SCIENCE BASED TARGETS NETWORK
GLOBAL COMMONS ALLIANCE

SCIENCE-BASED TARGETS for NATURE

An overview for companies

Who we are

Science Based Targets Network is setting the standard for ambitious measurable corporate action on nature, which includes, and builds upon, climate action.

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Explore our technical guidance through our target-setting guide

The Science Based Targets Network (SBTN) is a unique collaboration of over 80 leading global environmental non-profits, international agencies and mission-driven entities; a collective of the world's leading scientists and sustainability experts.

We have come together to equip companies and cities with the guidance, tools and methods they need to operate within Earth's limits while also meeting society's needs.

The SBTN is one of five components that make up the Global Commons Alliance (GCA). GCA is a network of forward looking organizations working to ensure that societies and the global economy thrive, sustained by healthy global commons, on a stable planet.

Through its components, GCA has identified safe and just Earth System Boundaries for humanity, created the first related science-based targets for the global commons, and is building the advocacy, accountability and information systems to take this to scale.

Our collective mission is to empower citizens, cities, companies, and countries to become stewards of our global commons.

"

With its ground-breaking first targets for freshwater and land use, the SBTN is bringing nature into the board room.

Nikki Bartlett, Chief Impact Officer, CDP

Hear from SBTN

Our mission

Watch video: https://www.youtube.com/watch?v=FG1iFJvnrNI

Power of our network

Ani Dasgupta, President & CEO, World Resources Institute; Watch video: https://www.youtube.com/watch?v=mcQke5g2Xa8

Get the latest news on science-based targets for nature

SIGN UP FOR OUR NEWSLETTER

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WWF is extremely proud of being a founding member of SBTN, and part of a coalition of organizations aiming to set standards for ambitious and measurable corporate action on nature, to help deliver on these ambitions and create a nature positive future.

Marco Lambertini, Special Envoy, WWF
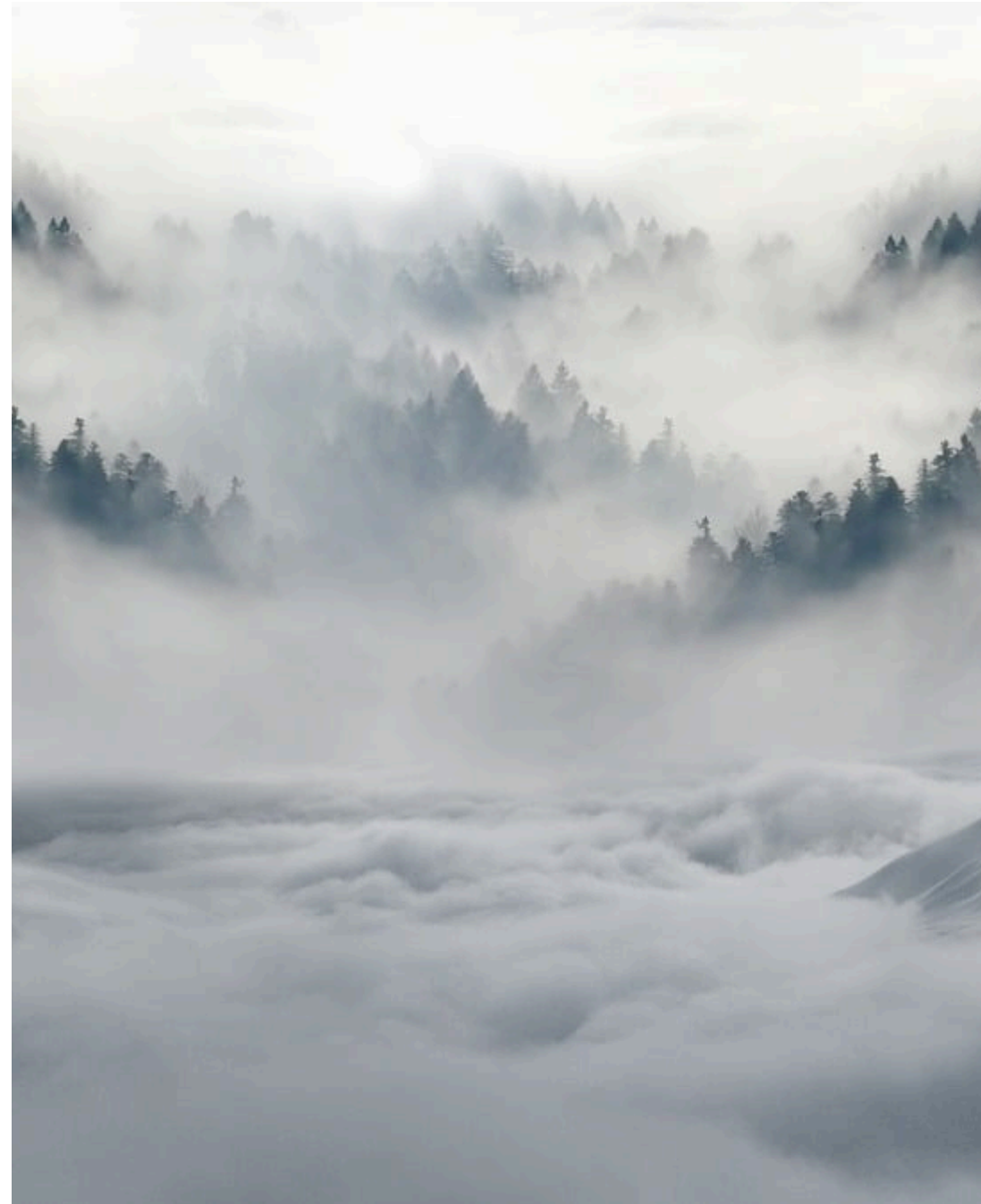
What's at stake for business?

Business leaders know that the activities associated with "business as usual" are fueling the loss of nature, and that our way of doing business must change.

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.

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). These indications of the degradation and loss of nature entail a direct risk for human well-being and global economic activities.

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.

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 2020).

