeguards

SYSTEMS

- Work with industry/sector coalitions (e.g., OP2B, FashionPact, Proteus Partners) to establish and share best practices
- Champion nature-positive policy in national/regional/global jurisdictions, individually or through industry associations and coalitions (like Business for Nature)
- Create products that enable customers to live more sustainable lifestyles
- Increase transparency about environmental impacts and risk by supporting platforms for data management and information disclosure

Figure 9. Transformative actions companies can take across their spheres of influence and control to contribute toward a nature-positive future.

Step 4: ACT | *illustrative example*

To deliver on her company's targets, Paola and her team identify the following as options for action.

Land/water/sea use change:

- Throughout Ursus's value chain (including direct operations, manufacturing), they make a commitment to avoid any further conversion of terrestrial, freshwater, or marine/coastal ecosystems. This will contribute toward Ursus's value chain-wide land use targets, as well as site-specific targets on freshwater and marine ecosystem use. To begin acting on this target, Paola starts to learn about how Ursus can contribute to jurisdictional efforts in three of her key sourcing areas.
- In sourcing sites within Ursus's value chain, they make a commitment to explore regenerative agricultural practices in partnership with suppliers. As a starting point, they set out to work with experts and local stakeholders to determine which of the following practices could be appropriate, and then set initial and long-term targets. Practices they've identified for supplier engagement include no/reduced till, increasing cover crops, afforestation and restoration in marginal/degraded areas, agroforestry, silvopasture, riparian restoration to filter pesticide residues, intercropping, and under-sowing.

Resource exploitation:

- Water withdrawal limits can be adjusted for seasonal availability. Experimentation with new technologies can increase efficiency of use.

Climate change:

- Ursus contracts renewable energy for 100% of production facilities and pursues aggressive energy efficiency and conservation, including through employee engagement. For their value chain, they initiate a fund for research and development into new technologies and practices that can be deployed throughout the value chain, working with local universities in Spain.

Pollution:

- Though Ursus's pollution targets are site-specific, they decide to set a value chain-wide commitment to avoid use of particularly harmful chemicals in agriculture, processing, and manufacturing. They take a value chain-wide approach so that Ursus is able to support its suppliers in buying less-toxic alternatives and to use a consistent approach to enforcement.

DIRECT OPERATIONS

Paola's team resolves to take the following "transform" actions within their sphere of control/direct operations in order to increase overall positive impact (across the target areas above):

- start an educational/training program for employees on nature in the context of their business operations
- allocate sufficient resources and create the infrastructure (like staff, monitoring equipment) needed to achieve their environmental goals
- conduct an internal evaluation of their business model to see how it can contribute positively toward the Earth and human well-being

VALUE CHAIN

Transform actions they take within their value chain that will support their delivery on a number of different targets include the following:

- requiring suppliers to collect standardized environmental metrics to improve data availability on environmental impacts and to encourage better environmental performance

VALUE CHAIN-ADJACENT AREAS

Transform actions they will take within value chain-adjacent areas include the following:

- lobbying local and national governments in key countries to match Ursus's financial support to landscape-level or jurisdictional initiatives in key sourcing areas

SYSTEMS

Transform actions they can take at the systems level to magnify impact include the following:

- align policy lobbying with public sustainability goals at multiple levels; e.g., lobby local and national governments to adjust regulations around integrated water management
- join industry-wide coalitions working on sustainability issues like One Planet Business for Biodiversity (OP2B), to work with like-minded companies to create positive pressures on suppliers to adjust their practices and to work together to improve data availability

5
TRACK

2.6 Step 5: Track

To set SBTs, companies need practical and appropriate indicators and their alignment to Earth's limits and societal sustainability goals (see Section 1.4). At the same time, their internal and external stakeholders—investors, civil society, the general public, and others—need to understand companies' targets, the actions taken to achieve them, and progress toward meeting them. This is the role of monitoring, reporting, and verification (MRV; see box). Over the coming two years, we will continue to refine our proposed indicator framework (see Section 2.4) in partnership with consultancies, financial institutions, civil society, and reporting initiatives to develop a system for monitoring actions, reporting on targets, and verifying progress that pulls from and supplements existing sustainability target setting. This system will increase transparency, facilitate cooperation, and improve data availability so that both companies and their stakeholders will have a better understanding of a contextualized environmental performance.

While this measurement framework is not yet finalized, we have included a section on the principles related to measurement (see Section 2.4.1) for companies getting started today. It is important to note that MRV-related activities occur throughout the SBT-setting process:

- First, while measuring impacts and dependencies on nature (Step 1),
- Next, while deciding which locations to prioritize (Step 2),
- Then, while collecting baseline data and disclosing this when targets are set (Step 3),
- Throughout the process of acting on your SBTs for nature (Step 4), companies will track and report on their progress (Step 5).

Table 9 shows the types of MRV activities that occur in each time period, and these activities are further described below and in Technical Annex TA4.

Depending on the type of targets that have been defined and the scale (e.g., site versus value chain) at which they apply, appropriate monitoring and measurement approaches will vary. Further, the different types of actions associated with Step 4—avoid, reduce, regenerate, restore, and transform—will likely require different types of targets and indicators; targets focused on reducing impacts, such as fish depletion rates or pollution reductions, require different indicators than targets for restoring and regenerating nature. In line with the proposed measurement framework, we envision that the mix of indicators for some companies and issue areas will include a mix of state monitoring at site level, pressure reduction targets at site or company level, and additional response targets, such as for restorative and regenerative activities.

