

# MONITOR

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## Alarming Decline in Biodiversity

### Insights to the value of ecosystem service for the economy

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- › Biodiversity policy should be treated as core economic policy, not only as environmental policy. Governments should explicitly frame biodiversity loss as a threat to economic activity as we know it.
- › Climate change mitigation and adaptation, and biodiversity protection and restoration should be integrated. The topics are strongly interconnected and targets for either can only be achieved together.
- › Regulation should prioritise real-world outcomes and close the door for narratives that amount to *greenwashing*. Claims such as “nature positive” should require site-level evidence, science-based indicators, and clear links to the core business model.
- › Implementation of the Kunming–Montreal Global Biodiversity Framework should be strengthened through monitoring and accountability. Countries should build robust national reporting systems aligned with the GBF targets and use the monitoring framework to discover, monitor, and close gaps.
- › Disclosure requirements should be action-enabling, not as box-ticking exercises. Standardised, decision-useful reporting should focus on dependencies and impacts, improve comparability, and support capital allocation toward activities that reduce drivers of biodiversity loss.
- › Policy should target the five direct drivers of biodiversity loss at the level necessary. Use global tools where drivers are global (e.g., climate mitigation) and (hyper-) local tools where impacts are local (e.g., habitat restoration, wetland protection, ecological connectivity, land-use planning).
- › Policy design and delivery should actively promote multi-stakeholder approaches and include especially indigenous peoples and local communities, building the trust necessary for (hyper-) local implementation.

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## Why the buzz about biodiversity loss?

Biodiversity underpins all life on Earth, yet current trends show a rapid and accelerating deterioration of ecosystems globally across all regions and biomes. According to the latest *Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services* (IPBES) Global Assessment report (2019), nature is declining at rates unprecedented in human history, driven by land-use change, overexploitation, climate change, pollution and invasive species. The latest *IPBES Business and Biodiversity Assessment* (2026) reiterates that these five drivers of biodiversity loss are largely linked to economic activity.

One million species face risk of extinction, many within decades, unless transformative action is taken. This decline affects not only wild species but the ecosystem functions that sustain food production, water regulation, climate stability and cultural well-being.

It is important to note that biodiversity loss is not a distant threat, as its impacts are already visible. The IPBES Global Assessment shows that ecosystems have declined in extent and condition by an average of 47 per cent compared with their natural baselines (IPBES 2019). The latest IPBES Business and Biodiversity Assessment (2026) shows that this includes severe degradation in forests, wetlands, coral reefs and agricultural landscapes. The capacity of nature to support humanity through ecosystem services is weakening affecting inter alia essential services like pollination, soil fertility, coastal protection and disease regulation. As a consequence, natural capital has declined by up to 40 per cent since 1992. The costs of these declines are starting to affect businesses and economies. According to the IPBES (2022 & 2026) the crisis is deeply rooted in societal value systems that prioritise short-term economic returns over nature.

The following will explore how current developments in business, finance, and policy action can support the preservation of biodiversity and ecosystem services.

## What is causing biodiversity loss?

*“Our two-century-long experiment with burning fossil fuels, destroying forests, wilderness, and oceans, and degrading the land has caused a biosphere catastrophe.”*

(UN Secretary-General António Guterres during his speech at the COP15 in 2021)

Understanding biodiversity loss means understanding that it is an immediate threat with perceivable impacts. What is driving this unprecedented loss in biodiversity and how can it be stopped and reversed?

The IPBES<sup>1</sup> defines five primary drivers of biodiversity loss (in order of impact):

- 1. Changes in land and sea use:** habitat loss or alteration, especially from agriculture, urban expansion and infrastructure
- 2. Direct exploitation of organisms:** harvesting, logging, hunting, fishing and other extraction that reduces populations
- 3. Climate change:** global warming, extreme events and impacts on species distribution and ecosystem function
- 4. Pollution:** air, water and soil pollution, including plastics, chemicals and greenhouse gases

**5. Invasive alien species:** species introduced by humans that spread and harm native biodiversity and ecosystem processes

These five drivers of biodiversity loss have in common that they are directly linked to economic activity. For example, land use change occurs when biodiversity rich forests have to make way to satisfy the increasing demand for agricultural land. Importantly, another driver on the list is climate change, which shows that the current global crises do not exist in isolation, but are connected, which has to be considered when looking into ways of addressing the polycrisis.