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).
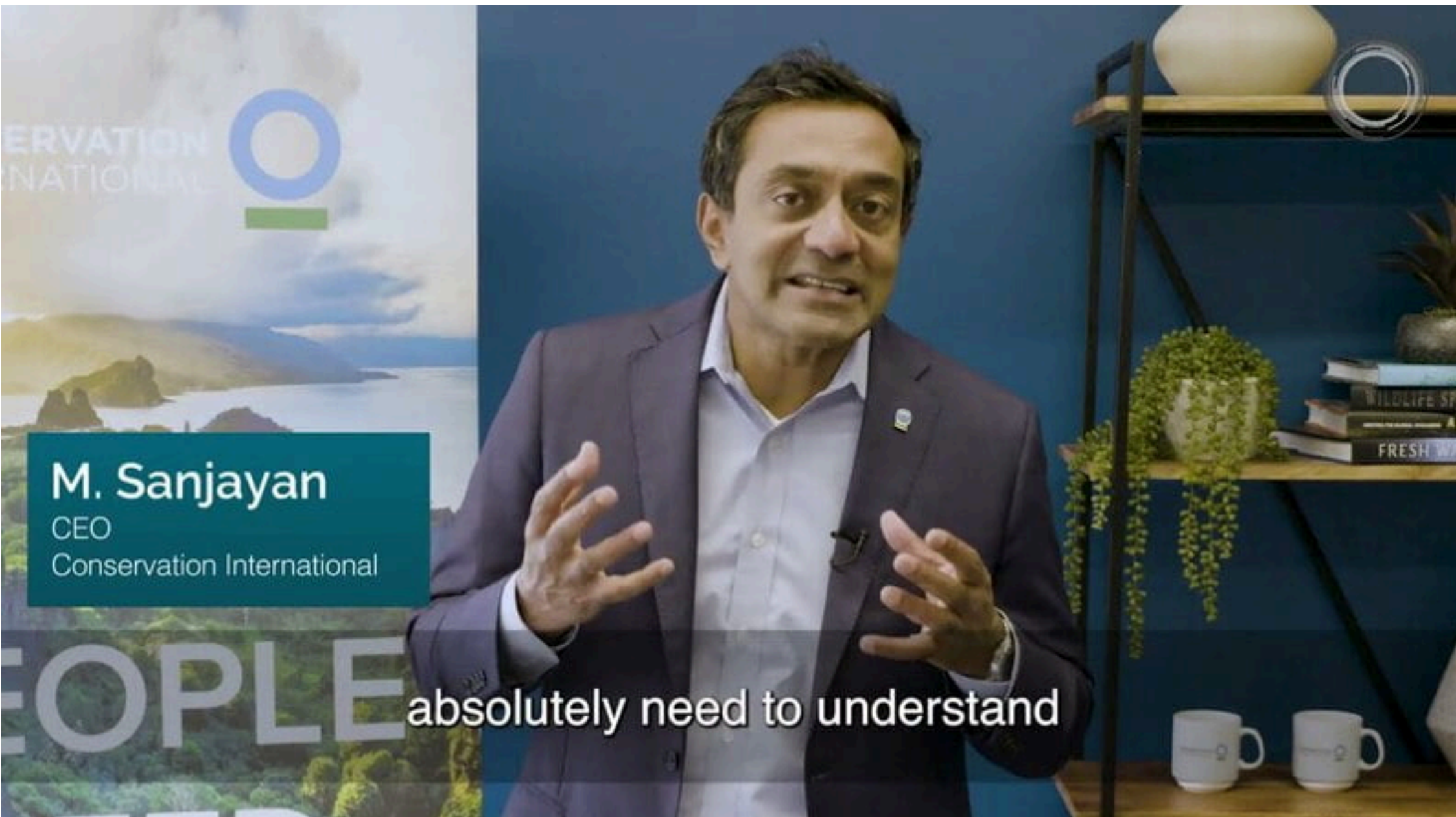
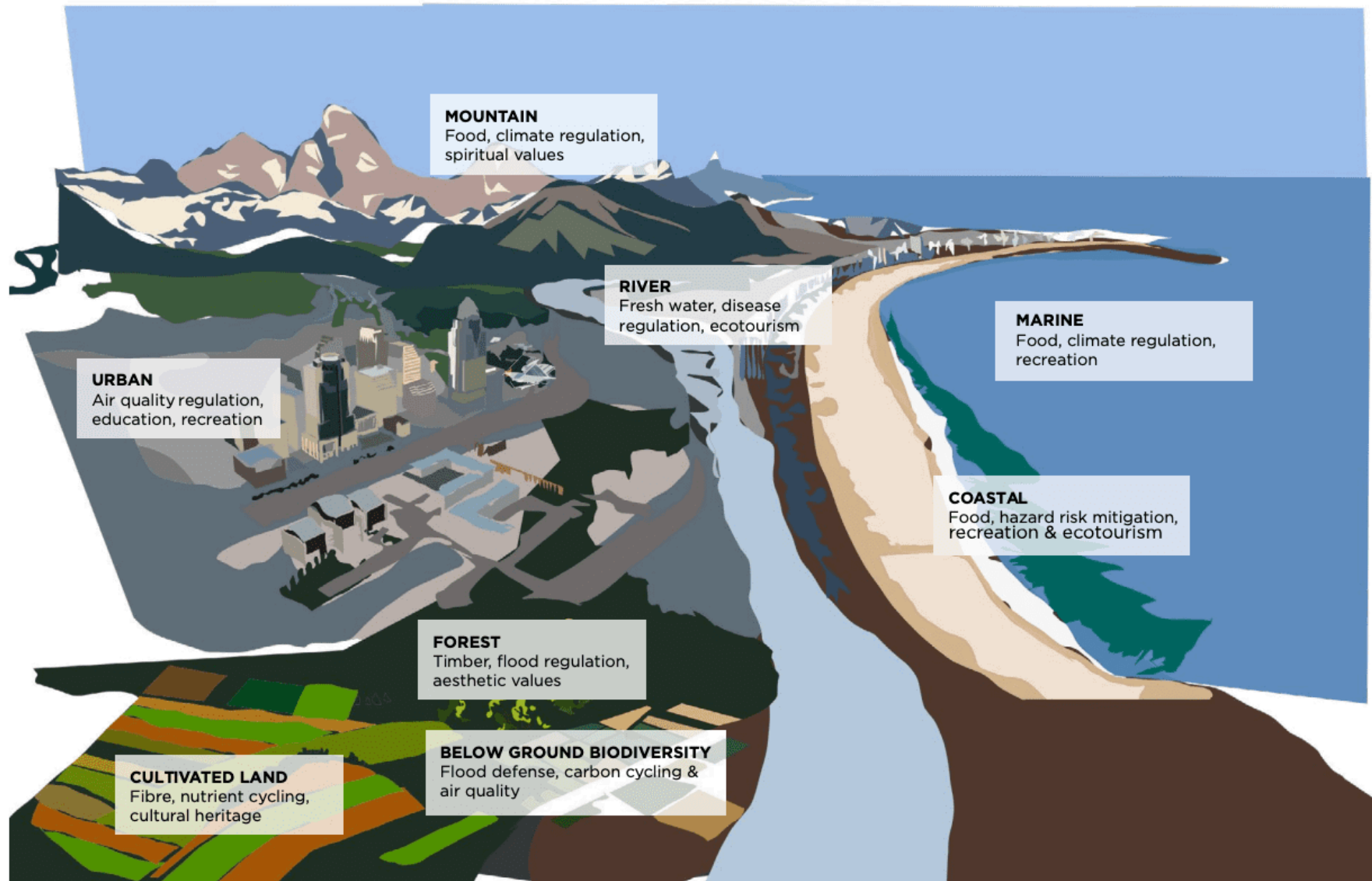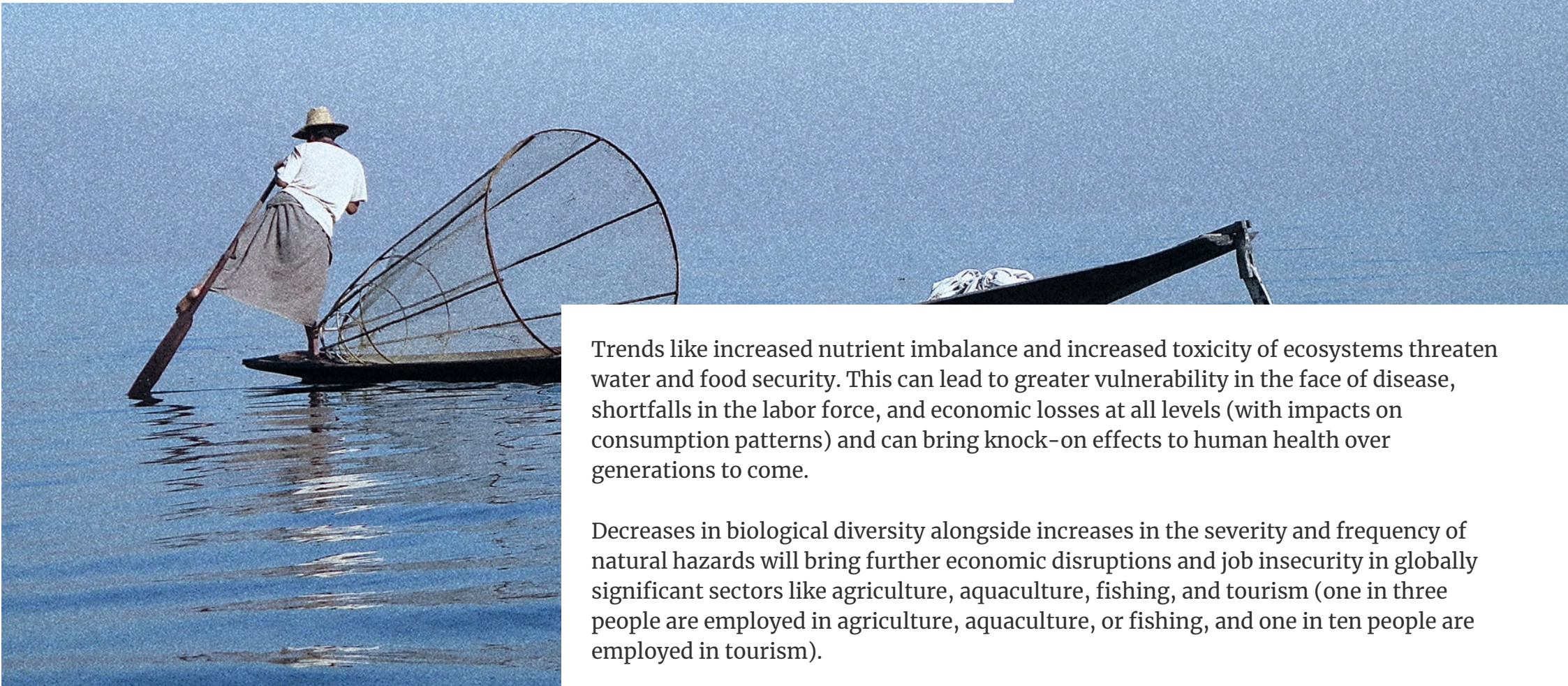Watch video: https://www.youtube.com/watch?v=gqUgQJ_WHJo