Some new indicators and measurement techniques will be required, given the limited focus of such standards to date on key aspects of nature. Further details are shown in the Technical Annex TA8.

Similar to Step 1: Assess, two major types of monitoring can be distinguished: (1) observations using primary data and (2) collection of secondary data (e.g., estimates using modeling techniques). The selection of the most appropriate monitoring and measurement approaches entails trade-offs between practicality and robustness. In some cases, companies may be able to make use of public monitoring systems such as remote sensing or Earth observation systems (e.g., stream gauges, land cover satellites), whereas in others, the company itself will likely have to devise a monitoring system.

The Science-Based Targets initiative's Call to Action can serve as an example of potential MRV requirements associated with SBTs for nature. It is particularly relevant for any companies looking to set SBTs for climate as part of their journey toward becoming nature-positive. In the call, SBTi outlines monitoring and reporting criteria related to boundaries, timeline, reporting frequency, and ambition level. At the same time, we recognize that MRV systems for climate change (accounting standards, reporting platforms, third-party verifiers) are all more advanced for climate than for nature. This represents both challenges for SBTs and an opportunity to develop the system with SBTs in mind directly.

Tracking progress definitions

Monitoring
tracking progress towards targets.

Measurement
the process of collecting data for baseline setting, monitoring and reporting

Reporting
preparing of formal documentation typically connected to desired objectives, outcomes or outputs, such as those connected to targets and goals

Validation
an independent process involving expert review to ensure target meets required criteria and methods of science-based targets

Verification
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

	MONITORING	REPORTING	VERIFICATION
Submission of targets **(Steps 1, 2, and 3)**	SBTN requires that targets be traceable so that we can observe how actions influence the attainment of corporate objectives and the associated pressure on or state of the environment (see Section 2.4).	At the time of target setting, disclosed targets should be expressed using contextual information (on the company, sites of operations) to provide framing for planned actions [see GRI 103]. Intended targets should be reported using both a baseline value and the target value of the indicator, including any interim target levels. Targets should be accompanied by a description of expected intervals (often annual) for verifying progress. Targets should be accompanied by a description of the indicators used, including relevant standards. Reporting should be public, allowing verification by stakeholders.	Independent verification should be used to assure the company's process used for value chain mapping and materiality assessment (SBT Step 1), prioritizing locations for action (SBT Step 2), collecting baseline data (SBT Step 3) and setting targets (SBT Step 3).
Acting and tracking progress **(Steps 4 and 5)**	Target progress should be monitored regularly, with the frequency appropriate for each target determined in part by the indicator. For instance, quarterly may be appropriate for some (e.g., water use or pollution discharge), annual for others (e.g., ecosystem intactness) and every three to five years for others (e.g., species abundance).	Progress made toward the target should be reported publicly, including: • actions taken to meet target, by location • progress from baseline performance and "on track" assessment • adaptive management actions in case of "not on track," built on a clear narrative • limitations of targets and/or data collection processes • explanations of any changes to targets, indicators and monitoring plans	Independent verification of progress toward targets should be sought out.

Table 9. Draft monitoring, reporting, and verification (MRV) requirements for SBTs for nature.

Transparent reporting that allows for the verification of a sound assessment and of progress against targets is essential. As in the discussion above, third-party verification can help ensure credibility. As emphasized in Table 9, we expect that reporting requirements for SBTs for nature will cover both the process and context of target setting and quantitative progress to target. Final reporting guidance will be available in 2021–2022 and will align with existing principles of public reporting; see for instance the Task Force on Climate-related Financial Dislosure's (TCFD) principles for reporting and the evolving work of the Task Force on Nature-related Financial Disclosures (TNFD).

A particular concern for SBTN is reporting burden. We recognize that companies are challenged to report on a wide variety of sustainability issues in different platforms and formats. We are thus particularly interested in the alignment of SBT indicators to existing or future reporting and accounting standards, some of which are currently being enshrined as mandatory reporting policies. As much as possible, we will ensure alignment with existing reporting standards, such as GRI, IFC, and the EU Non-Financial Reporting Directive, as well as with environmental data aggregators like CDP.

ursus NOURISHMENT

Step 5: TRACK | *illustrative example*

Fast-forward to the end of year one. Paola and her team have been hard at work.

- Some methods for monitoring are proving too onerous, so they are exploring new options that allow them to use secondary data. As part of their annual report, they begin preparing a statement to explain the shift.
- They are learning that in places where they have been able to work with local stakeholders—community members and locally operating companies—they are closer to achieving targets (e.g., on restoration, zero conversion) than in those where such relationships have not yet been established.
- Impending policy changes in the USA and Brazil mean that environmental standards are about to become more stringent; while Paola and her team made sure to have ambitious policies in place from the beginning, they up their ambition levels so they can remain ahead of the curve.
- New developments in the disclosure standards shake up the food and beverage sector. Because they have been working with SBTN, Paola's team has been tracking the developments of the Task Force for Nature-related Financial Disclosures (TNFD) and have been using tools for impact assessment that are already in line with the emerging practice. Now that their investors and shareholders are beginning to ask about these issues, Ursus is ahead of the curve.