### Addressing climate change means addressing biodiversity loss

*“Climate change poses a fundamental threat to nature, species, and people. However, nature also provides key solutions for both carbon storage and building climate resilience – if the global community takes steps to protect, restore, and better manage our natural resources.”*

(Nature-based Solutions for Climate, IUCN)<sup>2</sup>

Climate change is one of the key drivers of biodiversity loss. One of the effects of climate change is that regular rainfall patterns change, which in turn means changing water cycles in ecosystems. This can create ecosystem stress, which can lead to biodiversity loss and the decline of ecosystem services. In addition to the changes in regular weather patterns, the likelihood of extreme weather events also increases, which includes heatwaves, heavy rainfall, storms. Even more than the change of the regular rainfall patterns, these events, especially if they appear more frequently because of climate change, create ecosystem stress, with the mentioned consequences.

The reason why climate change is such a key driver of biodiversity loss is that it also interacts with the other drivers, magnifying the negative impacts.<sup>3</sup> For example, warming increases the vulnerability of ecosystems that are already impacted in their resilience due to fragmentation by land-use change. Some invasive species are only able to survive in their invaded habitats due to the consequences of climate change, e.g. higher water temperatures.

It becomes clear that one of the best ways to address biodiversity loss is for states, businesses, and investors to make the transition to a low-carbon economy a priority.

### The impact on businesses, investor, and the economy

*“The solution starts with understanding and accepting a simple truth: our economies are embedded within nature, not external to it.”*

(The Economics of Biodiversity: The Dasgupta Review, 2021)<sup>4</sup>

Simply put, the Dasgupta Review finds that a threat to nature is also a threat to economic activity as we know it. The most direct link exists between biodiversity loss and declining ecosystem services. Ecosystem-services generally describes services that “nature” is providing to the economy. This includes amongst many others fresh water, soil quality, protection against natural hazards, pollination. Economic activity therefore has many dependencies on biodiversity. Most strikingly, businesses depend on natural resources. For example, up to 75 per cent of food crops rely on pollinators. These resources can only be provided by ecosystems that are intact and functioning, i.e. biodiversity rich ecosystems. On the flip side, this means that the loss of biodiversity is directly threatening the availability of resources on which businesses depend. Certain industries like agriculture and pharmaceuticals are especially affected. According to IPBES, land degradation has led to a 23 per cent decrease in productivity on global land surfaces. Biodiversity is also essential for the pharmaceutical industry. Functioning ecosystems provide raw materials to produce

pharmaceutical products. Even more importantly, one source for pharmaceutical research and development of new treatments is microbial biodiversity.

The aforementioned factors are all related to land-based biodiversity. However, this is not the full picture. According to the IPBES<sup>5</sup>, in coastal areas, the consequences of biodiversity loss are severe: IPBES estimates that the loss of coastal habitats and coral reefs leads to an increased risk from floods and hurricanes, because biodiversity loss leads to decreasing natural coastal protection, for 100 to 300 million people.

Seeing these dependencies and impacts, the question that arises is: Are current business models incorporating biodiversity risks?

The World Economic Forum (WEF) and PwC estimate in two analyses (2021 & 2023) that over half of global gross domestic product (GDP) depends to some degree on nature. This equates to USD 58 trillion (2023). The WEF and PwC see three risks to businesses: direct dependencies on nature for their operations, consequences stemming from their impact on nature, and social and market disruption due to the loss of nature.<sup>6</sup>

Investors are increasingly questioning whether business models are taking the dependencies and impacts on biodiversity into considerations. Several key initiatives were established to address this issue, among them three of pivotal importance:

- › The initiative with the most momentum is the *Nature Action 100* (NA100) collaborative engagement investor initiative.<sup>7</sup> The initiative was set up, and its governance structure was determined by the *Finance for Biodiversity Foundation* (FfBF)<sup>8</sup> in 2022. FfBF also selected the *Institutional Investor Group on Climate Change* (IIGCC)<sup>9</sup> to run the NA100 secretariat, once again highlighting the deep interconnectedness between biodiversity and climate.
- › The SPRING initiative is run out of the United Nations supported *Principles for Responsible Investment* (PRI) secretariat, which is the most important industry association on sustainable investment. SPRING and NA100 have a similar focus, i.e. material financial risks from biodiversity decline. SPRING and NA100 have agreed to work complementary and avoid targeting the same companies.
- › There are also investor initiatives that focus specifically on one of the drivers of biodiversity loss. *The International Chemical Secretariat* (ChemSec)<sup>10</sup> was founded in 2002 to build up a multi-stakeholder initiative, including scientists, businesses, policy makers, and other NGOs, with the aim to address pollution through hazardous chemicals. ChemSec is a champion of constructive multi-stakeholder work highlighting existing problems and providing solutions at the same time, for example through their safer alternatives database.<sup>11</sup> The logical step was then undertaken in 2023 when, with the launch of the *Investor Initiative on Hazardous Chemicals* (IIHC)<sup>12</sup>, investors were explicitly added to the group of stakeholders. The strength of the IIHC is that it takes its lead from ChemSec operating as a constructive science-driven multi-stakeholder initiative.

The emergence of these international investor initiatives shows that there is an interest in biodiversity loss. A key challenge that remains is how to capture the link between economic activities and biodiversity in a structured way. In 2013, the International Integrated Reporting Council (IIRC)<sup>13</sup> published a framework to make these links explicit, with the IIRC Octopus at its core<sup>14</sup>. In short, the framework shows that a company's business model depends on a set of resources, including natural resources, which it impacts in its creation of products and services. As ecosystem

services decline, inter alia due to the impact of economic activities, natural resources that business models depend on decline, showing the connection between a company's dependencies and impacts.

However, it is important to note that this link is not always explicit and often only sets in with a delay, i.e. there is a mismatch in terms of time-horizon between impacts and dependencies. In these cases, the link between today's impact and tomorrow's dependencies needs to be established through regulation.

### **Biodiversity “net-positive”: A meaningful concept or a marketing tool?**

An analysis of the status quo in business, investment, and the economy overall would not be complete without a word of warning. The recent years have sharpened the societies' view on greenwashing. In the current discussion, “net-positive biodiversity” or simply “nature positive” are being mentioned. These terms try to build concepts analogous to climate change. This is understandable, as an already overwhelming number of concepts, terms, acronyms are popping up in the current discussion. What do they mean? <sup>15</sup>

The terms were created trying to carry over momentum from climate change to biodiversity efforts. The idea was to use familiar terms and not add complexity by introducing new concepts. However, the biggest difference between the climate change crisis and the biodiversity loss crisis is that climate change mitigation works globally: it does not matter where in the world CO<sub>2</sub> is emitted or emissions are mitigated. Biodiversity loss, in turn, is a crisis made up by many (hyper-) local crises, e.g. flooding might not affect the whole city (local), but only specific neighbourhoods (hyper-local). Some of the drivers are of a global nature, like climate change, but trying to preserve biodiversity and ecosystem services requires intervention on a (hyper-) local level. Simply put, cutting down Mangroves in Malaysia cannot be addressed by planting pine trees in Finland. This reveals the challenge of netting in biodiversity and any approaches that rely on netting, like “net-positive biodiversity” or “nature positive”. For these approaches to be sound, they need to approach the netting on a (hyper-) local level.

The best way to examine the rigour behind concepts of netting is to first check, if it is linked to the core of the business model. The IIRC / IFRS Octopus model can be used to verify this. Second, if the concepts are capturing biodiversity loss on a (hyper-) local level, e.g. an analysis should be carried out for each site, especially when netting. The case studies at the end will serve to explain where companies create a “nature positive” outcome at their sites (hyper-local approach).

### **Landscape of legislation, regulation and political action**

Legislation, regulation and political action face similar challenges to businesses, investors, and the economy. First, that the consequences of the action taken today will only become visible tomorrow. Second, that some drivers of biodiversity loss are global and others are (hyper-) local. Both needs to be reflected in suitable regulatory and political action. The following will provide an overview of the general direction of travel, with a focus on the UN, the EU, and Germany.

