

Biodiversity: Key steps to future- proof businesses

€50 trillion of annual global economic activity is moderately to highly dependent on nature.



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How do companies consider the role of biodiversity in their operations?



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Sweco's analysis reveals that 82% of the 50 largest European manufacturing and energy companies have identified biodiversity as a material topic in terms of impact materiality. However, only 16% recognised biodiversity as financially material, indicating a potential blind spot in risk management.



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"There is no net-zero without nature." This principle is increasingly guiding companies to integrate biodiversity into their climate strategies.

Biodiversity: Key steps to future-proof businesses

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Over 50 trillion reasons for being biodiversity-conscious

Biodiversity is rapidly emerging as a critical pillar of business resilience and long-term value creation. Nature delivers essential services, such as regulating climate, purifying water, pollinating crops, and protecting infrastructure. With more than €50 trillion in global economic activity moderately to highly dependent on nature, protecting biodiversity is a strategic necessity.

Solutions aimed at adding value to the nature could generate nearly €10 trillion in business value and create 395 million new jobs globally by 2030.

To better understand how industries are responding to biodiversity loss, Sweco recently examined how the 50 largest European manufacturing and energy companies are addressing biodiversity in their sustainability reporting. The results reveal a growing recognition of biodiversity impacts, but a possibility for persistent underestimation of biodiversity-related financial risks:

- 82% of companies identified impact on biodiversity as a significant topic.
- Only 16% recognised biodiversity as financially significant, showing a potential gap in risk awareness.

Sweco experts recommend five practical and iterative actions for building nature-aligned business strategies.

1. Understand company's activities and value chains
2. Know your businesses' impacts and dependencies
3. Collaborate to shape the future
4. Manage risks and leverage opportunities
5. Transform to make business for nature

By integrating biodiversity and climate strategies into their core operations, businesses worldwide are increasingly recognising the crucial role of healthy ecosystems in achieving long-term sustainability and profitability.

Foreword

At Sweco, we are committed to shaping sustainable cities and communities. Recognising the crucial role of biodiversity, we understand that integrating biodiversity into business strategies is essential for ensuring both immediate and long-term success. Healthy ecosystems provide vital services such as pollination, water purification, and climate regulation – services that are indispensable for human well-being and economic stability. More than €50 trillion of annual global economic activity is moderately to highly dependent on nature¹.

As a leading engineering and architecture consultancy in Europe, we are aware of the severity of challenges posed by extreme weather events, biodiversity loss and ecosystem collapse. These issues rank among the top two global risks in the next decade and demand urgent and informed action.² Over 28% of assessed species globally, and 25% in Europe, are threatened by extinction³, impacting food security, water supply, climate change, and human health.

Globally, the Kunming-Montreal Global Biodiversity Framework (GBF), adopted in 2022, aims to halt and reverse biodiversity loss by 2030, setting ambitious targets such as conserving 30% of land and marine areas and mobilising €195 billion annually for nature protection. Business leaders and developers, including Sweco, play a pivotal role in this endeavor.

Sweco is driving the shift to biodiversity-conscious societies and businesses, spurred by regulatory changes, increased investor demands, and heightened societal concern for environmental impacts. We encourage our clients and partners to be at the forefront of this transition.

Digitalisation is a key enabler in this journey. Businesses can use nature-tech solutions, AI-driven strategies, and digital tools to monitor and enhance biodiversity efforts, improving data collection and decision-making.

Solutions aimed at adding value to nature could generate nearly €10 trillion in business value and create 395 million new jobs globally by 2030⁴. By integrating biodiversity and climate strategies into core operations, businesses can contribute to positive societal changes, mitigate risks through resilient business models and tap into new markets and business opportunities.

This report explores the crucial role of biodiversity for businesses, examining both short and long-term impacts and highlighting common challenges. We also present results from Sweco's analysis of the 50 largest European manufacturing and energy companies' positions on the significance of biodiversity – both from the perspective of impacts caused and financial implications to the company. Finally, to support companies' in their biodiversity work and future success, Sweco's experts suggest five key actions to future-proof your business.

The choices we make today will shape the future health of our ecosystems, communities, and businesses. Healthy ecosystems ensure a reliable supply of food and energy, protect against extreme weather events, and reduce operational and financial risks

Piia Pessala, Executive Director in Biodiversity at Sweco in Finland.



Biodiversity in business



The role of biodiversity in business

What are the risks?

Biodiversity loss is a critical issue globally as the planet faces its sixth mass extinction, potentially losing over a million species within a decade. More than 90% of biodiversity loss and water stress is estimated to be due to the extraction and processing of natural resources, driven by the 'take-make-waste' economy. In addition to resource use, the key drivers of biodiversity loss are land use, sea use and change of use, climate change, pollution and invasive species⁵.

Businesses rely heavily on the stability of natural systems, even if the connection to nature is not always obvious. In Europe, ecosystems such as forests, wetlands, peatlands and coastal areas play critical roles in maintaining the environmental conditions that support industrial operations.

These ecosystems regulate water flows, buffer temperature extremes, reduce flood risks, provide oxygen and improve soil resilience – all of which are essential for the smooth functioning of infrastructure and supply chains. The effectiveness of these systems is directly tied to biodiversity. A greater variety of species within an ecosystem means greater resilience and efficiency in providing these services⁶. In other words, when biodiversity is lost the ability of these systems to perform their essential functions is diminished.

The impacts of biodiversity loss are particularly acute during Europe's summer months, when demand for water grows and extreme weather events, such as droughts and floods, become more frequent and severe. Reduced river levels, for instance, can disrupt inland waterway freight and cooling water supply. Wildfires can damage critical infrastructure, such as energy grids and pipelines. Flood events can halt production, damage facilities and lead to costly repairs. For businesses, particularly in the manufacturing and energy sectors, this can introduce significant operational and financial risks.