2.7 Spotlight on the work inside SBTN

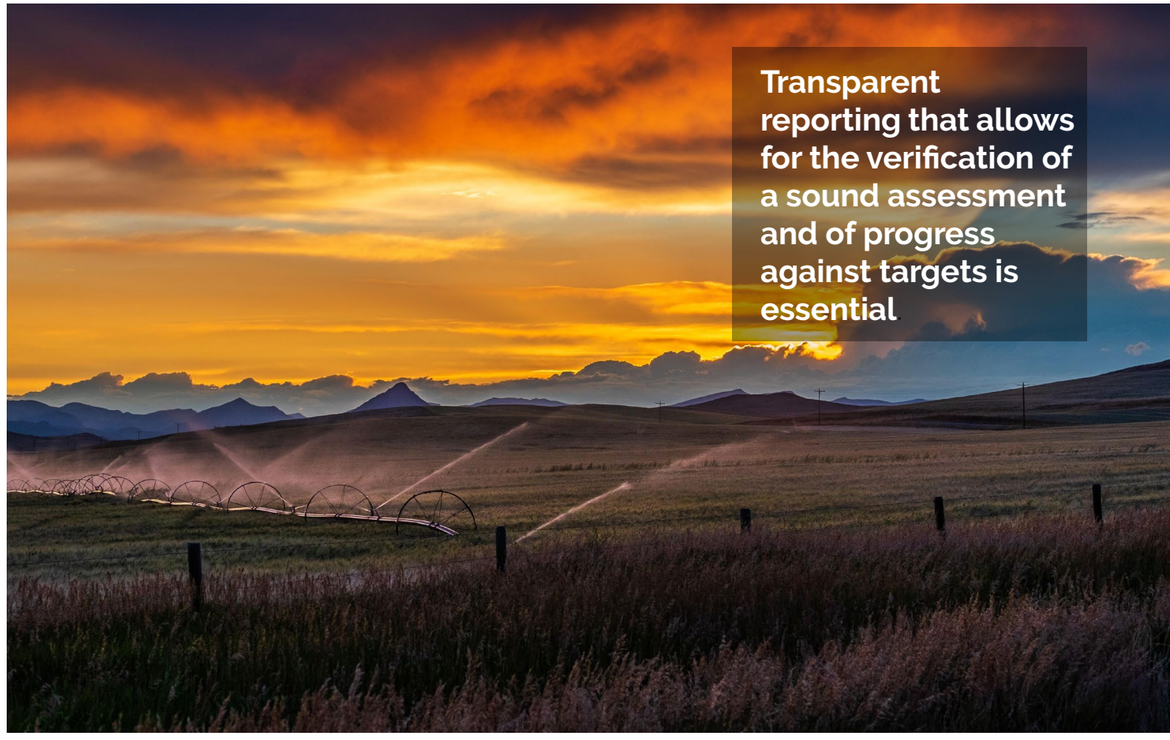
The experts who make up the Science Based Targets Network are organized into Hubs organized by realm—land, ocean, and water; and by issue—biodiversity and climate. Explore the boxes at right to learn more about SBTN's Hubs and their work.