Figure: Some of the services and benefits nature provide human societies and economies. Adapted from: Dasgupta et al. 2020.

Local and global pressures on nature are decreasing ecosystems' ability to function and 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.

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).

Claire Lund, Vice President of Sustainability, GSK; Watch video: https://www.youtube.com/watch?v=mFoaOgpjApk

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).

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.

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 2020).

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. Human activities like trade, consumption, and production have created these existential threats.
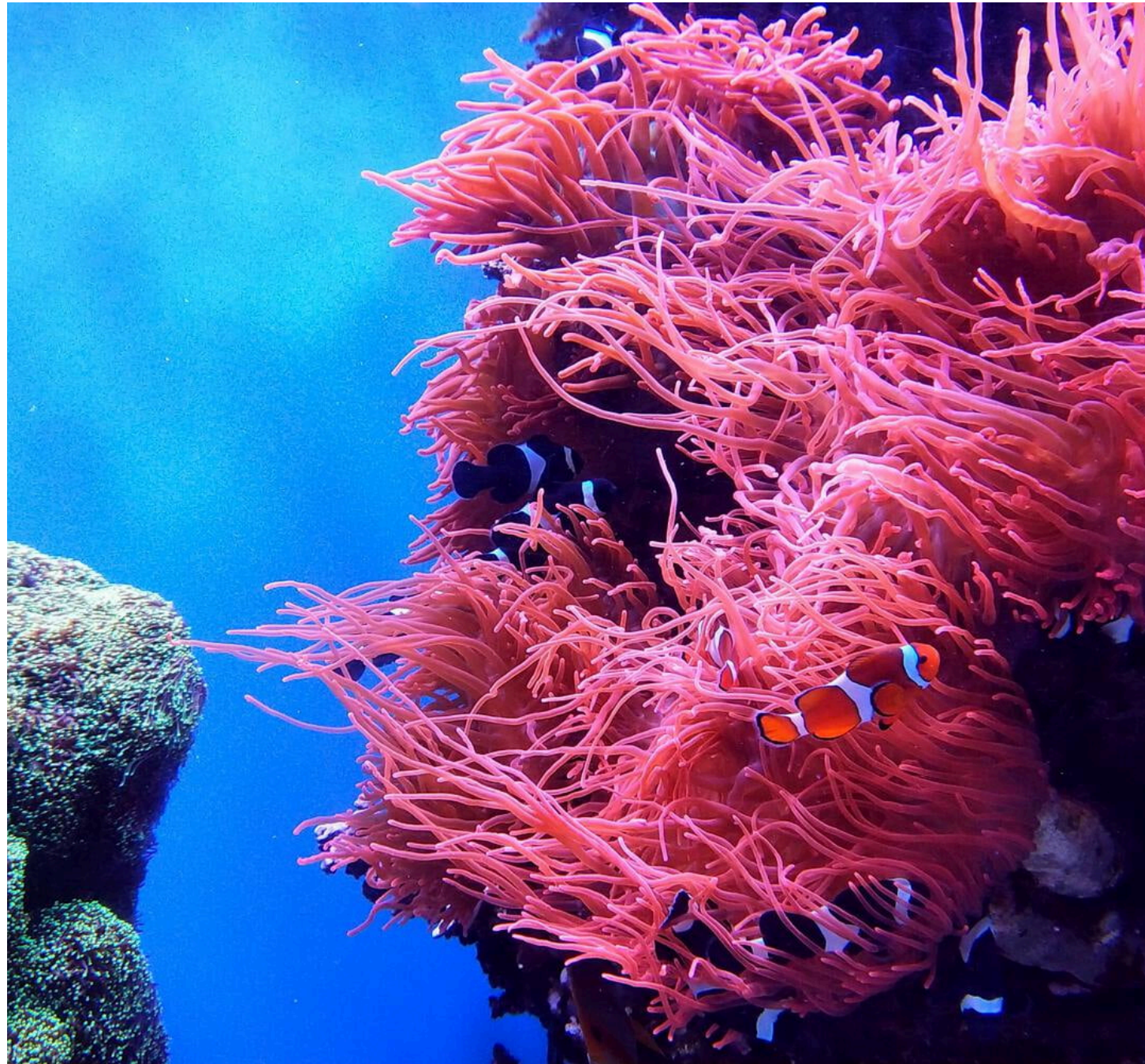
To meet this challenge, we call on leaders from throughout the business world to join us.

"

As a company committed to sustainable and responsible business practices, we recognize that protecting and restoring nature is of critical importance to the world, and to our business.

Olivier Rigaud, CEO, Corbion

What's behind nature's decline?

Achieving a nature-positive future—and defining corporate alignment to it—must start with understanding the science of nature loss.