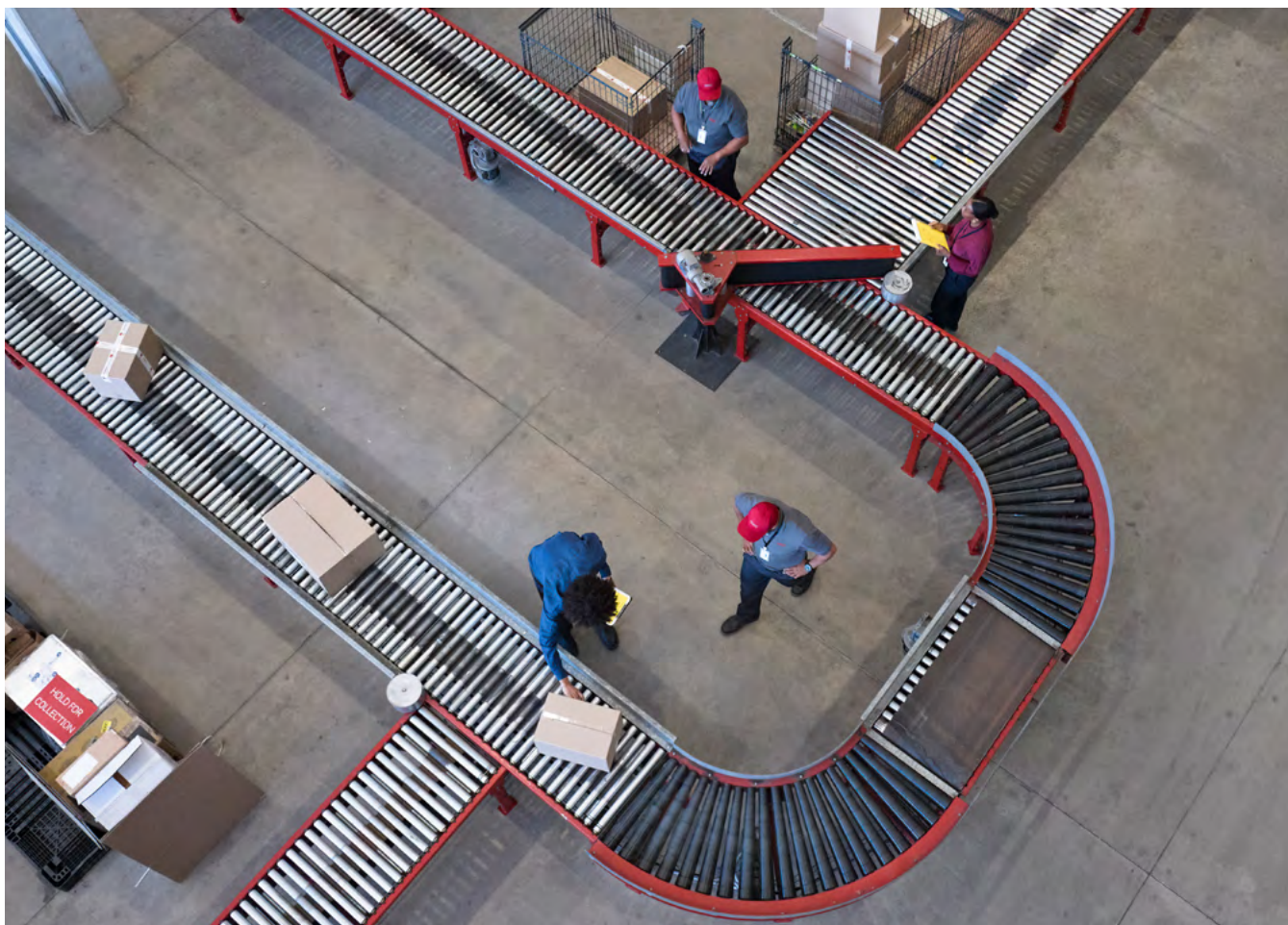
What are the business opportunities?

Given this dependency, biodiversity should be recognised as a significant asset that underpins the stability of industrial operations. By

understanding and addressing the importance of biodiversity, companies can better future proof their operations and reduce potential disruptions, while at the same time unlocking new business potential.

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) stresses that halting global biodiversity loss requires transformative changes in not just economic, but also

social, political and technological aspects, beyond mere conservation efforts. In fact, global agreements and the financial sector's focus on biodiversity-related risks present clear business opportunities. Therefore, to succeed, stay resilient and leverage competitive advantage, both knowledge of biodiversity and having strategies and goals that clearly connect biodiversity with the company's business development and models are required.



Examples of nature dependencies in the energy and industry sectors



Monoculture vulnerability causing losses to business and society

Key dependency: Mixed-species forests consisting of both coniferous and broadleaved trees are more resilient to pests and extreme weather events and also deliver improved water regulation and long-term carbon sequestration.

Financial implications: Financial implications from less resilient monocultures can be direct (e.g. loss of raw material) or more indirect through loss of vital ecosystem services. Homogeneous plantations allow pests to spread more easily, as there are no non-host species to slow them down. Their uniform root systems and canopy structures also make them more vulnerable to wind damage during storms. Additionally, they contribute less to soil health by limiting nutrient diversity and offer weaker support for healthy, resilient, and diverse plant communities compared to mixed-species forests. This means that monoculture forests are more susceptible to large scale damage, with direct implications for the land owners and related industries, but also for the recreational use of forest areas.

Examples of costs: The spruce bark beetle outbreak in the Czech Republic has resulted in significant economic losses, estimated to be around €1.7 billion in 2020⁷. This estimate encompasses both revenue loss and loss resulting from premature felling of trees.



Water scarcity and ecosystem health impacting businesses

Key dependency: Freshwater ecosystems provide critical water resources for manufacturing operations, hydroelectric power, and cooling systems used in power plants and across various industries. These ecosystems also support navigable waterways, enabling the cost-efficient transport of raw materials and finished products across regions.

Financial implications: Biodiversity loss degrades landscapes and soils, reducing water retention and causing greater fluctuations in water levels. This undermines the reliability of water supplies and transport routes, creating financial risks. Manufacturers may experience production delays, higher water treatment and procurement costs, and transport disruptions due to low waterway navigability. Energy companies relying on hydropower or water-cooled thermal plants face output losses during droughts or variable flows. Low water levels restrict cargo capacity, delay deliveries, increase transport costs, and disrupt just-in-time supply chains. Additionally, resource conflicts and stricter regulations can raise compliance costs and harm corporate reputations.

Examples of costs: It has been estimated that in a month with 30 days of low water in the Rhine river, industrial production in Germany declines by about 1%⁸. This highlights the critical dependency of industry in certain countries on navigable waterways, which in turn are affected by fluctuations in ecosystem health.



Rising costs for industries with high resource-dependency

Key dependency: Healthy ecosystems provide raw material for industrial manufacturing, such as for pharmaceuticals, chemicals and paper to name a few. Resource extraction industries such as forestry and mining rely heavily on nature to maintain a consistent supply of raw materials.

Financial implications: For industries reliant on natural resources, such as building materials (timber, aggregates) and energy (fossil fuels, bioenergy), ecosystem degradation can lead to limited availability and/or the reduced quality of raw materials, which, in turn, can result in higher costs and/or supply shortages. For example, timber supply disruptions due to forest fires can drive up procurement costs for construction and manufacturing projects, while reduced fish stocks can affect the seafood industry and other dependent businesses like those in the retail and hospitality sectors.

Examples of costs: Between 1960 and 2020 the total costs of invasive species in Europe summed to €116.61 billion, with the majority (60%) being damage-related and impacting multiple sectors⁹. This underscores the extensive financial burden these species impose on natural resource industries.

The status of biodiversity considerations in companies

How do the 50 largest European manufacturing and energy sector companies consider biodiversity?

Sweco has analysed how many of the 50 largest (revenue-based) European manufacturing and energy sector companies have identified biodiversity as a significant sustainability topic in terms of impact materiality and financial materiality in their double materiality assessments (DMA).