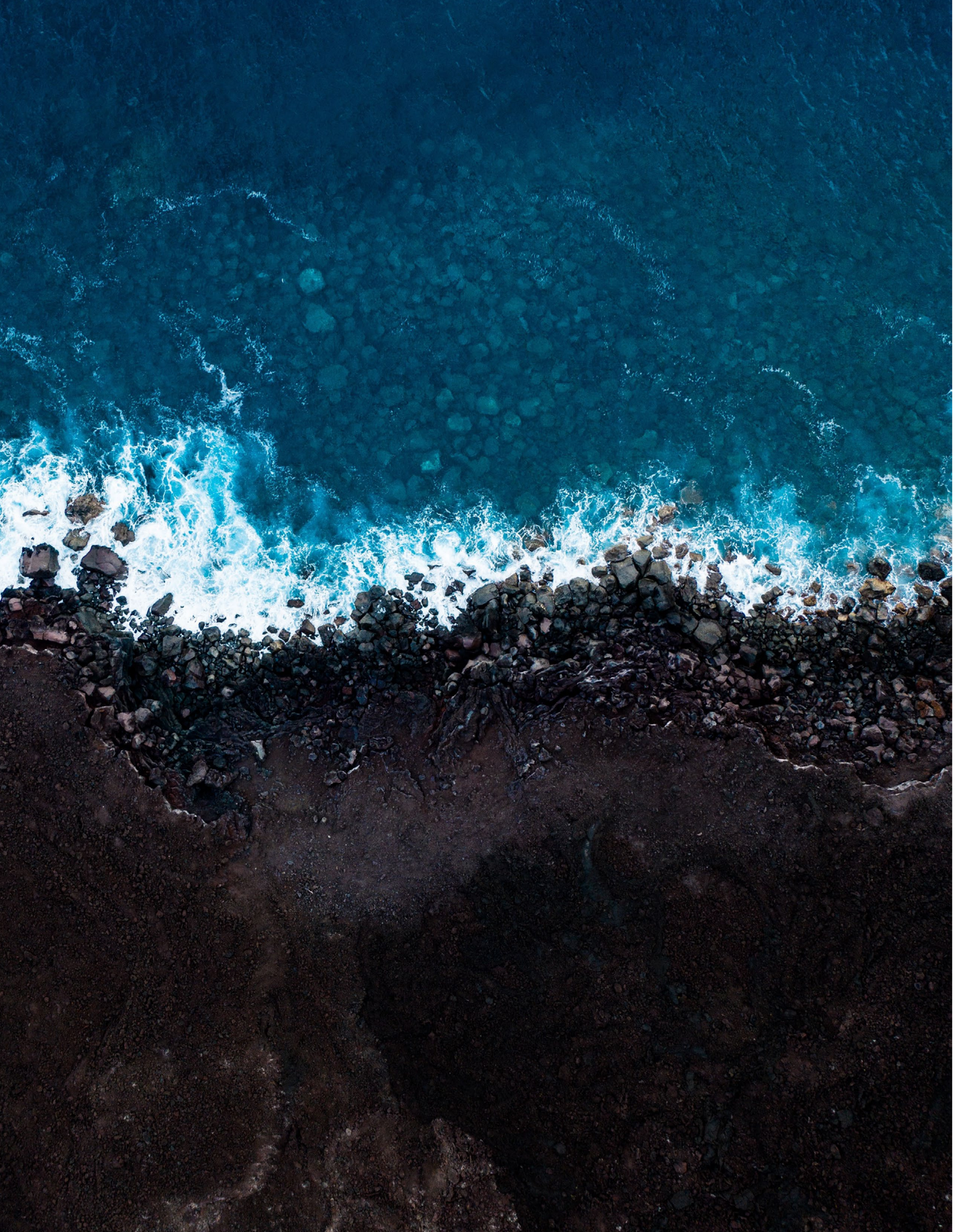
CLICK HERE FOR MORE INFORMATION ON WATER

CLICK HERE FOR MORE INFORMATION ON OCEANS

CLICK HERE FOR MORE INFORMATION ON LAND

CLICK HERE FOR MORE INFORMATION ON BIODIVERSITY





What next?

3.1 A call to action

This guidance lays out a common framework for action for companies from across different industries and geographical regions. A common framework for action is essential to resolve a number of system-wide problems that have limited the effectiveness of environmental and sustainability efforts to date. These system-wide problems include:

- Organizations thinking about themselves and functioning as solitary actors
- Organizations attempting to address interconnected issues in isolation
- Organizations being unable to account for the actions being taken by actors at different scales/across different places

These problems are creating

- unintended consequences that often negatively impact (or generate externalities for) other actors in the system (e.g., a company polluting the watershed upon which its factory's laborers and their families depend)
- perverse outcomes across environmental issue areas (e.g., pursuing "solutions" for climate that might harm biodiversity)
- inaccurate assessments of how much action needs to be taken, and by whom (this adds hurdles to the process of prioritizing between issue areas; it is particularly relevant for companies that sit at the "end" of complex global value chains and are reliant on many tiers of intermediary suppliers)
- a proliferation of initiatives, increased workload for all, and the potential for duplicated effort

In uniting under the SBTN, more than 45 organizations have agreed to work together to address these systemic challenges. We are continuing to expand our coalition to increase cooperation and reduce the complexity of sustainability efforts globally. Going forward, we intend to expand our network to include members of the investment and financial community such that SBTs are made a standard component of ESG assessment frameworks.

As we develop detailed methods and tools, SBTN is working to align methods and goals with existing SBTi guidance, particularly in sectors with high climate and nature impacts. For example, SBTN is working to align with SBTi's Forests, Land, and Agriculture (FLAG) project. This will ensure a streamlined target-setting process for companies, as well as help to promote thoughtful implementation of nature-based solutions that can deliver on societal objectives for both climate and nature. If your company has already set SBTs for climate, this is the time to consider SBTs for nature to maximize effectiveness. If your company has not yet set SBTs for climate, you should do so now.

We have begun to identify how science-based target setting will add value to existing business initiatives. In this guidance, we introduce a draft framework for tracking corporate progress on targets for nature that is connected to both existing corporate reporting frameworks, and frameworks for tracking progress on societal sustainability goals like the SDGs and CBD (see Technical Annex TA4.1). As targets related to the CBD Post-2020 Global Biodiversity Framework emerge over the coming months, we will identify relevant indicators for tracking these, including targets on biodiversity and nature's contributions to people.

With this guidance, we lay the foundations for a common language that conveys the direction in which all businesses must begin to move together to create what is being defined as a 'nature-positive' economy.

Table 10. How does this guidance prepare companies to set science-based targets?

		2020		2022	
		What SBTN is providing in this guidance	**What companies can do now**	**What SBTN will aim to provide with future products**	**What companies can do in 2022**
1	ASSESS	• Preliminary decision tree and tools for completing materiality and value chain mapping	• Conduct a hotspot assessment of your value chain • Gather spatial data for high-impact features of your operations (facilities or inputs)	• Final decision tree guidance • Tools repository aligned with decision tree • Materiality screening tool • Interface for reporting value chain data	• Conduct a full value chain and materiality assessment, supported by digital tools
2	INTERPRET & PRIORITIZE	• Preliminary guidance and criteria for prioritization	• Begin prioritizing locations for action and value chain partners for collaboration • Begin mapping and working with stakeholders in locations key for action	• Prioritization and boundary setting guidance • With support from the Earth Commission, target setting guidance that incorporates a dual lens of safety and justice	• Refresh your prioritization of locations and value chain partners for action • Align issue areas and ambition levels with needs of global and local stakeholders
3	MEASURE BASELINE & SET TARGETS	• Initial proposed impact areas and indicator framework	• Measure baselines for well-established indicators • Pilot emerging indicators and measurement techniques • Set SBTs for climate	• Final indicator framework • Measurement guidance and/or standards across issue areas	• Complete baseline measurement and SBT setting for all nature-related issue areas
4	TAKE ACTION	• The SBT for nature action framework: avoid, reduce, regenerate, restore, transform (AR³T) • Guidance on types of action that can be taken	• Commit to high-level corporate goal for nature • Begin action planning for nature • Take "no regrets" actions	• Refinements to our action framework (AR³T) • Guidance on how to increase synergies and decrease trade-offs across targets	• Develop and implement synergistic and science-based action plans for nature that can deliver on multiple objectives, e.g. for climate and land, biodiversity and water availability
5	TRACK PROGRESS	• Initial guidance on types of monitoring and potential reporting options	• Disclose results of materiality and value chain assessment through your own reporting • Disclose baseline data for targets through your own reporting • Begin trialing monitoring methods	• Final monitoring and verification framework • Interface for reporting targets and progress	• Monitor progress across your value chain • Upload data on your progress to a shared interface that tracks the targets and progress of your collaborators and peers