The key governmental panel on nature science, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, otherwise known as IPBES, has found (Figure ES2) that globally, declines in the state of nature (measured in terms of ecosystems, species, and nature's contributions to people) were the result of five key **pressures**:
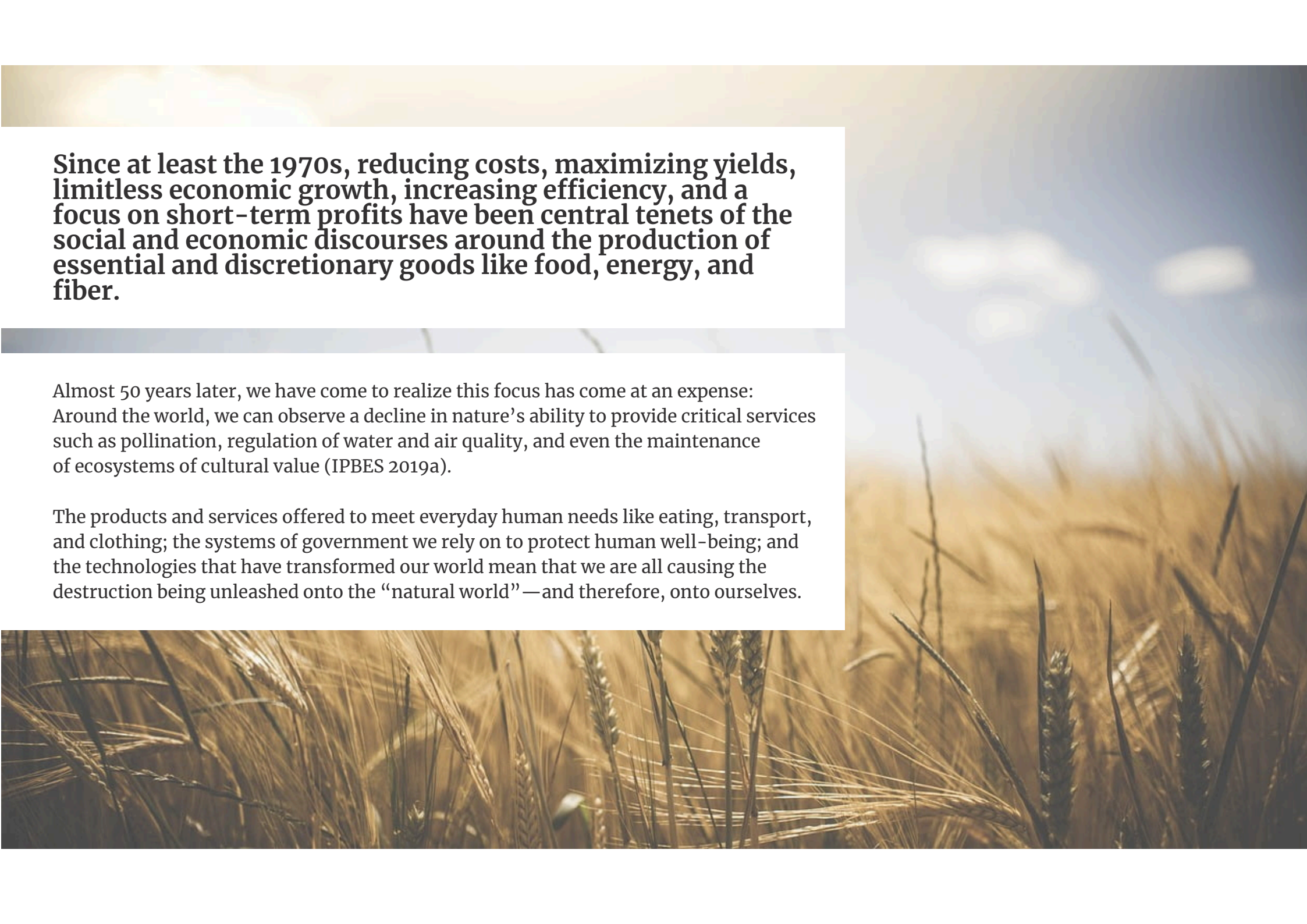
- land and sea use change
- direct exploitation of organisms
- climate change
- pollution
- invasion of alien species.

These pressures in turn have resulted from underlying **drivers**, fueled by human values and behaviors.

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.

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.

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).

The products and services offered to meet everyday 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"—and therefore, onto ourselves.

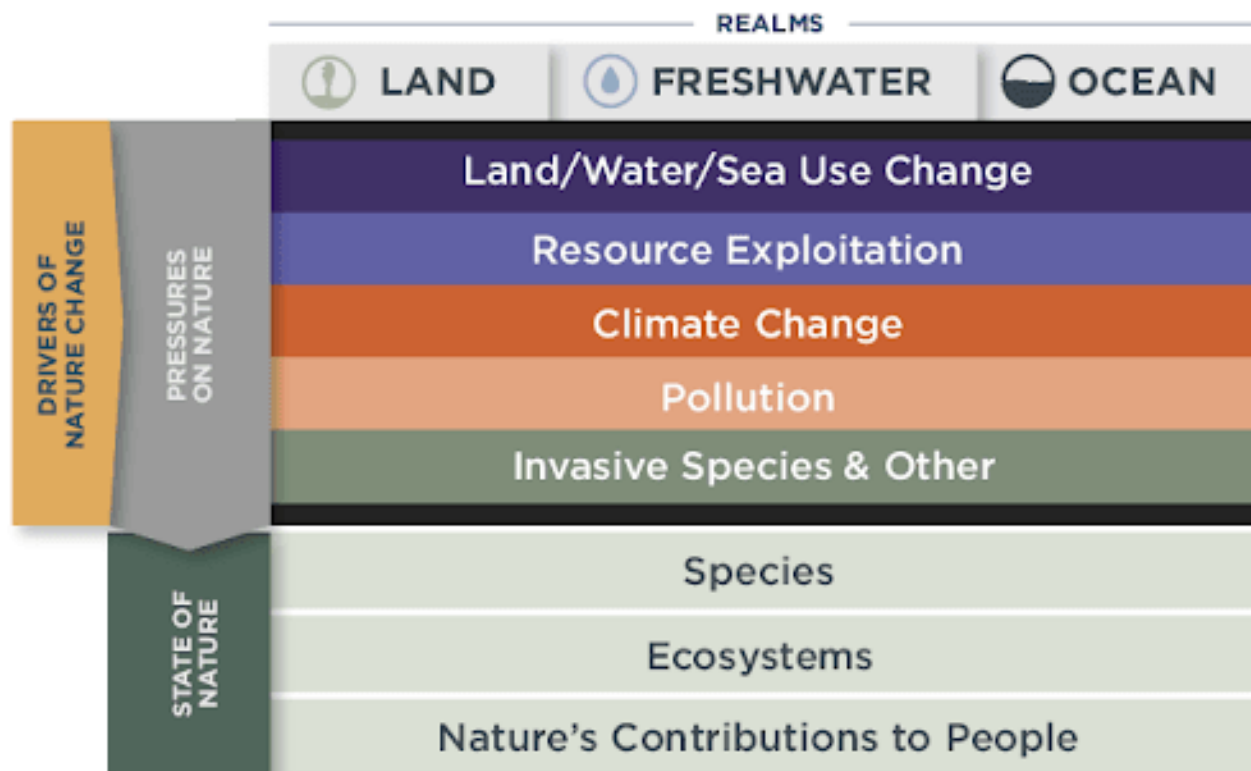# How SBTs take aim at the drivers and pressures of nature loss