#### **In general, approaches to tackle biodiversity loss tend to fall into the following categories:**

- › Trying to address the drivers of biodiversity loss – For example, creation of protected areas, connecting habitats, climate change mitigation.
- › Trying to create accountability of states, companies, and investor through disclosure regimes – For example, national and international disclosure regulation.

## A global political framework on biodiversity

In 2019 the United Nations General Assembly called for a “Decade on Ecosystem Restoration 2021 – 2030”. What started as a vague call for action led to the Kunming-Montreal Global Biodiversity Framework (GBF), which was adopted in December 2022 at the 15th meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD-COP15) by the 196 states that signed the Convention on Biological Diversity (CBD).<sup>16</sup> It is considered a landmark agreement, setting a global path for action to halt and reverse nature loss by 2030 and achieve recovery by 2050.<sup>17</sup> The GBF contains the following four goals for 2050:<sup>18</sup>

- › **Protect and restore:** Halt the destruction of ecosystem through protection measures and restore damaged ecosystems.
- › **Prosper with nature:** Shifting the focus to the benefits of biodiversity for current and future generations.
- › **Share benefits fairly:** Working towards sharing the monetary benefits from research with the countries whose genetic resources build the foundation for the research.
- › **Invest and collaborate:** Closing the finance gap which is estimated to be around USD 700 billion a year.

These high-level goals are then broken down into 23 targets to be achieved by 2030. Two key targets are the protection of 30 per cent of degraded terrestrial, inland water, and marine and coastal ecosystems (by area), and to reduce loss of areas of high biodiversity importance to as close to zero as possible. More specific targets include the phasing out of subsidies considered harmful to biodiversity. There is also an explicit reference to the need of private funding, i.e. a target to raise USD 200 billion for biodiversity.<sup>19</sup>

The aim of the GBF is to provide a framework that can guide and align regulation and political action globally to reduce uncertainties currently cited *inter alia* by companies and investors as a roadblock to action against biodiversity loss.

## CBD-COP16 (2024)

The COP16 was the first Conference of the Parties to the Convention on Biological Diversity since the GBF was adopted. The purpose of the COP is operationalising the implementation, monitoring, and accountability of the framework, in short to make sure that everything is on track and that challenges can be discussed and solved together. The key outcomes of COP16 were that the role of non-state actors was noted, this includes indigenous and local communities, but also business and finance. In addition, a monitoring framework was confirmed to be able to track progress towards the 2030 targets. In order to be able to track progress, reporting has to take place on country-level.<sup>20</sup>

## COP30 (2025)

The interconnectedness between biodiversity loss and climate change also became apparent during the UN Climate Change Conference COP30 this year. Brazil as hosting nation attempted to put a focus on the interconnection and the role that indigenous peoples play as guardians of biodiversity. About one thousand indigenous people participated in the negotiations to emphasise the importance of a biodiversity rich ecosystem for climate change mitigation and adaptation.<sup>21</sup> In addition, other stakeholders published calls alongside the main negotiations, e.g. Finance for Biodiversity published “A COP30 call for policy coherence and integrated finance strategies”, highlighting

that incoherent regulation and the recent “back and forth” approach to biodiversity regulation is harmful for companies’ and investors’ efforts on biodiversity.<sup>22</sup>

Interconnections between climate change and biodiversity loss also featured during the main part of the COP30 negotiations. However, the focus was still on climate change, and not explicitly on the interconnectedness. For examples, Nature-based Solutions (NbS) to climate change formed part of COP30, discussing adaptation and ecosystem resilience, i.e. ecosystem-based adaptation, and land use and deforestation, which as mentioned affects climate change and biodiversity loss.

## European Union

The EU has advanced legislative, regulatory, and political action on biodiversity for several decades. The efforts became increasingly coordinated with the pledges at the Rio Summit in 1992.<sup>23</sup> At this point the Natura 2000 framework for biodiversity protection was created, and operationalised through directives, e.g. the Habitats Directive in 1992. In this text the focus lies on the recent developments, but it is important to note that they are following in a long line of efforts to address drivers of biodiversity loss.