3.2 What's next from SBTN?

Starting in late 2020, we will begin

- road testing with companies to ensure practicality
- developing tools to provide companies support in the SBT-setting process
- working with cities/urban actors to scale uptake and catalyze systems change

By 2022, we aim to provide companies with

- methodologies and tools for integrated target setting, in line with the best available science, to optimize synergies and trade-offs across issue areas and between factors of safety and justice
- a system for validation of corporate targets, guidance on target wording and claims, and a platform for targets and action plans disclosure

By the end of 2022, SBTN aims to have secured significant public- and private-sector commitments that will have the potential to transform and contribute measurable progress to the SDGs across the climate, development, and nature agendas. By 2025, we aim to have widespread adoption of SBTs for nature (water, land, ocean, and biodiversity). These are essential steps on the pathway toward a nature-positive future (see Section 1.4).

3.3 What can you do today?

In Table 10, we summarize how this report prepares companies to set science-based targets for nature.

Why start now? You shouldn't wait until the methods are finalized in 2022 to take action:

Nature can't wait. With scientists telling us we have a decade to halt and reverse current trends in climate change and nature's decline, we must do everything we can now.

Know what lies ahead. If you are interested in going down this path, it is advantageous for you to know what lies ahead by digging into the guidance today.

Preparing to set SBTs for nature takes time. Steps involved in setting SBTs may take time and require early planning—e.g., data collection involved in Step 1: Assess.

Save money. Based on draft guidance, you may be able to start making changes that will save you money in the long run.

Help shape products available to companies setting SBTs for nature. By starting your journey now, you can share your experiences with us and help actively shape our product and tool development.

Build credibility. By becoming an early partner with SBTN, you may build credibility with customers, employees, regulators, and investors.

To summarize the guidance, "no regrets" actions companies can take today include the following:

Engage with SBTN to develop and finalize methods

1. Register on our website.
2. Formally engage with SBTN so that you can test our tools, methods, and guidance.
3. Share your experiences testing our guidance with us, through use cases we can publish on our website.

Begin gathering data

4. Use recommended tools to gather data on your value chain impacts and dependencies, particularly spatial information, which is key for the hotspot assessment (see Section 3.2).
5. Collaborate with stakeholders within your value chain or the landscapes/seascapes where you operate in order to collect data.

Where possible, measure and set targets

6. Measure your impacts and dependencies on nature with proposed indicators, and disclose them (see Sections 3.2 and 3.4).
7. Set SBTs or ambitious targets where methods already exist (e.g., for climate, land use change, and water, see Section 2.4.4).
8. Integrate SBTN's principles for target implementation into your operations to the extent possible (see Section 2.5).

Start transforming your business

9. Commit to an ambitious, high-level goal for nature at your company.
10. Support nature-friendly policy by committing to businessfornature.org.