Figure ES3: High-level target categorization for SBTs for nature — how SBTs take aim at the drivers and pressures fueling the degradation of nature and the state of nature itself. On the previous page, SBTN's Action Framework (AR3T) summarizes the types of actions that companies will take to align to Earth's limits and societal goals for nature.
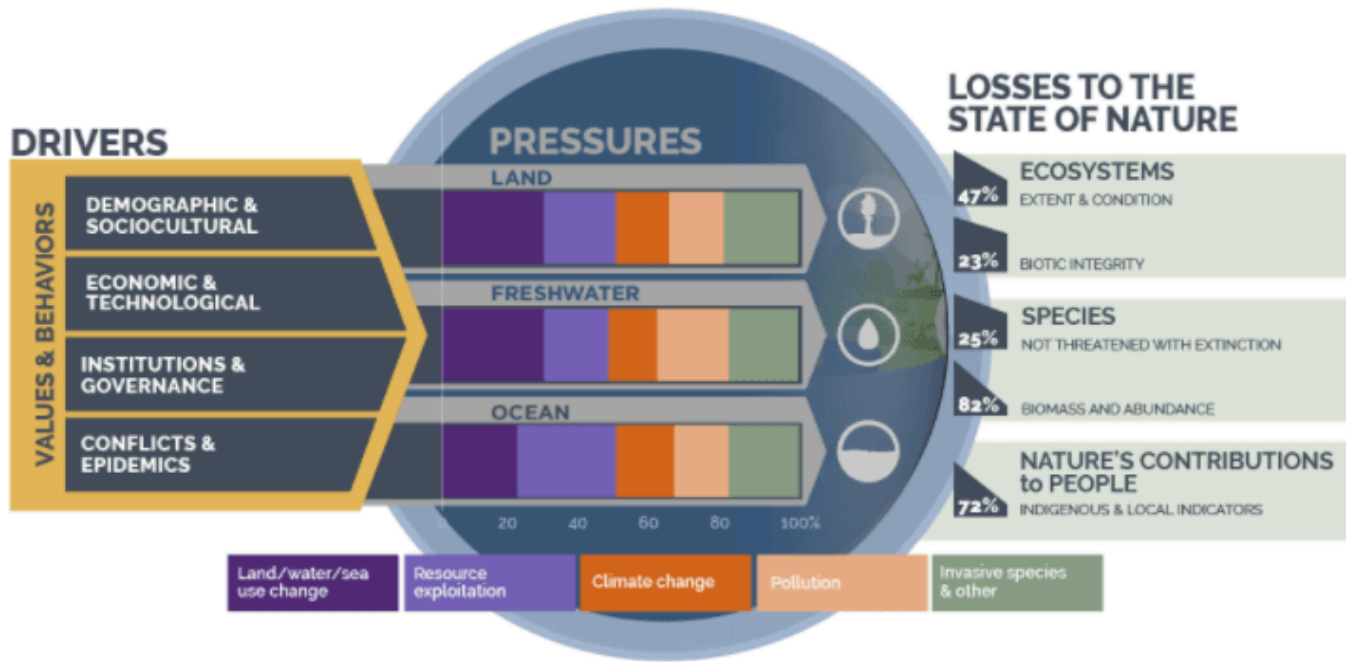
Figure: Drivers, pressures, and states of nature loss, adapted from the IPBES Global Assessment, 2019. The "drivers" feed into "pressures," which then fuel the degradation and loss of nature (measured in state variables) within the land, freshwater, and ocean realms. The percentages on the bars represent the approximate global importance of different pressures in each realm; see the IPBES Global Assessment for more details. The right-hand side highlights some of the key "states" of nature loss related to ecosystems, species, and nature's contributions to people.

These pressures and drivers are core components of SBTN's framework for measurement of corporate environmental impact and our framework for positive corporate action.

What are science-based targets for nature?

We define SBTs 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.

By setting SBTs, actors—for the purposes of this guidance, companies—can align their actions to both the scientific boundaries that define a safe operating space for humanity in terms of Earth's limits and the societal sustainability goals that set out global objectives for equitable human development.

> **"Science-based targets for nature take the guesswork out of what businesses need to do, by when, by whom, how much, and where."**

M. Sanjayan, CEO, Conservation International

Jennifer Morris, CEO, The Nature Conservancy; Watch video: https://www.youtube.com/watch?v=NFnUGniMmgU
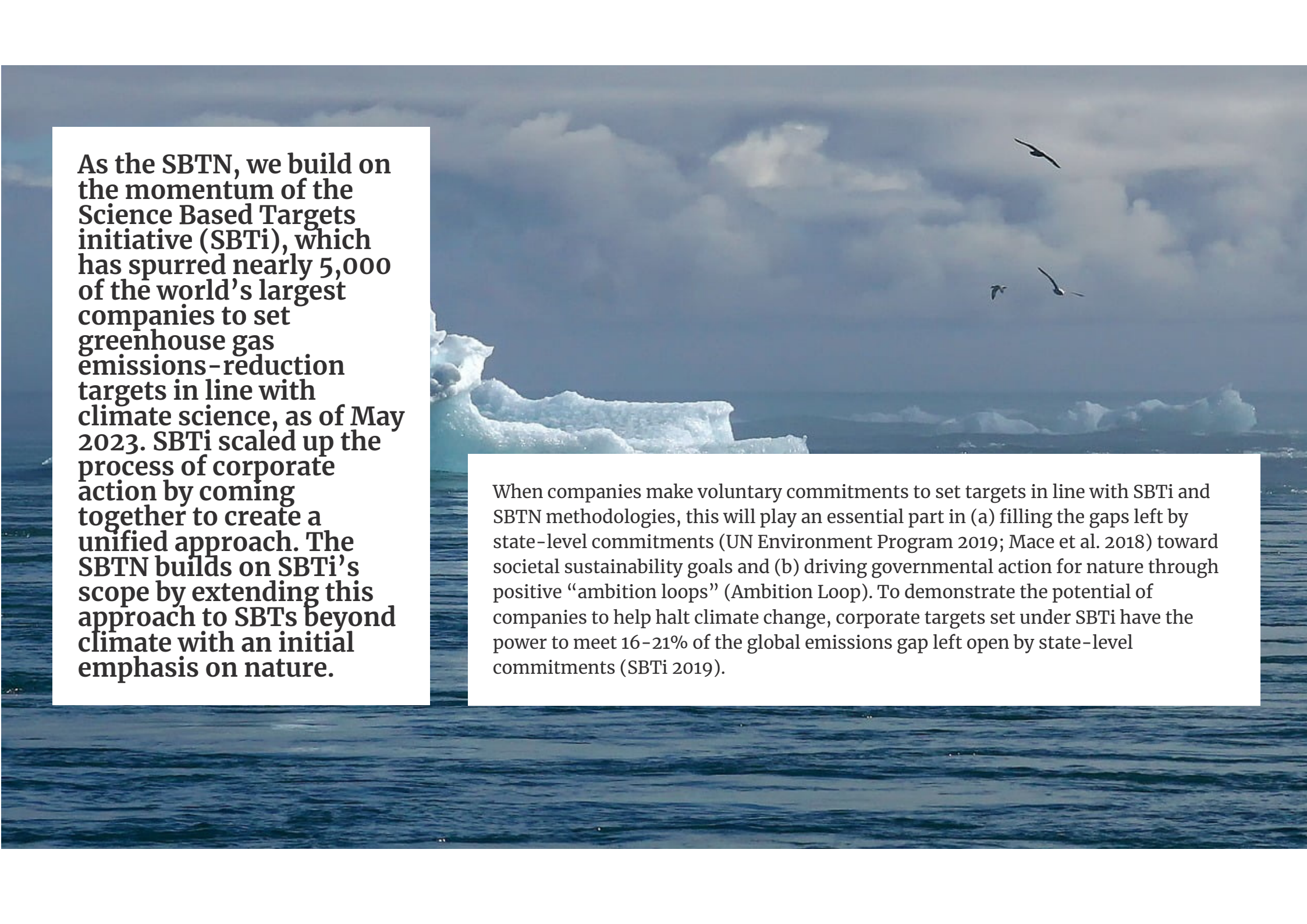
By expanding the scope of SBTs from tackling only climate change to tackling both the loss of nature and climate change, we can foster synergies between public and private sector action on these two fundamentally connected issues.