In addition to the companies' CSRD reporting, Sweco assessed how the group of manufacturing and energy sector companies report on the EU Taxonomy. The EU Taxonomy is a classification system that aims to help investors and companies to identify environmentally sustainable economic activities and direct capital flows toward companies and projects that support, i.e. make a substantial contribution to, the EU's environmental objectives. Finally, Sweco also carried out an analysis of

the biodiversity impacts and dependencies of the manufacturing and energy sectors' own operations using the ENCORE (Exploring Natural Capital Opportunities, Risks, and Exposure) tool¹⁰.

How do the companies consider the role of biodiversity in their operations?

The results of the analysis show that 82% of the 50 companies included in the analysis have identified biodiversity as a significant topic in terms



of impact materiality, while only 16% of the companies have identified biodiversity as being significant in terms of financial materiality.

The analysis conducted using ENCORE reveals that both the manufacturing and energy sectors, have significant direct dependencies and impacts on biodiversity. Both sectors have at least moderate dependencies on multiple ecosystem services, illustrating varying degrees of reliance on natural resources that could quantify as financial risks as biodiversity loss continues. As most of the com-

How do the 50 largest European manufacturing and energy sector companies report on EU Taxonomy?

4%

reported undertaking economic activities that significantly contribute to the protection and restoration of biodiversity and ecosystems.

60%

reported undertaking activities that significantly contribute to climate change mitigation and/or adaptation.

12%

reported undertaking activities that significantly contribute to sustainable use of water, pollution prevention and/or circular economy transition.

24%

did not report on EU Taxonomy in their 2024 reports.

panies assessed have recognised in their DMAs, the ENCORE analysis confirms that both of the assessed sectors also have profound direct impacts on biodiversity.

The protection and restoration of biodiversity present business opportunities

Regarding the companies' EU Taxonomy reporting, 4% reported having economic activities that have substantial contribution to the objective of protection and restoration of biodiversity and ecosystems. However, according to the technical screening criteria in the latest version of the Environment Delegated Act,¹¹ the common economic activities carried out by companies operating in the energy and manufacturing sectors do not qualify as substantial contributions to the objective of the protection and restoration of biodiversity and ecosystems. While the assessed companies' main economic activities do not, as such, qualify as per the EU taxonomy's definition of sectors making a substantial contribution to increasing biodiversity, the finding of 4% being eligible suggest that companies within the manufacturing and energy sectors can form innovative and profitable business models that provide substantial positive contribution to biodiversity.

Whilst only a minority of the assessed companies indicated that they had direct economic activities that make a substantial contribution towards biodiversity, 60% of the 50 companies assessed reported that their economic activities are eligible to make a substantial contribution for climate change mitigation and/or climate change adaptation and 12% of the companies reported that their economic activities are eligible to make a substantial contribution to sustainable use and the protection of water and marine resources, pollution prevention and control and/or transition to a circular economy. Thus, most of the companies assessed have the potential to make substantial positive contributions towards environmental objectives that act as drivers for biodiversity loss, providing possible avenues for indirect biodiversity considerations. 24% of the companies, did not report on EU Taxonomy in their 2024 reports.

Rising regulatory pressure and public expectations prompt companies to assess the impacts, risks and opportunities related to biodiversity. However, quantifying the financial impacts of biodiver-

Multiple factors affect on how companies analyse and report on biodiversity

- Biodiversity impacts are often complex and hard to quantify, making financial risk assessments challenging compared to metrics like carbon emissions or water usage.
- Companies can perceive biodiversity-related financial impacts as long-term impacts, yielding lower scores in DMAs.
- The financial implications of biodiversity are often inter-linked with the financial implications of other sustainability topics, for example, climate change, thus causing companies to consider these financial risks under another environmental topic such as climate change.
- The CSRD and the guidelines for DMAs shape how companies report on biodiversity.
- The distinction between impact materiality and financial materiality in DMAs can reflect companies' different priorities and perceptions regarding corporate responsibility and financial outcomes.

sity loss and directing capital flows towards biodiversity actions remains complex. Improved methodologies and standardised metrics can help companies better understand and quantify biodiversity-related financial risks. Advances in risk assessment tools and data analytics can illuminate how biodiversity risks translate into financial risks and visualise links between biodiversity and other environmental issues like climate change.

Financial materiality is traditionally linked to investor priorities regarding profitability and risk. If investors do not demand biodiversity data and view it as financially significant or put emphasis on biodiversity-specific EU taxonomy criteria, companies may deprioritise biodiversity work. However, growing investor and public awareness of ESG issues is likely to increase pressure on companies to recognise the significance of biodiversity.

Scope of Sweco's analysis

The group of energy companies included in Sweco's analysis represented sub-industries such as oil, gas, electricity, utilities and renewables. While the group of manufacturing companies included sub-industries such as automotive manufacturing, industrial manufacturing, steel manufacturing, construction related manufacturing and many more. The analysis on double materiality assessments and EU taxonomy was based on companies' sustainability or annual reports for 2024.

The environmental objectives covered by the EU Taxonomy are climate change adaptation, climate change mitigation, sustainable use and protection of water and marine resources, pollution prevention and control, transition to a circular economy and protection and restoration of biodiversity and ecosystems.

DMA is a tool companies use to identify the most significant sustainability topics for them – both from the perspective of financial impacts on the company and the company's impacts on the environment and society. DMA are the key to defining which sustainability topics companies need to report on according to the EU Corporate Sustainability Reporting Directive (CSRD), but DMA results also provide valuable insights into advancing companies holistic sustainability.

The ENCORE analysis was carried out for the manufacturing and energy sub-industries that the companies included in the group of the 50 largest European companies represent. The analysis was conducted to gain further understanding about the biodiversity dependencies and impacts that the companies within the manufacturing and energy sectors are facing in general. The ENCORE analysis focused on the sectors' operations in general and should not be seen as targeting any specific European company. The analysis did not cover supply chain impacts and dependencies.



How do the largest manufacturing sector companies in Europe address biodiversity?

Among the manufacturing sector companies analysed, 67% have identified biodiversity as an important topic in terms of impact materiality, while 21% of the companies have identified biodiversity as being important in terms of financial materiality. Of the 21% who identified biodiversity as being material in both categories, companies highlighted biodiversity risks such as restricted availability of raw materials and potential legal issues due to possible environmental non-compliance. Biodiversity opportunities cited by the companies include increased supply chain resilience, operational efficiency, reduced reliance on natural resources and growing demand for biodiversity-driven products.

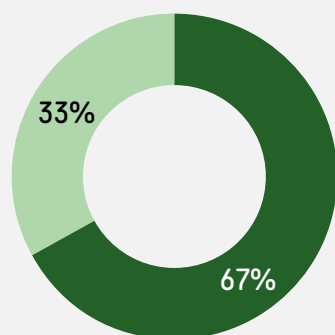
The ENCORE analysis highlights a variety of biodiversity dependencies within the manufacturing sector companies' own operations. The level and type of dependency on biodiversity and healthy ecosystems varies from one sub-sector to another. The highest dependencies relate especially to water supply, speci-

fically in basic metals manufacturing. Examples of dependencies common across all the analysed manufacturing sectors include the different regulating services carried out by healthy ecosystems such as dependency on water purification, water flow regulation, as well as flood and storm mitigation..