Recently the EU Green Deal<sup>24</sup> in general and the EU Biodiversity Strategy 2030<sup>25</sup> specifically have ushered in a new age of action against biodiversity loss. Following the entry into force of the controversial EU Nature Restoration Regulation in August 2024, EU Member States are expected to submit national restoration plans to the EU Commission by August 2026.

The main focus of these political actions is to address the drivers of biodiversity loss proposing concrete measures. As a brief overview, a few examples of EU regulation and action regarding biodiversity refer to the following areas:

### 1. Changes in land and sea use

- Extending the existing Natura 2000 areas and creating the largest network of protected areas in the world<sup>26</sup>
- EU Nature Restoration regulation<sup>27</sup>
- Regulation of Deforestation-free Products<sup>28</sup>

### 2. Direct exploitation of organisms

- Establishing a common fisheries policy (CFP)<sup>29</sup>

### 3. Climate change

- Climate neutrality by 2050<sup>30</sup>

### 4. Pollution

- Zero Pollution Action Plan<sup>31</sup>
- Chemicals strategy<sup>32</sup>

### 5. Invasive alien species

- The Invasive Alien Species Regulation<sup>33</sup>

## Germany

Similar to the development in the EU early legislation, regulation and political action was focused on specific issues or single drivers of biodiversity loss. Attempts to protect nature predate the EU significantly as they date back to the Weimar Republic. At the time protecting nature was seen as a way to protect the *natural heritage* of the nation. The earliest German-wide nature protection law was passed in 1935 (*Reichsnaturschutzgesetz*) to establish protected areas. The law was instrumentalised by the Nazi regime at the time, focusing on the role of nature in the Nazi ideology. In 1976 the law was replaced by a modern version that put the ecological aspect of protecting nature at the centre of the law (*Bundesnaturschutzgesetz*).<sup>34</sup>

Since 2007 the *National Biodiversity Strategy*<sup>35</sup> coordinates efforts to protect nature and biodiversity in Germany. It is important to note that the strategy is not static, but that it develops over time. For example, in December 2024 the update *National Biodiversity Strategy 2030* was passed by the German Government, incorporating international agreements like the Kunming-Montreal GBF and the EU Biodiversity Strategy 2030. It pursues over 60 goals in more than 20 areas and its implementation is supposed to start through an initial action plan covering around 250 measures by 2027.

## Global market-driven reporting initiatives

The increasing awareness of the materiality of biodiversity loss for business models and therefore also for investors, led to the emergence of initiatives aiming to provide decision makers with information required for decision making, e.g. investment decisions. One of the most relevant initiatives is the Taskforce for Nature Financial Disclosure (TNFD)<sup>36</sup>. The aim of the initiative is to provide a reporting framework for nature, analogue to the Taskforce for Climate Financial Disclosure (TCFD). The purpose of this disclosure framework is for companies to understand their dependencies and impacts on nature and report those in a standardised way so that investors can evaluate the information during an investment decision making process.

## Disclosure regulation

The regulatory and political action covered so far touches on the question on how to avoid economic activities that harm biodiversity and how to promote economic activities that enhance it. This requires disclosures, as it is only possible to assess businesses and investors' economic activities in a meaningful way, if there is a standardised disclosure of how these activities depend and impact on biodiversity. These considerations are the driving force behind the Corporate Sustainable Reporting Directive (CSRD)<sup>37</sup> and the Sustainable Finance Disclosure Regulation (SFDR)<sup>38</sup>. The first one designed to provide investors with the necessary data to make informed investment decisions and the latter designed for investors to request the data from the companies and publicly report on their dependencies and impacts. This logic is linked to the Kunming-Montreal Global Biodiversity Framework (GBF): standardised reporting is required to fill data gaps and allow the tracking of progress towards biodiversity targets.

The current political and regulatory landscape is unfortunately increasingly complex, which leads to uncertainty for businesses and investors. Therefore, the importance of political and regulatory action to stop and reverse biodiversity loss is difficult to overstate, as it is the foundation of life as we know it. This becomes clear when looking at the interconnectivity with the Sustainable Development Goals (SDGs). Progress towards 80 per cent (35 out of 44) of the assessed SDG targets relating SDGs 1-poverty, 2-hunger, 3-health, 6-water, 11-cities, 13-climate, 14-oceans, and 15-land is undermined, if current biodiversity loss is allowed to continue<sup>39</sup>. Loss of biodiversity cannot be considered a purely environmental issue. Due to its interconnectedness, it is an economic and social issue as well.