Neither issue can be solved without action on the other.

The Science Based Targets Initiative (SBTi) is already helping businesses set ambitious science-based targets for climate, which will help reduce their companies' greenhouse gas (GHG) emissions. This will also cut global emissions and can drive positive feedback loops for policy ambitions on climate change.

Figure: Combined "nature" and "climate" ambition loops, which collectively create stronger policy and voluntary action for
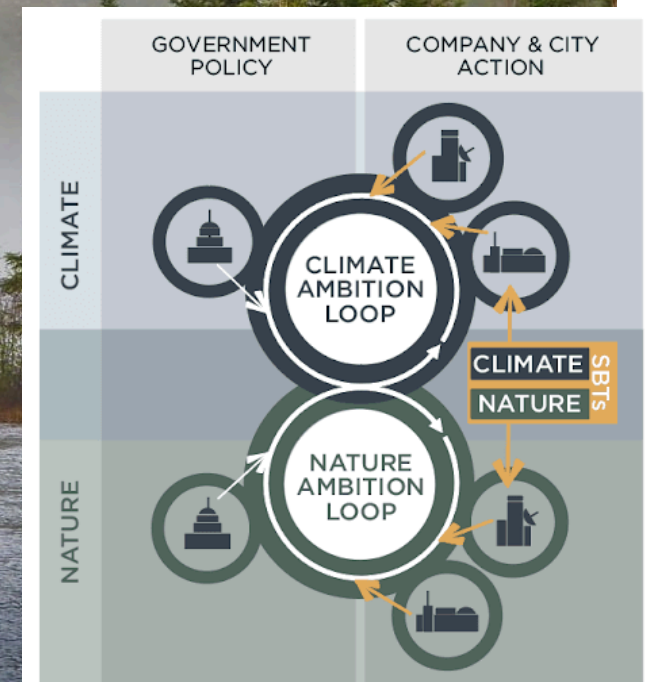
As the SBTN, we build on the momentum of the Science Based Targets initiative (SBTi), which has spurred nearly 5,000 of the world's largest companies to set greenhouse gas emissions-reduction targets in line with climate science, as of May 2023. SBTi scaled up the process of corporate action by coming 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.

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).

Nature focused SBTs as currently designed will allow companies to take action that aligns with a subset of the goals set out in the UN conventions on biodiversity (UNCBD), climate change (UNFCCC), land degradation (UNCCD), and the 2030 Agenda for Sustainable Development (SDGs).

A critical component of these societal goals for nature has now been finalized: the Global Biodiversity Framework (UNCBD) and its high-level goals for species, ecosystems, and "nature's contributions to people"—the life-sustaining services that nature provides. This Framework defines our common goal to halt and reverse nature loss by 2030 and requires all large businesses and financial institutions to assess and disclose their risks, impacts and dependencies on biodiversity. The time for action is now.

A group of leaders from many organizations working with SBTN supports 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 of nature by 2050.

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.

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

The Earth Commission, also part of the Global Commons Alliance, is a group of leading social and natural scientists hosted 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 (Rockstro¨m et al. 2009; Steffen et al. 2015) and has identified quantitative boundary conditions for biophysical systems such as biodiversity, freshwater, land, ocean, and climate as well as considering socioeconomic aspects, justice, and human well-being. Taking into account the complex interactions between the systems, in 2023, the Earth Commission launched a new breakthrough science assessment that defines and quantifies a "safe and just corridor" for human development. They have also assessed 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. Further, the "translation" of the science into targets will be jointly developed by the SBTN and the Earth Commission.

"

In a future with cascading risks, science-based targets (or SBTs) offer a pathway for sufficiently ambitious corporate action.

The Club of Rome

Why science-based targets for nature?

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We encourage others to start taking science-based action on nature, to build business resilience and to help us all move faster to a net zero, nature positive, healthier planet.
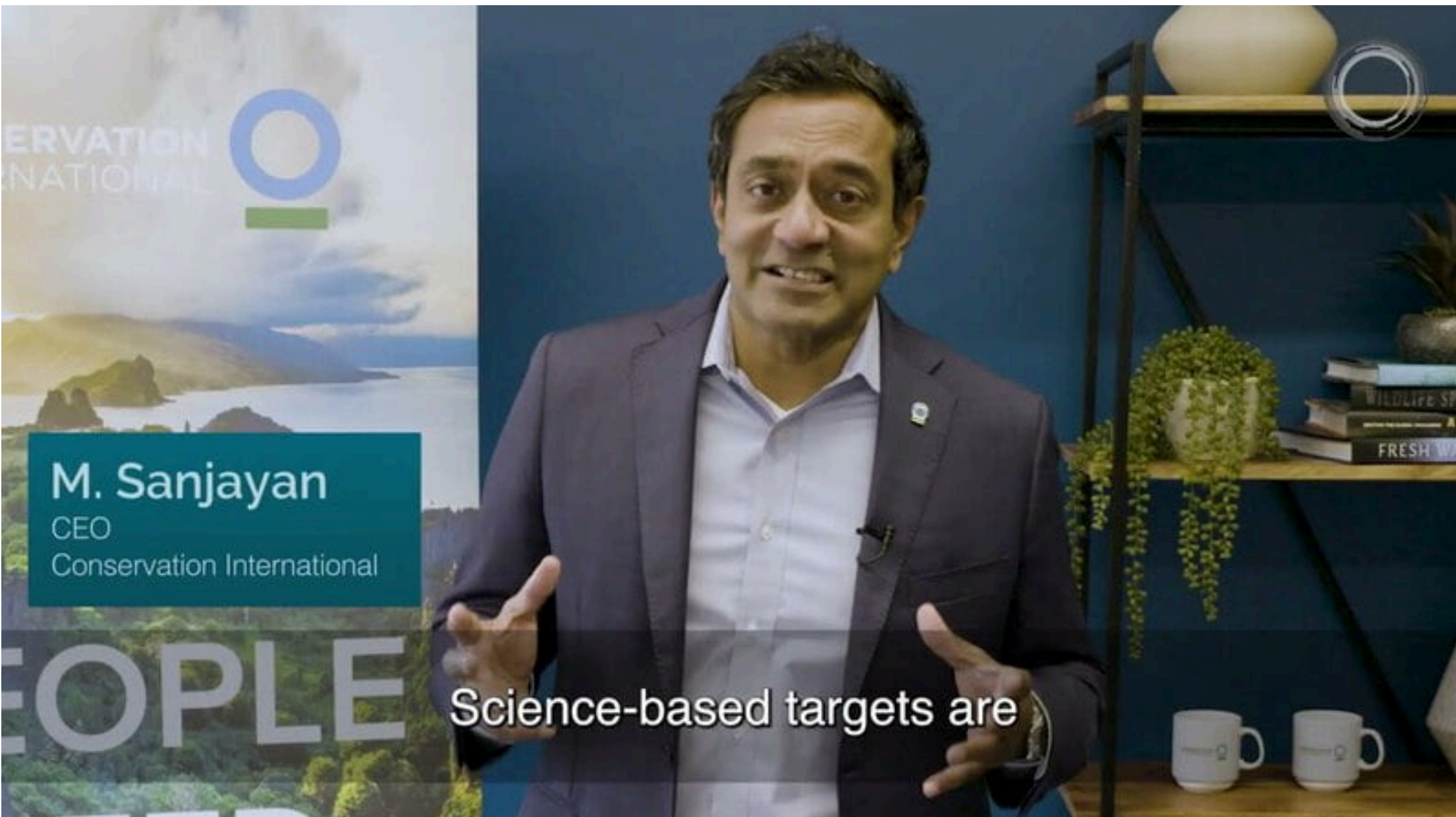
-Regis Simard, President, Global Supply Chain, GSK