In terms of direct impacts, different types of disturbances and emissions of toxic pollutants are among the most significant, with emissions of non-greenhouse gas (GHG) air pollutants and solid waste generation also causing biodiversity impacts. However, when considering the supply chain, the scope of biodiversity dependencies and impacts extends significantly. Raw material extraction, agricultural processes, transportation, and intermediate processing stages introduce additional dependencies on water supply, climate regulation, and soil services. These upstream activities amplify the sector's overall environmental footprint through habitat destruction, increased greenhouse gas emissions and water pollution.

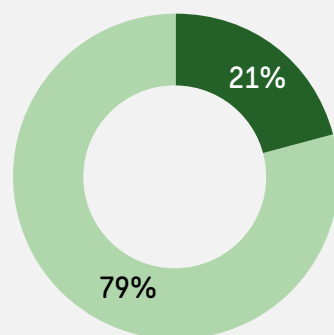


Biodiversity is material in terms of **impact materiality**

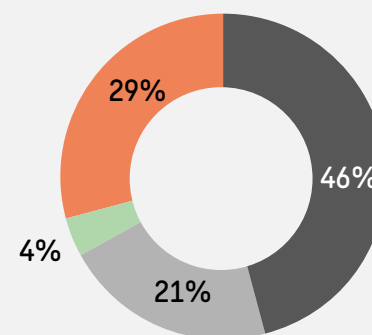


■ Yes ■ No

Biodiversity is material in terms of **financial materiality**



Economic activities are eligible for substantial contribution for



- Only climate change mitigation and/or climate change adaptation
- Sustainable use and protection of water and marine resources, pollution prevention and control and/or transition to a circular economy (in addition to climate change mitigation and/or adaptation)
- Protection and restoration of biodiversity and ecosystems (in addition to other environmental objectives)
- Company has not reported on EU Taxonomy

How do the largest energy sector companies in Europe address biodiversity?

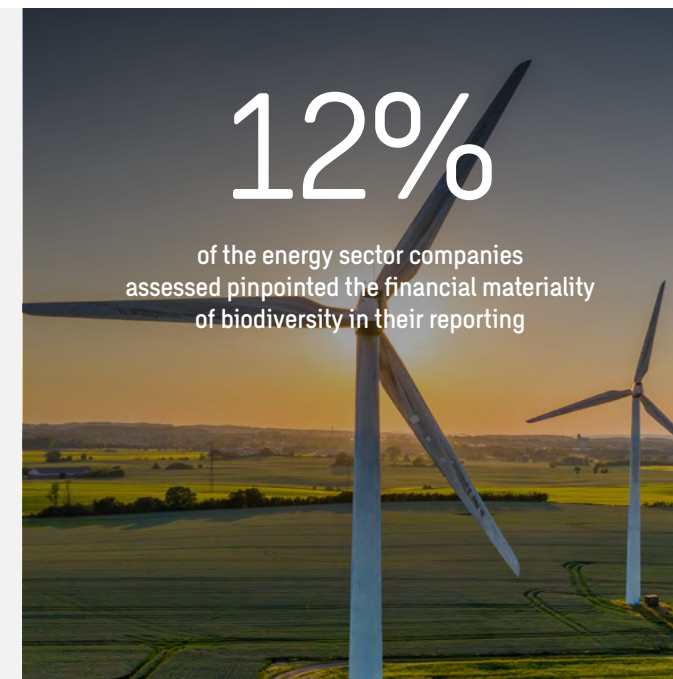
96% of the energy sector companies analysed, have identified biodiversity as a material topic in terms of the company operations having a significant impact on biodiversity. However, only 12% of the energy sector companies analysed have identified biodiversity as a financially material topic. Companies seeing biodiversity as financially material identified related risks like operational restrictions due to droughts and ecosystem collapse and opportunities like focusing on renewable energy production.

The ENCORE analysis results for energy sector companies vary notably between different sub-industries and dependencies vary from very low to very high across different ecosystem services. Biomass-based energy production has low or very low dependencies relating to many ecosystem services and is mostly reliant on biomass provisioning, water purification and rainfall pattern regulation. Hydropower, on the other hand, is very highly dependent on water supply, water flow regulation and flood mi-

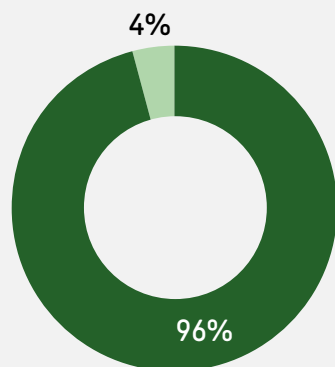
tigation services, as well as soil and sediment retention. Solar and wind energy production represent sub-sectors that are very highly dependent on global climate regulation services.

In terms of impacts, the energy sector significantly disturbs ecosystems and contributes to emissions of GHG and other air pollutants. For example, the impacts from biomass energy production are high and the impacts from fossil fuel energy production are very high when it comes to GHG emissions and other air pollutants. Gas and fossil fuel energy production also generate toxic pollutant emissions that affect the water and soil. In solar and wind energy production, these emissions are low or very low, respectively.

If the energy sector's supply chain biodiversity dependencies and impacts are taken into account, including activities such as the extraction of raw materials and transportation, they these would add additional dependencies relating to water supply and soil retention, for example.

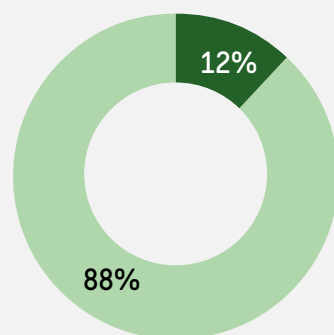


Biodiversity is material in terms of **impact materiality**

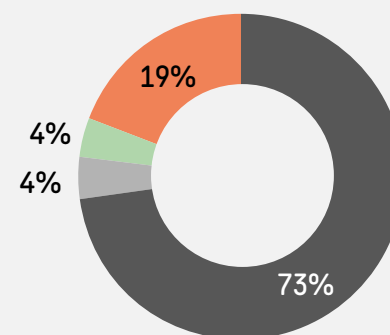


■ Yes ■ No

Biodiversity is material in terms of **financial materiality**



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- Only climate change mitigation and/or climate change adaptation
- Sustainable use and protection of water and marine resources, pollution prevention and control and/or transition to a circular economy (in addition to climate change mitigation and/or adaptation)
- Protection and restoration of biodiversity and ecosystems (in addition to other environmental objectives)
- Company has not reported on EU Taxonomy

Biodiversity in financial decision-making

Filling in the financial gap

The European Commission estimates that at least 7-8% of annual GDP must be directed toward green investments to meet the 2030 and 2040 climate targets.¹² To help meet this daunting challenge, the EU has, among other initiatives, launched the EU Biodiversity Strategy for 2030, which sets out several objectives. At least €20 billion a year should be unlocked for spending on nature, and a sig-

nificant proportion of the EU budget dedicated to climate action will be invested in biodiversity and nature-based solutions.