## Business Case Studies: Understanding dependencies and impacts of economic activities

The importance of biodiversity as an economic and environmental factor can be illustrated by two case studies.

### Case Study dependencies: Understanding how a threat to biodiversity is a threat to the core business model

Founded in 1899 and headquartered in Tokyo, Suntory is a Japanese multinational beverage producer with operations spanning alcoholic drinks, non-alcoholic beverages, and health-oriented products. It is famous for its iconic Japanese, Scottish, and American whiskies. The company positions natural resources, especially water and peat, as central to its business model, as many of its products depend on consistent access to high-quality groundwater. This dependency has shaped Suntory's sustainability approach, which emphasizes watershed protection, responsible water use, and long-term environmental stewardship in the regions where it operates. Suntory also invests in research on ecosystems and water recharge, collaborates with local communities on watershed management.<sup>40</sup>

For this case study the focus lies on Suntory's whisky production at the Hakushu and the Laphroaig distilleries in Japan and Scotland, respectively. Starting at the Hakushu distillery, a materiality analysis identified water quality as key to success. The quality of the water is a key factor linked to the quality of the whisky. Suntory found that the key to high quality water is for the water to be filtered through the biodiversity-rich forest environment that surrounds the Hakushu production site. As a consequence, Suntory created the *Natural Water Sanctuary Initiative*, to protect the water quality, a material factor of its business model Suntory.

The initiative started in Japan, but was extended to Suntory's overseas sites, e.g. in 2019 to the Jim Beam sites in the USA and in 2021 to the Laphroaig site in Scotland. In 2024 Suntory protected 12,000 hectares<sup>41</sup> of land around 23 sites<sup>42</sup>. At the Laphroaig site Suntory took the materiality analysis one step further. Whilst the Hakushu whiskies are not smoky, the Laphroaig whiskies of the Isle of Islay are famously smoky. The smoky flavour is created during the malting process, when peat fire is used to create the heat that stops the germination process.

Unfortunately, the excessive use of peat, not just by the distilleries, has damaged the wetlands on the Isle of Islay. Suntory realised that their business model is at risk: First they rely on the peatlands to filter the water and give it a characteristic taste. Second, they rely on the peat to create the famous smoky flavour. They could have spent their money on lobbying activities to guarantee access to peat, ignoring the state of the wetlands and their importance for the ecosystem and the storage of CO<sub>2</sub>. Instead, Suntory decided to work on restoring and preserving as much peatland as it takes to grow enough peat in a year to cover their annual peat requirements, by 2030. It is important to mention that peat grows at a pace of roughly 1mm a year. As a result, the Suntory *Peatland Water Sanctuary* is working on restoring and preserving 1,300 hectares<sup>43</sup> of peatland.

### Key take aways from this case study?

- › Suntory is embracing double materiality: considering the dependencies as well as the impacts of its economic activities.
- › Addressing biodiversity loss requires multi-stakeholder approaches. Suntory works inter alia with researchers, NGOs, and the local communities to implement its sanctuary approach.

## Case study impacts: How to leave a site with more biodiversity than you found it

Holcim is one of the world's largest building materials companies operating in 60 countries and headquartered in Switzerland. One of the products produced by Holcim is cement in different variations. Holcim as a company is transitioning toward nature-positive operations, with particular attention to biodiversity, climate, and water. This involves commitments to reduce emissions across the value chain, implement science-based targets, expand circular materials use, and rehabilitate or restore natural ecosystems linked to its sites, especially quarries.<sup>44</sup>

The focus of this case study is Holcim's impact on biodiversity at its quarries and how the consequences of its economic activities are being analysed, monitored, and addressed. Having recognised the impact of its quarries, in 2007 Holcim started working with the *International Union for Conservation of Nature* (IUCN) on creating rehabilitation plans for its quarries.<sup>45</sup> Its latest *Quarry Rehabilitation and Biodiversity Directive* (2024) formalises this process and sets mandatory requirements for how all extraction sites are managed to limit ecological damage and ensure rehabilitation after quarrying ends. This includes sites at all stages of their lifecycle, i.e. active, inactive, and decommissioned sites. The Directive establishes minimum global standards, covering legal compliance, site-level impact assessments, and the preparation of rehabilitation plans. It also requires regular updates to these plans and dedicated financial provisions to ensure that rehabilitation can be carried out even after site closure. It is crucial to note that the plans are being created, and the provisions are being made before extraction begins.