Science-based targets (SBTs) are built on an understanding of the nature-related risks facing business.

While some of these risks are down the road, the greatest risk facing companies today is inaction.

Watch video: https://www.youtube.com/watch?v=Ws0-qO9cEAQ

Business leaders know that the activities associated with "business as usual" are fueling the loss of nature, and that our way of doing business must change.

This change must occur in multiple ways and at multiple levels. The key questions for businesses are how to change and by how much. Science-based targets are designed to provide the answer.

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

- Local and global pressures on nature like landscape conversion and pollution are decreasing ecosystems' ability to function and, consequently, their ability to provide contributions to the wellbeing of human and nonhuman life.

- Businesses are waking up to this. Biodiversity loss is increasingly being recognized as one of the most important and most likely business risks, alongside climate change and water crises.

For companies, SBTs will help:

- Get ahead of regulation and policy changes
- Strengthen your reputation among consumers, employees, and society
- Increase the confidence of your investors, parent companies, subsidiaries, and other stakeholders
- Catalyze innovation that's good for the planet, and for business
- Open opportunities to collaborate with other stakeholders
- Improve your medium-to-long-term profitability

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.

Why work with SBTN? Hear from...

Join Holcim, Natura, and over 150 leading companies in our Corporate Engagement Program preparing to set science-based targets for nature.

Magali Anderson, CSO; Watch video: https://www.youtube.com/watch?v=OLbGfN4d8d8

Roberto Marques, Group CEO; Watch video: https://www.youtube.com/watch?v=ETjX-qXoCzQ

Click here to learn more about our Corporate Engagement Program

Holcim

Natura

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Why work with SBTN?

- **Consolidated approach:** The methods and targets designed by SBTN are being built on existing sustainability tools, approaches, and platforms,
- **Practicality:** We are working with end users to "road test" draft methods and ensure that SBTs are practical and intuitive for businesses.
- **Credibility:** The guidance is being developed by experts from the world's leading environmental NGOs, governmental organizations, purpose-driven consultancies, ambitious businesses, and societyminded business coalitions. The guidance is grounded in the best available science.
- **Stability:** While the science will continue to evolve, SBTN's framework for setting SBTs will be designed for long-term use.
- **Prioritization:** The SBTN approach to target setting will help companies prioritize places and issue areas for action, so that they 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.

Step-by-step process to setting SBTs

Our guidance presents a five-step process that companies can follow to supplement their current understanding of environmental issues or to begin exploring these issues for the first time.

Wherever 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. In short, companies will:

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 value chain locations for target setting.

2. **Interpret & Prioritize.** You then interpret the outputs of Step 1, prioritizing key issues and locations to take action. You will consider actions across different 'spheres of influence'–from your operations, to the landscapes surrounding your value chain(s).

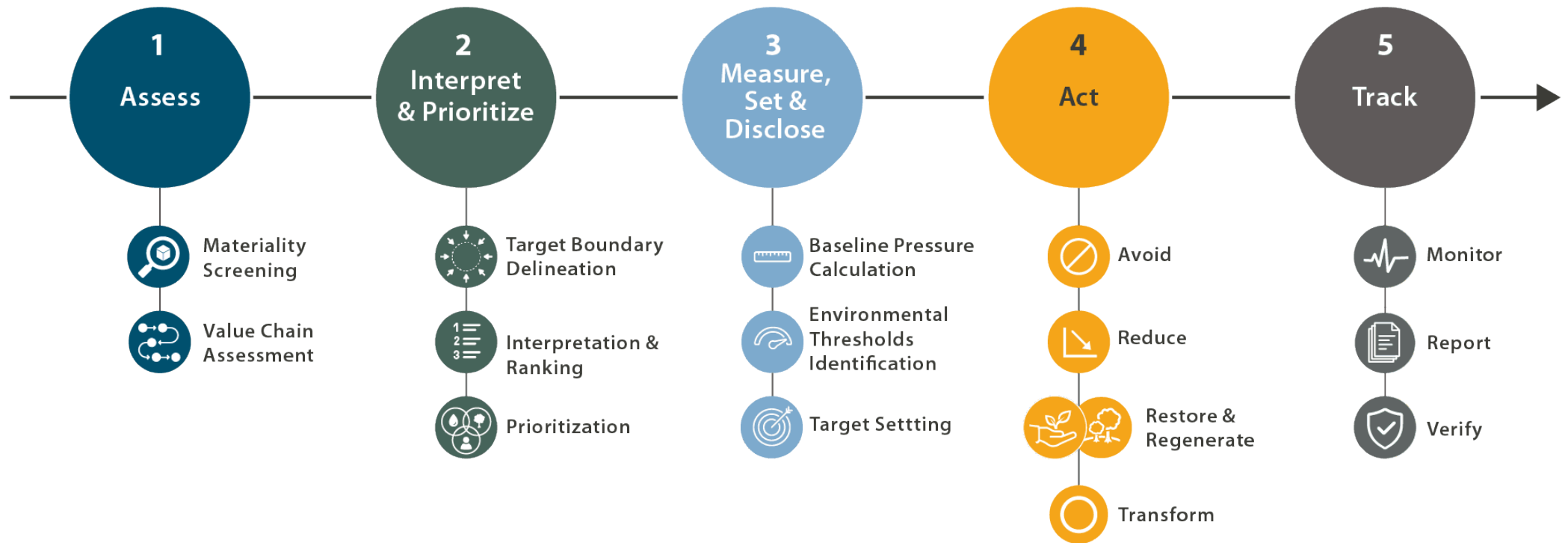3. **Measure, Set & Disclose.** You then collect baseline data for prioritized targets and locations.Using the data from this and previous steps, you can set targets aligned with Earth's limits and societal sustainability goals and then disclose these publicly.

4. **Act.** Once targets are set, you utilize SBTN's Action Framework (AR3T: Avoid, Reduce, Regenerate,Restore, and Transform) to make a plan and begin to address your contributions toward the unsustainable use and loss of nature key impacts.

5. **Track.** Finally, you monitor progress toward your targets, and report publicly on this progress, and adapt your approach as necessary.