Another objective of the EU Biodiversity Strategy is that a dedicated natural capital and circular-economy initiative will be established to mobilise at least €10 billion over the next 10 years, based on public/private blended finance. Furthermore, the EU has decided that the

long-term EU budget for 2021-2027 should dedicate 7.5% of annual spending to biodiversity in 2024, to be increased to 10% in 2026 and 2027.¹³

The EU aims to minimise the financing gap for green investments. However, the EU's efforts alone are not enough in order to close the gap. This is only possible with collective effort, and here the financial sector plays an important role.



Bridging the awareness gap

Central banks and financial institutions are increasingly conducting nature stress testing and assessing the economic impacts of nature loss in their portfolios.¹⁴ Globally, the Finance for Biodiversity Pledge with its 200 signatories representing €23 trillion in assets across 28 countries showcases financial institutions commitment to, for example, impact assessment, target setting, and public reporting¹⁵.

As an example of country-level engagement, the Finnish financial sector recently put forward a commitment to support measures to promote the goals of the Kunming-Montreal GBF. The commitment includes indicators to describe and monitor the sector's measures to prevent biodiversity loss between 2024 and 2028. The progress of the sector's biodiversity engagement will be monitored using an annual survey.¹⁶



Even though awareness is increasing among financial organisations that nature loss is a financially material issue, a recent Norwegian Bank Investment Management (NBIM) survey shows that many companies are sceptical about whether investors fully assess nature impacts and dependencies as part of financing decisions. This pinpoints that it is crucial, when promoting biodiversity financing, that there is a mutual understanding and belief between the financial sector and businesses that both are indeed engaged and committed, and that these stakeholders understand each other's incentives and requirements.¹⁷

Multiple instruments for financing biodiversity

Debt financing is the largest sustainable investment flow, of which green bonds remain the primary financing instrument with annual EU issuance exceeding € 200 billion since 2021¹². The eligibility criteria for being included in a green bond differs between financiers based on their business profile, and investors have been relying on various sources for guidance, including academics, investment advisers, auditors, technical experts, and the media. However, the voluntary Green Bond Principles (GBP) are being widely used. As per the EU Green Bond Standard, the core principle is that proceeds from



Examples of instruments in the private sector financing toolbox

- nature-focused use of proceeds
- sustainability-linked bonds/loans
- nature impact funds
- nature venture capital and equity investing (e.g. early-stage tech, new products)
- insurance products
- biodiversity certificates/credits

these European green bonds shall be used for projects with economic activities that align at least 85% with the EU Taxonomy Regulation¹⁸.

As an example, Nordea lists in its green funding framework¹⁹ the green bond assets categories that they have identified as relevant to increase positive impact or reduce negative impact on the environment, such as the restoration of degraded and damaged ecosystems and habitats including forests and woodlands, reforestation with native or naturalised species, restoration of disused production areas and retrofitting infrastructure such as green roofs, green walls and wildlife passages. Another example is the protection and preservation of biodiversity and natural ecosystems including R&D and technology dedicated to monitoring, reporting and verifying biodiversity impacts such as drones, satellite monitoring and platforms for nature-based solutions.

Transparency is needed to facilitate informed financial decisions

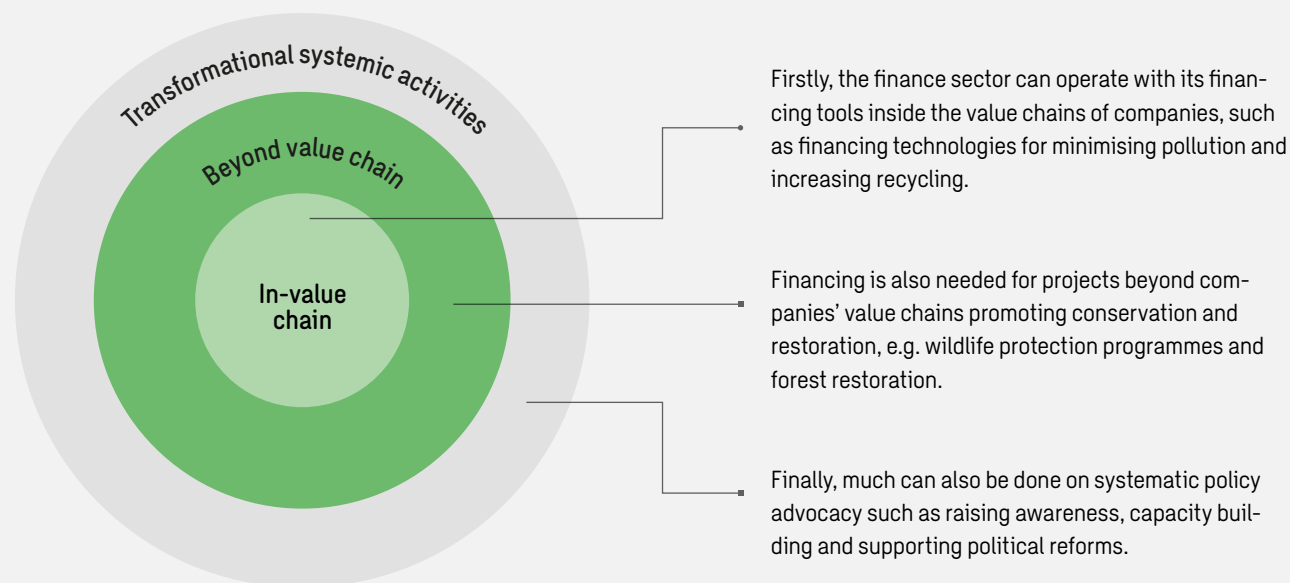
Biodiversity is a complex topic with many processes involved. This requires private sector financial institutions to tackle the topic from different angles to promote biodiversity effectively, both regarding what to finance and how to finance it. Biodiversity financing covers three perspectives to help businesses reduce their nature footprint, focusing on inside-out (meaning in-value chain investment), beyond value chain investment and transformational systematic activities.²⁰

To promote biodiversity effectively, the financial sector needs to incorporate biodiversity risk assessments to make informed investment decisions. Hence, ensuring that this information is available is one way of attracting funding and future-proofing one's portfolio. Sustainability reporting requirements have increased lately. If compa-

nies assess biodiversity to be a material sustainability topic for their business – based on impact materiality, financial materiality or both – the CSRD requires companies in scope to report on their impacts and dependencies relating to biodiversity and ecosystems. One of the main purposes of the Directive is to enable investors and other stakeholders to make informed decisions when seeking to engage in sustainable activities and businesses.

Finance institutions need information on, for example, biodiversity impact assessments, goals and strategies for biodiversity, transparency in supply chains, as well as metrics and indicators to measure biodiversity-related outcomes and progress. The future-proofing steps as listed in this report provide clear guidance on how to make your business more attractive in terms of securing funding.