SCIENCE BASED TARGETS NETWORK
GLOBAL COMMONS ALLIANCE

NOTES

1. Note that monetary value is only one way of capturing the worth of goods and services provided by nature to humans. See Pascual et al. (2017) for insights on the different ways to understand and assess the value of nature and its contributions to people.
2. PwC's analysis of dependency assigned scores to sectors based on the number of individual dependencies of each sector, the mean strength of those dependencies, and the maximum strength of any individual dependency. See Annex A of WEF's New Nature Economy report.
3. The full period covered by the Global Assessment is 1970–2050, with years in the future covered by models.
4. Our proposed approach for setting science-based targets for nature is based on a variation of the conceptual framework put forward by IPBES for understanding humanity's impact on nature. We note that IPBES uses the term "indirect drivers" where we use the term "drivers," and IPBES the term "direct drivers" where we use the term "pressures"—see more details in the glossary. We have used the pressures identified by IPBES to organize the materiality assessment (Section 2.2) and draft measurement framework (Section 2.4), while the drivers identified by IPBES serve to orient our understanding about a strategy for transformative action (Section 2.5.4).
5. We acknowledge that the distinction between man and nature, and between the "built world" and the "natural world" is in many ways a false dichotomy. The human economy is embedded within—not external to—nature (Dasgupta et al. 2020). The framing and phrasing in this document reflect the current state of public opinion and common ways of thinking, though we will challenge outdated notions where necessary.
6. The risks of climate change are connected to and in some cases fueling the loss of biodiversity, water crises, and threats to human health. Inversely, the loss of biodiversity is in some cases fueling the rate of climate change, decreasing ecosystems' ability to regulate the water flows, and increasing human vulnerability in the face of these changes.
7. SBTs are considered voluntary until the point at which they are embedded in binding, enforceable regulation at the international or national level. .
8. The Emissions Gap for 2030 was estimated as between 18-24 Gt CO2e/year for an ambition of "well below 2°C" or below 1.8°C (UNEP 2019).
9. Although we acknowledge that the SDGs are considered an "integrated and indivisible" framework for action, the early phases of work carried out by the SBTN (2020–2022) will focus primarily on SDGs 6, 12, 13, 14, and 15.
10. These represent two of the four high-level goals of the UNCBD's draft framework (A and B).
11. Note that loss occurs over different time scales. If recoverable, some ecosystem services or capital stocks may take a few years to re-establish at healthy levels; others may take a few generations, and others may take centuries.
12. See our website—www.sciencebasedtargetsnetwork.org—for more details.
13. Following Managing Directors from BCG, "The model of companies as economic islands that independently maximize financial value extraction is becoming obsolete" (Young & Reeves 2020).
14. In particular, there are key opportunities for multiple benefits of data collection for companies beginning to disclose using GRI's latest standard, GRI 306: Waste 2020, which asks companies to gather data associated with specific value chain sites and geographical locations. See more here: https://www.globalreporting.org/standards/gri-standards-download-center/.
15. Currently, we are limited in the amount of support we can give companies for downstream assessment, however, we are working with partners to develop tools companies can use for this analysis.
16. This can be done using data originally gathered for a different purpose/study, or modeled data, per the Natural Capital Protocol. Examples include past assessments, published or gray literature, and modeling techniques.
17. Emphasis on "first"—SBT setting is an iterative process. Companies should expect to revisit their targets every three to five years, and to set out interim objectives and indicators so that they can track their progress along the way.
18. There are many terms that refer to the unintended consequences of environmental resource interventions, including impact or load displacement, leakage, rebound effects, slippage, spillovers, transfer effects, and unequal ecological exchanges.
19. This explicitly includes actions that would be classed as 'compensation' under the mitigation hierarchy or conservation hierarchy.
20. Permeability refers to the degree to which a landscape sustains ecological processes and supports movement of many species by virtue of the structural connectedness of its natural systems (Meiklejohn et al. 2010).
21. Many have asked how SBTN is planning to cover offsets. At the moment, we refer companies to the IUCN's Global Inventory of Biodiversity Offset Policies (https://portals.iucn.org/offsetpolicy/), noting this is a topic that does not have global agreement.
22. For further reading, see Folke et al. (2019) and Osterblom et al. (2017).

Abbreviation	Definition
AR^{3}T	Avoid, Reduce, Regenerate, Restore, Transform
EEIO	Environmentally extended input-output
ESG	Environmental, social, and governance
GCA	Global Commons Alliance
GHG	Greenhouse gas
GICS	Global Industry Classification Standard
GRI	Global Reporting Initiative
IFC	International Financial Corporation
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
KBA	Key Biodiversity Area
LCA	Life cycle assessment
MRV	Monitoring, reporting, verification, validation
NCP	nature's contributions to people
NPP	Net primary production
SASB	Sustainability Accounting Standards Board
SBTi	Science-Based Targets initiative
SBTN	Science Based Targets Network
SBTs	Science-based targets
SDG	Sustainable Development Goals
STAR	Species Threat Abatement and Recovery
TCFD	Task Force on Climate-related Financial Disclosures
TNFD	Task Force on Nature-related Financial Disclosures
UNCBD	Convention on Biological Diversity
UNCCD	Convention to Combat Desertification
UNFCCC	Framework Convention on Climate Change

Resources

- Additional content building on the guidance is available in the Technical Annexes.
- A short list of the key terms introduced in the guidance is available in the glossary.
- Additional information about the business benefits can be found in our Business Benefits document.
- This document builds on a large amount of previous work, including scientific publications, corporate sustainability reports and frameworks, and broader reports. A small subset of additional reading for the interested reader/practitioner is available in the additional reading in Technical Annex TA9.

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Citations

Burgess P., J. Harris, A. Graves, L. Deeks. (2019). Regenerative Agriculture: Identifying the Impact; Enabling the Potential. Report for SYSTEMIQ. Bedfordshire, UK: Cranfield University. https://www.foodandlandusecoalition.org/wp-content/uploads/2019/09/Regenerative-Agriculture-final.pdf

Dasgupta et al. (2020). The Dasgupta Review-Independent Review on the Economics of Biodiversity (Interim Report). https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/882222/The_Economics_of_Biodiversity_The_Dasgupta_Review_Interim_Report.pdf

Folke, C., H. Österblom, J. Jouffray, E.Lambin, W. Adger, M. Scheffer, B. Crona, M. Nyström, J. Anderies, S. Carpenter, S. Chapin III, A. Crépin, A. Dauriach, V. Galaz, L. Gordon, N. Kautsky, S. Levin, B. Walker, J. Watson, J. Wilen, and A. de Zeeuw. (2019). Transnational corporations and the challenge of biosphere stewardship. Nature Ecology and Evolution. 3: 1396–1403. https://www.nature.com/articles/s41559-019-0978-z

Henderson, R. (2020). Reimagining Capitalism in a World on Fire. PublicAffairs.