5 Steps of SBTs for nature

1
Assess

- Materiality Screening
- Value Chain Assessment

2
Interpret & Prioritize

- Target Boundary Delineation
- Interpretation & Ranking
- Prioritization

3
Measure, Set & Disclose

- Baseline Pressure Calculation
- Environmental Thresholds Identification
- Target Settting

4
Act

- Avoid
- Reduce
- Restore & Regenerate
- Transform

5
Track

- Monitor
- Report
- Verify

SBTN's Action Framework

Key types of corporate action

# If we wish to live in a nature-positive world, we need urgent and ambitious action by all stakeholders.

In our guidance, we highlight key types of action-summarized as our Action Framework (AR³T) - that companies can get started on today:

- **Avoid and reduce** the pressures on nature loss, which would otherwise continue to grow.
- **Restore and regenerate** so that the state of nature can recover (e.g., the extent and integrity of ecosystems and species extinction risk).
- **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. Within this structure, each company will set different targets, depending on its sector and specifics of its business.

Readers should note that in our guidance, we emphasize the actions that companies can undertake on their own because these are often easier for companies to get started on today. However, the science is clear that the problems facing business and society are system-wide, intertwined, and connected to a broad array of actors.

The problems we face therefore demand that companies go beyond individual action to push action through their value chains and explore **system-level collaboration** and **transformation**, such as through landscape and jurisdictional initiatives.
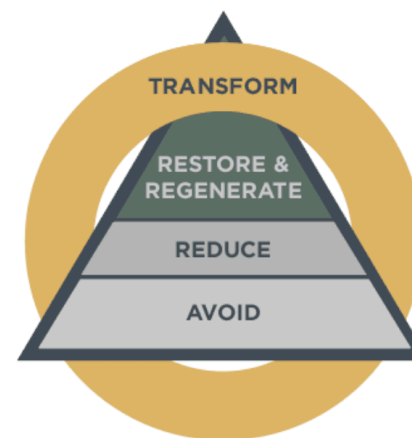
[More information on detailed actions companies can take for nature using SBTN's Action Framework.](#)

How companies can get started today

Take science-based action for nature

Wherever your company is on their sustainability journey, there are immediate actions to take.

Flip to the next pages to learn more.

Marco Lambertini, Convenor, Nature Positive Initiative; Watch video: https://www.youtube.com/watch?v=vZYlsaEPIyA

Understand impacts and dependencies on nature

Using our detailed <u>Step 1: Assess</u> and <u>Step 2: Prioritize</u> guidance, undertake a 'root and branch' audit of your business that will enable you to identify and learn about your company's most material impacts on nature – and where they occur in your operations and across your value chain.

- Start with a materiality screening to get a high-level overview of your organization's environmental impacts
- Then estimate the pressures on nature that your company generates and identify the locations in which these pressures are particularly harmful to the state of nature
- Finally prioritize which targets to set, which locations and economic activities to include within your company's target boundaries, and where to act first

Measure and Set Targets

When you have assessed and prioritized areas for your company to take action, use our methodologies to set science-based targets for nature beginning with freshwater and land. With the conclusion of the corporate validation pilot in 2024, targets can soon be submitted for validation through SBTN's new validation host, the Accountability Accelerator.

START TAKING ACTION TODAY

Mobilize Action

If your company wants to take action on nature but is not ready to set science-based targets for nature, this is what you can do:

- Use our materiality assessment tool to begin to understand impacts on nature (part of Step 1: Assess guidance)
- Join our Corporate Engagement Program to lead the way on ambitious corporate action on nature
- Get expert help from our recommended service providers to guide your organization through the target-setting process
- Use our onboarding resources to rally internal buy-in
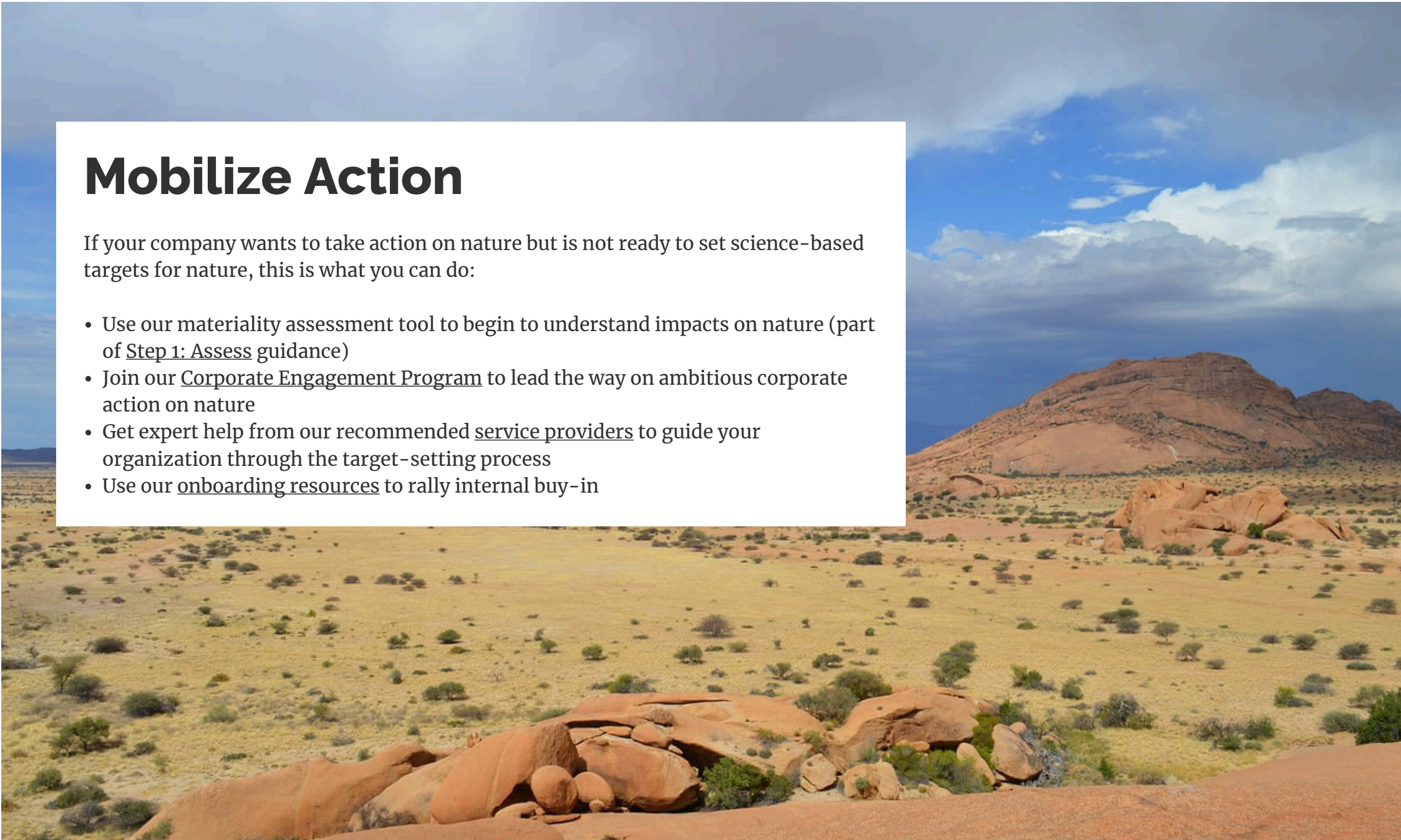
Thank you for reading

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Sign up for our newsletter at
https://sciencebasedtargetsnetwork.org/join-our-mailing-list/