A variety of biodiversity enhancing activities need financing



Key steps to future-proof your business



Biodiversity is a complex topic, and adapting operations to become aligned with nature can seem overwhelming. However, getting started does not have to be difficult – the important thing is to take that first step. Regardless of how small the initial action is, it will contribute to future-proofing your business and a better planet. The following sections highlight five steps that Sweco advises that companies undertake. These steps, performed simultaneously and iteratively, form the backbone of a resilient and more competitive business strategy.

- 1 Understand your company's activities and value chains
- 2 Know your business' impacts and dependencies
- 3 Collaborate to shape the future
- 4 Manage risks and leverage opportunities
- 5 Transform to make business for nature

1

Understand your company's activities and value chains

Accountability and awareness through value chain knowledge

Gaining a clear understanding of the processes and stakeholders involved in one's business leads to increased transparency, accountability and awareness. This can enable better collaboration with, for example, suppliers, customers and partners, encouraging shared sustainability goals and practices. In the context of biodiversity, value chain mapping offers insights on potential risks and vulnerabilities such as dependency on scarce resources or exposure to environmental impacts.

How to succeed in value chain mapping?

When mapping your value chain, it can be beneficial to begin by analysing your own operations before extending the breakdown to upstream and downstream activities. Start with mapping the main activities in your core business, as well as identifying the relationships associated with those activities. To begin, it is helpful to address fundamental questions such as 'What activities do we perform in our operations in general?' and 'What resources and relationships do we need to carry out those activities?'. Using, for

example, International Standard Industrial Classification (ISIC) coding ensures that the mapping is systematic and increases comparability and transparency by standardising the classification of economic activities, allowing for accurate data analysis and informed policy making.²¹

Once you have a better understanding of your own operations, the next step is to focus on mapping the upstream segments of the value chain, including direct suppliers and their suppliers.



Achieving a comprehensive understanding of your value chain also involves engaging directly with stakeholders. For instance, many key questions, such as the content or origin of goods, can be answered effectively through interactions with suppliers. For many businesses, the value chain extends globally and includes multiple tiers of suppliers. Thus, building transparency and strong relationships through-out the entire value chain is important for tracking the origins of raw materials and other critical components. Regardless of whether your focus is on biodiversity or other areas, maintaining constant and transparent communication with suppliers is necessary for mitigating potential risks within the value chain.

Mapping the downstream part of a value chain involves identifying end customers and pinpointing distribution channels, such as retailers, wholesalers and direct sales. Each intermediary should be detailed, capturing all levels from direct customers to final consumers. Tracking the flow of goods, services and information can give an understanding of the creation and movement of value. Additionally, to further enhance the mapping of the value you add to society, try to contextualise your downstream activities accordingly. Once you have understood your operational context through your value chain mapping, it will be easier to grasp your impacts and dependencies on biodiversity.

Mapping value chain and double materiality assessment

Sweco in Sweden has supported Södra, the largest forest-owner association in Sweden, in their double materiality analysis and the identification of impacts, risks and opportunities. The assessment began with value chain mapping, covering both Södra's own operations and upstream and downstream actors. The key impacts identified included Södra's forestry practices, which affect biodiversity both in a positive and negative way. Business opportunities were identified in family forestry, which encourages natural variation in the forest and provides resistance. The double materiality assessment concluded that biodiversity and ecosystems (i.e., E4 in the European reporting standards) is material for the company from both impact and financial perspectives.

Piloting the Science-Based Targets for Nature framework

Pohjolan Voima, a Finnish energy company responsible for about 20% of Finland's electricity production, partnered with Sweco to test the SBTN framework. Pohjolan Voima generates energy through hydroelectric, thermal and nuclear power, with hydroelectric and thermal power included in the pilot. The focus was primarily on framework Step 1: Assess and Step 2: Prioritize.

Pohjolan Voima has already had a biodiversity programme for some years, outlining goals and actions to promote biodiversity. The company sought to understand how the SBTN process could support their systematic biodiversity efforts. Although the SBTN target-setting guidance is not yet suitable for hydropower, steps 1 and 2 provided a systematic approach to mapping value chains and identifying and prioritising biodiversity impacts and actions within operations and the value chain.



How to map your value chain

- Begin by systemically mapping activities, resources and relationships in your own operations.
- Engage with suppliers to understand the upstream segments of the value chain.
- Track the flow of value creation through the downstream segment, including the societal value you generate.
- Promote transparent dialogues to better map risks and opportunities.

Developing the measurement of our biodiversity efforts has been a key goal for us. We wanted to explore whether the SBTN process would help us in setting goals and to leverage its clear and logical approach for analysing biodiversity impacts.

Katja Permanto, Sustainability and Environmental Manager at Pohjolan Voima.

How we conduct our forestry has a large impact on biodiversity and, with active biodiversity management we also contribute to strengthen biodiversity. With help from the CSRD framework, we are further future-proofing our business.

Jessica Nordin, Head of Sustainability at Södra.

2

Know your business' impacts and dependencies

How to understand impacts and dependencies?

By conducting value chain mapping, companies gain valuable insights into their overall impacts and dependencies on biodiversity. The next steps will be to measure, set targets and report on biodiversity efforts. In this context, impacts and dependencies refer to the ways in which business operations rely on and affect ecosystems and species.

Understanding company specific impacts and dependencies is necessary for managing risks and recognising where biodiversity work

needs to be focused. When measuring impacts and dependencies, try to be as specific as possible so that the results are accurate and you can set actionable next steps based on the analysis.

Addressing biodiversity might appear overwhelming and complex. However, the most important step is to initiate the work. You can start from your existing practices that already support your sustainability goals and assess the possible interlinkages with biodiversity. Moreover, if you are already familiar with a particular working method, such

as conducting life cycle analyses, leveraging this expertise could be a good way to also examine biodiversity impacts.

Tools and frameworks

When measuring your biodiversity impacts and dependencies using recognised tools and frameworks can be helpful. At the same time, the most important thing is to always choose tools that help you achieve your purpose and suit your needs. An example is the ENCORE tool that helps businesses and financial institutions understand the impacts and dependencies associated with natural capital and biodiversity. It aids in assessing how environmental changes can impact business operations and financial performance, ultimately supporting better decision-making for sustainability.¹⁰ The framework allows increased public awareness and engagement, leading to long-term sustainability and improved regulatory standards. Another key tool is the risk filter suite provided by the WWF that allows screening of location-specific impacts and dependencies for your operations and the value chain²².

There are multiple frameworks, measurement methods and guides available for companies to assess their impact on biodiversity. Among methods for measuring the biodiversity footprint²³ in companies is the Global Biodiversity Score (GBS), which calculates local terrestrial biodiversity intactness, considering pressures like land use, fragmentation, human encroachment and climate change and covers terrestrial and freshwater ecosystems²⁴. In addition to selecting tools that suit your operations and existing practices, it is advantageous to choose those that are well-established and developed by research-oriented organisations.