Herweijer, C., S. Mariam, and W. Evison. (2020, March 04). The hidden risks nature loss poses for businesses. https://www.weforum.org/agenda/2020/03/hidden-risks-of-nature-loss-for-businesses/.

IPBES. (2016). The assessment report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services on pollinators, pollination and food production. S.G. Potts, V. L. Imperatriz-Fonseca, and H. T. Ngo (eds). Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Bonn, Germany. https://ipbes.net/sites/default/files/downloads/pdf/2017_pollination_full_report_book_v12_pages.pdf

IPBES. (2019a). Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (editors). IPBES secretariat, Bonn, Germany. https://ipbes.net/global-assessment

IPBES. (2019b). Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. S. Díaz, J. Settele, E. S. Brondízio E.S., H. T. Ngo, M. Guèze, J. Agard, A. Arneth, P. Balvanera, K. A. Brauman, S. H. M. Butchart, K. M. A. Chan, L. A. Garibaldi, K. Ichii, J. Liu, S. M. Subramanian, G. F. Midgley, P. Miloslavich, Z. Molnár, D. Obura, A. Pfaff, S. Polasky, A. Purvis, J. Razzaque, B. Reyers, R. Roy Chowdhury, Y. J. Shin, I. J. Visseren-Hamakers, K. J. Willis, and C. N. Zayas (eds.). IPBES secretariat, Bonn, Germany. https://ipbes.net/sites/default/files/2020-02/ipbes_global_assessment_report_summary_for_policymakers_en.pdf

IPBES. (2019c). Initial scoping report for Deliverable 1(c): A thematic assessment of the underlying causes of biodiversity loss and the determinants of transformative change and options for achieving the 2050 Vision for Biodiversity. IPBES 7 (April/May 2019, Paris). https://ipbes.net/sites/default/files/Initial_scoping_transformative_change_assessment_EN.pdf

IPCC. (2012). Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. https://www.ipcc.ch/site/assets/uploads/2018/03/SREX_Full_Report-1.pdf

IPCC. (2018). Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [V. Masson-Delmotte, P. Zhai, H. O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J. B. R. Matthews, Y. Chen, X. Zhou, M. I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, T. Waterfield (eds.)]. In Press. https://www.ipcc.ch/sr15/

IPCC. (2019a). Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.-O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.)]. In press. https://www.ipcc.ch/srccl/

IPCC. (2019b). IPCC Special Report on the Ocean and Cryosphere in a Changing Climate [H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)]. In press. https://www.ipcc.ch/srocc/

IUCN. (2020). Global Standard for Nature-based Solutions. A user-friendly framework for the verification, design and scaling up of NbS. First edition. Gland, Switzerland: IUCN. https://portals.iucn.org/library/sites/library/files/documents/2020-020-En.pdf

Lammerant, J., A. Grigg, J. Dimitrijevic, K. Leach, S. Brooks, A. Burns, J. Berger, J. Houdet, M. Van Oorschot, and M. Goedkoop. (2019). Assessment of Biodiversity Measurement Approaches for Businesses and Financial Institutions. EU Business @ Business Platform. https://ec.europa.eu/environment/biodiversity/business/assets/pdf/European_B@B_platform_report_biodiversity_assessment_2019_FINAL_5Dec2019.pdf

Mace, G., M. Barrett, N. Burgess, S. Cornell, R. Freeman, M. Grooten, and A. Purvis. (2018). Aiming Higher to Bend the Curve of Biodiversity Loss. Nature Sustainability. 1: 448–451. https://www.nature.com/articles/s41893-018-0130-0

Meiklejohn, K., R. Ament, and G. Tabor. (2010). Habitat Corridors & Landscape Connectivity: Clarifying the Terminology. Center For Large Landscape Conservation. https://www.wildlandsnetwork.org/sites/default/files/terminology%20CLLC.pdf

Moss, K. (2020, April 09). The Coronavirus Pandemic Could Give Business Leaders a Broader Mandate for Sustainability. World Resources Institute. https://www.wri.org/blog/2020/04/coronavirus-pandemic-could-give-business-leaders-broader-mandate-sustainability

Naturvation. Review of Economic Valuation of Nature-based Solutions in Urban Areas. Briefing Note. https://wwfeu.awsassets.panda.org/downloads/naturvation_briefing_paper___economic_value_of_nbs.pdf

Obura, D. (2020). Getting to 2030 - Scaling effort to ambition through a narrative model of the SDGs. Marine Policy. 117: 103973. https://www.sciencedirect.com/science/article/pii/S0308597X19309340

Österblom, H, J. Jouffray, C. Folke, and J. Rockström. (2017). Emergence of a global science-business initiative for ocean stewardship. Proceedings of the National Academy of Sciences. 114 (34): 9038-9043. https://www.pnas.org/content/114/34/9038

Pascual, U., P. Balvanera, S. Díaz, G. Pataki, E. Roth, M. Stenseke, R. Watson, E. Dessane, M. Islar, E. Kelemen, V. Maris, M. Quaas, S. Subramanian, H. Wittmer, A. Adlan, S. Ahn, Y. Al-Hafedh, E. Amankwah, S. Asah, P. Berry, A. Bilgin, S. Breslow, C. Bullock, D. Cáceres, H. Daly-Hassen, E. Figueroa, C. Golden,

E. Gómez-Baggethun, D. González-Jiménez, J. Houdet, H. Keune, R. Kumar, K. Ma, P. May, A. Mead, P. O'Farrell, R. Pandit, W. Pengue, R. Pichis-Madruga, F. Popa, S. Preston, D. Pacheco-Balanza, H. Saarikoski, B. Strassburg, M. van den Belt, M. Verma, F. Wickson and N. Yagi. (2017). Valuing nature's contributions to people: the IPBES approach. Current Opinion in Environmental Sustainability. 26-27: 7-16. https://www.sciencedirect.com/science/article/pii/S1877343517300040

Paulson, H. (2020, Sept. 08). We Need a New Asset Class of Healthy Soils and Pollinators. Financial Times. www.ft.com/content/f04fc37b-f5ba-4a17-b964-ebd7ee3e8f1f?fbclid=IwAR1g79vuZJW-KSVBd6F-rO9MpBdcrFI5T4mTenar-WuTVNkGEbRNAnsJcGU.