### But what does this mean in terms of operations?

The cornerstone of the approach chosen by Holcim is the implementation of the science-based *Biodiversity Indicator and Reporting System* (BIRS)<sup>46</sup>, developed with IUCN for the cement and aggregates sector. The system serves as a standard tool for assessing and monitoring biodiversity conditions across sites. In line with the findings of the tool, restoration work should begin while extraction is still ongoing, to encourage transformative rehabilitation where ecological value can be increased beyond pre-extraction conditions. Holcim also specifies that rehabilitation outcomes need to be measurable through standardized indicators rather than left to discretionary judgment.<sup>47</sup>

### Key take aways from this case study:

- › Any meaningful approach needs to be science-based.
- › Multi-stakeholder approaches, like the partnership with the IUCN provides access to expertise, needed to generate meaningful impact.
- › Projects should take biodiversity into consideration throughout the full life cycle, not just once the damage is done.

### Where to from here?

The future of life on this planet as we know it will be determined by our ability to stop and reverse biodiversity loss. As mentioned at the beginning, it is a matter of societal value systems and also of taking responsibility for the preservation of the natural resources as foundations of life – today and also for future generations.

Statements like this, whilst true, can be daunting and can lead to action paralysis. The first take away from this text should be to break things down from the big abstract discussion to the (hyper-) local actions that are needed. Addressing biodiversity loss means addressing the drivers of

biodiversity loss. Once the focus shifts to the drivers, the situation is less daunting and possible actions become clearer.

This also means that climate change mitigation and adaptation should be seen as interconnected with biodiversity loss and therefore should be a priority: Climate change mitigation helps against biodiversity loss – action against biodiversity loss helps with climate mitigation. Using standards like the IUCN Nature-based solution helps with both.

Biodiversity loss cannot be tackled by any stakeholder group alone. Building multi-stakeholder partnerships is essential, because biodiversity is a (hyper-) local issue. It is necessary to work with and trust the communities on the ground who are affected by the impacts. Likewise, it is essential to build natural and social science-based approaches. The business case studies show what is possible to take action, when the relevant stakeholders come together.

Finally, the perception of disclosure as being simply a bureaucratic burden needs to be adjusted. It is true that disclosure should not exist for the sake of disclosure. However, it is also true that disclosure forms the basis for taking action in a situation of polycrisis that threatens the future of our businesses and our economy. Without standardised high-quality information, stakeholders, like investors and regulators, cannot make informed decisions.

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<sup>1</sup> [IPBES \(2019\), Global assessment report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.](#) [15/12/2025],

[IPBES \(2022\). Methodological Assessment Report on the Diverse Values and Valuation of Nature of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.](#) [15/12/2025],

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[IPBES \(2026\). IPBES Business and Biodiversity Assessment: Summary for Policymakers.](#) [23/02/2026]

<sup>2</sup> [IUCN, Nature-based Solutions for climate](#) [15/12/2025]

<sup>3</sup> [IPBES \(2019\), Global assessment report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.](#) [15/12/2025]

<sup>4</sup> [Dasgupta, P. \(2021\). The Economics of Biodiversity: The Dasgupta Review. \(London: HM Treasury\)](#) [15/12/2025]

<sup>5</sup> [IPBES \(2019\), Global assessment report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.](#) [15/12/2025]

<sup>6</sup> [Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy](#) [15/12/2025],

[Managing nature risks: From understanding to action](#) [15/12/2025],

[IPBES \(2026\). IPBES Business and Biodiversity Assessment: Summary for Policymakers.](#) [23/02/2026]