Science-Based Targets for Nature (SBTN) provides scientifically based methodologies for companies to assess their impacts on nature using pressure and state of nature pairs. Furthermore, it



allows companies to set and validate targets that decrease pressure on nature and preserve natural ecosystems and biodiversity, promoting sustainable business practices.²⁵

Naturetech

Measuring biodiversity takes time. Yet, digital technologies are transforming biodiversity conservation and governance. Tools like satellites,

drones, camera traps and acoustic sensors can capture data globally. These tools enhance species discovery and ecosystem monitoring. Pairing them with genetic sequencing and AI improves accuracy. They provide standardised, verifiable environmental data, often at a significantly lower cost than manual measuring methods. However, these potentials come with challenges and risks. Issues include data ownership and the environmental costs of the digital revolution.

Comparable data through biodiversity footprint

YIT, a North European construction company, engaged Sweco in Finland to investigate and calculate their biodiversity footprint. The analysis was carried out using the LC-impact methodology and covered company's own direct impacts and the impacts caused through procurement in Finland. The goal of the biodiversity footprint calculation was to obtain measurable and comparable information about which parts of YIT's operations and procurement result in the greatest ecological impacts to enable informed decision-making.

Landscaping and ecological management plan – a strategic tool for biodiversity

As data centre development expands, integrating biodiversity into land use planning is becoming increasingly important. Microsoft, in collaboration with Sweco in Sweden, is taking proactive steps to ensure ecological values are preserved and enhanced throughout its projects.

Sweco in Sweden has developed a strategic tool for Microsoft to maintain and increase ecological and biological values within and around the areas of its data halls. This Landscaping and Ecological Management Plan (LEMP) is a guiding document applied across all project phases, from design and buildout to full operation. It covers Microsoft's property and its immediate surroundings, focusing on ecosystem services and how they are impacted by development.

To manage and mitigate these impacts, the LEMP outlines a range of actions including principles for stepping stones, forest planting, water management and planning, minimising light pollution, and landscape adaptation and land modelling. These measures are tailored to each project stage, ensuring that biodiversity values are addressed dynamically and effectively throughout the lifecycle of the site.



How to measure your impacts and dependencies

- Start with an area where you already have data available.
- Stick to recognised and science-based frameworks and tools.
- If possible, align your biodiversity efforts with existing and familiar measurement practices.
- Utilise nature tech to gain a better understanding of general data.
- Report your progress transparently.

Integrating biodiversity into land development is no longer optional, it's essential. The LEMP ensures that our data center projects not only meet regulatory expectations but actively contribute to ecological resilience in the regions we operate. It's a model for how infrastructure and nature can coexist.

Samira Kiefer Andersson, Land Development Manager at Microsoft

3

Collaborate to shape the future

Nature – everyone's interest and responsibility

Individuals, communities and entire ecosystems suffer as a result of reduced biological diversity. This unites the interests of businesses with those of many other stakeholders, providing a solid foundation for dialogue and collaboration. Mapping relationships in your value chain, along with your understanding of your impacts and dependencies, will provide insight into which stakeholders and stakeholder

groups you should engage with. This approach also enables actions beyond the value chain, encouraging initiatives that extend beyond immediate business operations and the supply chain. Different stakeholders can add different perspectives and by addressing your biodiversity challenges from multiple views, you increase your chances of making progress and contributing to the desired systemic change.

Stakeholder dialogues

There are various types of stakeholder dialogues that businesses can choose from depending on what is suitable for the specific stakeholder. These include meetings, surveys, interviews, workshops and networks. Selecting the right type of dialogue ensures engagement tailored to the stakeholders' needs, as well as supporting a fruitful dialogue and strong cooperation. Public consultations ensure inclusive decision-making and build trust, while focus groups provide detailed insights and targeted feedback. Workshops promote collaborative solutions and skill development, whereas surveys capture a wide range of opinions and generate quantifiable data. Online platforms enhance accessibility and broad engagement, ensuring diverse viewpoints are considered.

Collaboration nurtures innovation

Stakeholder dialogue is often part of regulatory compliance, for example, in sustainability reporting or during new business establishment. To advance further, prioritise innovation and R&D as the starting point of your dialogues rather than focusing on compliance. Additionally, feel free to set up multidisciplinary teams with, for example, ecologists, business developers, customers and engineers. This creates excellent conditions for innovation.

To ensure that the dialogue also leads to collaboration, it is beneficial to team up with stakeholders who share your biodiversity goals. For example, you can connect with other actors from completely different industries that operate within the same geographical area. In the small town of Södertälje, for instance, the global pharmaceutical company Astra Zeneca, the automotive giant Scania and the local energy company Söderenergi have initiated a joint effort to increase local biodiversity.²⁶

Another way to work towards common goals is to team up with others in the same industry. This can involve self-imposed goals and practices that the industry sets as a common standard or knowledge exchange to learn from each other. An example of this is the Swedish



mining industry's joint roadmap towards increased biodiversity, Mining with Nature.²⁷

Engage with different types of stakeholders

Different types of actors that should be included in local collaborations are private companies, the public sector, Indigenous peoples and local communities and NGOs. The public sector, including authorities, municipalities, and state-owned companies usually make the decisions that set the scene for the private sector to operate in. They can play a convening role, as they have contact with many different stakeholders.

Indigenous peoples contribute deep, centuries-old knowledge of local ecosystems, rooted in cultural traditions and sustainable practices. Their understanding of the land, flora and fauna can offer

practical solutions and innovative approaches to conservation. NGOs provide extensive knowledge and technical expertise in biodiversity conservation, backed by scientific research and practical experience. In addition, NGOs are skilled in advocacy, policy development and community engagement, helping to facilitate dialogue and build consensus among stakeholders.

Lastly, do not forget your own workforce. Educating employees about biodiversity deepens their understanding of how their daily actions and choices influence the natural world. This knowledge raises a sense of stewardship and accountability, promoting environmentally conscious behaviours both within and outside the workplace. Furthermore, employees' understanding of biodiversity becomes a critical element for mitigating risks and capitalising on opportunities.



How to engage stakeholders for biodiversity

- Engage with a diverse range of stakeholders such as suppliers, Indigenous Peoples, local communities, NGOs, public sector representatives and your own workforce.
- Identify common interests and goals on biodiversity to enable collaboration and joint development steps towards a desired nature-conscious future.
- Approach your dialogues with a focus on innovation and R&D rather than compliance.

A biodiversity roadmap for the Finnish construction industry

Sweco in Finland supported the Confederation of Finnish Construction Industries RT in compiling their biodiversity roadmap 2030. The roadmap work included the comprehensive involvement of member companies and stakeholders from and beyond their value chains to identify the desired future, needed actions and possibilities of different actors to drive towards a biodiversity-enhancing future. The work resulted in a biodiversity roadmap that describes a vision for biodiversity work in the construction industry with the description of how progress will be measured and results monitored. The roadmap also included concrete steps towards promoting biodiversity in the sector.

Strategic approach to mitigate impacts on biodiversity

Sweco in Belgium has supported Evonik, one of the largest specialty chemicals companies in the world, in their ambitious strategy for their CHP installation in Antwerp. The unit produces steam and electricity, and nitrogen oxides are formed during the combustion process at high temperatures. To reduce their ecological footprint, Evonik will use steam from residual heat, cutting natural gas consumption and thus CO₂ and NO_x emissions. Impacts like eutrophication and acidification caused by nitrogen deposition are typical problems for the Low Countries, where industry, traffic, and agriculture coexist on a small area close to sensitive natural areas. Sweco investigated the necessity of various technologies to reduce nitrogen oxide emissions as well as assessed the impacts of different scenarios on biodiversity and nature areas.