Phipps, L. (2018, August 22). How Philips became a pioneer of circularity-as-a-service. GreenBiz. https://www.greenbiz.com/article/how-philips-became-pioneer-circularity-service

Pimm, S. L., Jenkins, C. N., Abell, R., Brooks, T. M., Gittleman, J. L., Joppa, L. N., Raven, P. H., Roberts, C. M., & Sexton, J. O. (2014). The Biodiversity of Species and their Rates of Extinction, Distribution, and Protection. Science. (New York, N.Y.). 344(6187): 1246752. https://science.sciencemag.org/content/344/6187/1246752
Power, M. (2018). Accounting, boundary-making and organizational permeability. Research in the Sociology of Organizations. 57: 31-53. http://eprints.lse.ac.uk/88111/1/

Power_Organizational%20Permeability_Accepted.pdf

SBTi. (2019). Raising the Bar: Exploring the Science Based Targets initiative's progress in driving ambitious climate action. https://sciencebasedtargets.org/wp-content/uploads/2019/12/SBTi-Progress-Report-2019-FINAL-v1.2.pdf

Rockström, J. & P. Sukhdev. (2016). How food connects all the SDGs. Stockholm EAT Food Forum. https://www.stockholmresilience.org/research/research-news/2016-06-14-how-food-connects-all-the-sdgs.html

Rockström, J., W. Steffen, K. Noone, Å. Persson, F. S. Chapin, III, E. Lambin, T. M. Lenton, M. Scheffer, C. Folke, H. Schellnhuber, B. Nykvist, C. A. De Wit, T. Hughes, S. van der Leeuw, H. Rodhe, S. Sörlin, P. K. Snyder, R. Costanza, U. Svedin, M. Falkenmark, L. Karlberg, R. W. Corell, V. J. Fabry, J. Hansen, B. Walker, D. Liverman, K. Richardson, P. Crutzen, and J. Foley. (2009). Planetary boundaries: exploring the safe operating space for humanity. Ecology and Society. 14(2): 32. https://www.ecologyandsociety.org/vol14/iss2/art32/

Steffen, W., K. Richardson, J. Rockström, S. Cornell, I. Fetzer, E. Bennett, R. Biggs, S. Carpenter, W. de Vries, C. de Wit, C. Folke, D. Gerten, J. Heinke, G. Mace, L. Persson, V. Ramanathan, B. Reyers, and S. Sörlin. (2015). Planetary boundaries: Guiding human development on a changing planet. Science. 347(6223): 1259855. https://science.sciencemag.org/content/347/6223/1259855

The Club of Rome. (2020). Planetary Emergency 2.0 Securing a New Deal for People, Nature and Climate. https://clubofrome.org/wp-content/uploads/2020/08/COR-PEP_Aug2020_A4_16pp-digital-1.pdf

United Nations Environment Programme. (2019). Emissions Gap Report 2019. https://wedocs.unep.org/bitstream/handle/20.500.11822/30797/EGR2019.pdf?sequence=1&isAllowed=y

World Economic Forum. (2020a). The Global Risks Report 2020. http://www3.weforum.org/docs/WEF_Global_Risk_Report_2020.pdf

World Economic Forum. (2020b). Toward Common Metrics and Consistent Reporting of Sustainable Value Creation. http://www3.weforum.org/docs/WEF_IBC_ESG_Metrics_Discussion_Paper.pdf

World Economic Forum. (2020c). Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy, http://www3.weforum.org/docs/WEF_New_Nature_Economy_ Report_2020.pdf

World Economic Forum. (2020d). New Nature Economy Report II The Future Of Nature And Business. http://www3.weforum.org/docs/WEF_The_Future_Of_Nature_And_Business_2020.pdf

WWF. (2019a). The Nature of Risk A Framework for Understanding Nature-Related Risk to Business. https://c402277.ssl.cf1.rackcdn.com/publications/1255/files/original/WWF_Nature_of_Risk.FINAL2.pdf?1568216828

WWF. (2019b). Climate, Nature and our 1.5°C Future A synthesis of IPCC and IPBES reports. https://wwfeu.awsassets.panda.org/downloads/wwf_climate__nature_and_our_1_5c_future_report.pdf

WWF & Proforest. (Forthcoming 2020). Landscape-level action on forest and natural ecosystem conversion: A how-to guide for companies. https://jaresourcehub.org/wp-content/uploads/2020/09/JA-Practical-Guide.pdf

Young, D., & M. Reeves. (2020, March 10). The Quest for Sustainable Business Model Innovation. Boston Consulting Group. https://www.bcg.com/publications/2020/quest-sustainable-business-model-innovation

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