- <sup>7</sup> [Nature Action 100](#) [15/12/2025]
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- <sup>10</sup> [The International Chemical Secretariat](#) [15/12/2025]
- <sup>11</sup> [ChemSec Marketplace: Safer alternatives](#) [15/12/2025]
- <sup>12</sup> [Investor Initiative on Hazardous Chemicals](#) [15/12/2025]
- <sup>13</sup> [International Integrated Reporting Council, now part of the IFRS Foundation](#) [15/12/2025]
- <sup>14</sup> [The International <IR> Framework \(2021\), p.22](#) [15/12/2025]
- <sup>15</sup> Please see two contributions: [AXA Investment Manager “Busting myths for investors tackling biodiversity and deforestation”](#) and [Friends of the Earth International “No Net Loss of Biodiversity: A False Solution”](#). They both highlight the similar issues, but from different standpoints. [15/12/2025]
- <sup>16</sup> [Convention on Biological Diversity](#) [15/12/2025]
- <sup>17</sup> [The Kunming-Montreal Global Biodiversity Framework \(GBF\)](#) [15/12/2025]
- <sup>18</sup> [GBF 2025 Goals](#) [15/12/2025]
- <sup>19</sup> [GBF 2030 Targets](#) [15/12/2025]
- <sup>20</sup> [United Nations Biodiversity Conference, COP16](#) [15/12/2025],  
[Decision adopted by the Conference of the Parties to the Convention on Biological Diversity](#) [15/12/2025]
- <sup>21</sup> [“Guardians of Biodiversity”: Brasil Coordinates Largest Indigenous Participation in COP History](#) [15/12/2025]
- <sup>22</sup> [A COP30 call for policy coherence and integrated finance strategies](#) [15/12/2025]
- <sup>23</sup> [United Nations Conference on Environment and Development](#) [15/12/2025]
- <sup>24</sup> [Protecting the environment and oceans with the Green Deal](#) [15/12/2025]
- <sup>25</sup> [Biodiversity strategy for 2030](#) [15/12/2025]
- <sup>26</sup> [Natura 2000: The largest network of protected areas in the world](#) [15/12/2025]
- <sup>27</sup> [Nature Restoration Regulation](#) [15/12/2025]
- <sup>28</sup> [Regulation on Deforestation-free Products](#) [15/12/2025]
- <sup>29</sup> [Common fisheries policy \(CFP\)](#) [15/12/2025]
- <sup>30</sup> [Climate action and the Green Deal](#) [15/12/2025]
- <sup>31</sup> [Zero Pollution Action Plan](#) [15/12/2025]
- <sup>32</sup> [Chemicals strategy](#) [15/12/2025]
- <sup>33</sup> [Invasive alien species](#) [15/12/2025]
- <sup>34</sup> [Hönes, ER. 80 Jahre Reichsnaturschutzgesetz . NuR 37, 661–669 \(2015\).](#) [15/12/2025]
- <sup>35</sup> [Nationale Strategie zur Biologischen Vielfalt](#) [15/12/2025]

- <sup>36</sup> [Taskforce on Nature-Related Financial Disclosure](#) [15/12/2025]
- <sup>37</sup> [Corporate sustainability reporting](#) [15/12/2025]
- <sup>38</sup> [Sustainability-related disclosure in the financial services sector](#) [15/12/2025]
- <sup>39</sup> [Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating'](#)  
[15/12/2025]
- <sup>40</sup> [Water Sustainability](#) [15/12/2025]  
[Natural Water Sanctuary Initiative](#) [15/12/2025]
- <sup>41</sup> Roughly 16,800 football fields
- <sup>42</sup> [The Peatland Water Sanctuary Initiative](#) [15/12/2025]
- <sup>43</sup> Roughly 1800 football fields
- <sup>44</sup> [Holcim on Nature](#) [15/12/2025]
- <sup>45</sup> [Partnership between Holcim and IUCN](#) [15/12/2025]
- <sup>46</sup> [Biodiversity Indicator and Reporting System \(BIRS\)](#) [15/12/2025]
- <sup>47</sup> For more information please see "[Rehabilitating quarries and bringing nature into cities](#)"  
[15/12/2025].

## Imprint

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