For large companies, there's a strong case for taking a global perspective on biodiversity, focusing mitigation efforts where they have the greatest impact. That can be effective, if backed by solid due diligence to ensure real results. Mitigating closer to home can feel more accountable, as outcomes are more visible. But a broader view is often justified. Crucially, most species have limited dispersal capacity. So mitigation should be located near existing biodiversity value to support or restore functioning ecosystems.

Jens-Christian Svenning, professor, PhD, and Director, DNRF Center for Ecological Dynamics in a Novel Biosphere (ECONOVO)

4

Manage risks and leverage opportunities

Risk assessment and mitigation

Mapping the value chain, measuring impacts and dependencies, along with stakeholder engagement, will provide valuable overall insights into your business from both risk and opportunity perspectives. It can be helpful to use the framework developed by the Taskforce on Nature-related Financial Disclosures (TNFD) to support companies in identifying nature-related risks and opportunities and required actions, as well as reporting on them. TNFD helps financial and business decision-makers to better understand, mitigate and

disclose the impacts that their activities have on nature.²⁸ In particular, the LEAP approach provides a practical means and tools to carry out the assessment analysis.²⁹

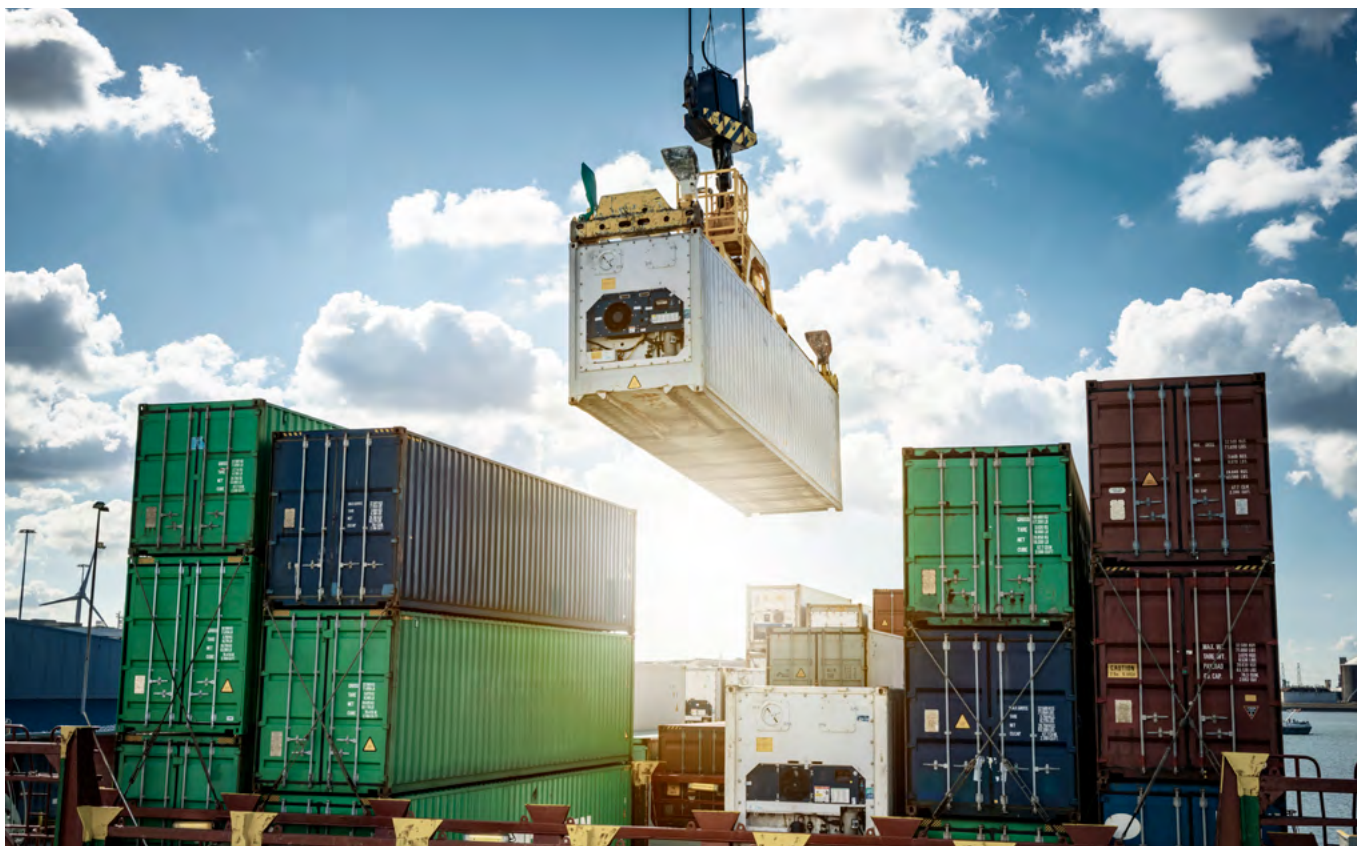
Biodiversity-related risks for businesses can include physical, transition and systemic risks. Physical risks include, among many others, damage to properties due to environmental impacts and potential disruptions in the supply or increased costs of scarce raw materials. Problematic dependencies might lead to increased insurance costs

or necessitate relocating some operations. Additionally, there are gradual risks to be mitigated, such as slow changes in the state of the environment and ecosystem services, which can affect the long-term viability of your operations.

Transition risks include the challenges and uncertainties businesses face as society shifts towards more sustainable practices and policies to protect biodiversity. These risks include political decision-making and evolving legislation in the sustainability field, which can lead to increased compliance costs, fines or restrictions. Other transition risks involve market changes and shifting stakeholder expectations. For instance, if consumer preferences for sustainable and biodiversity-friendly products increase, it potentially reduces demand for products perceived as harmful to nature. Additionally, reputational risks occur when companies seen as contributing to biodiversity loss face negative publicity and consumer backlash, affecting brand image and customer loyalty.

Lastly, systemic risks that impact long-term business viability might be the most significant. TNFD links these risks to ecosystem collapse and financial system failure. Despite being potentially the most significant risks, they can easily be overlooked because more immediate or business-related risks are usually easier to mitigate. When it comes to ecosystem collapse, the World Economic Forum report ranks it among the top risks anticipated in the next decade².

Mitigating biodiversity risks involves incorporating biodiversity considerations into business strategies and ensuring compliance with relevant and upcoming laws and regulations. Sustainable resource management and stakeholder engagement are crucial, focusing on renewable resources and collaboration with local communities. It's also important to remember that seeking opportunities in biodiversity is also a method of risk mitigation.



Capitalising on opportunities

An increased focus on biodiversity can unlock numerous opportunities for businesses. On a global level, biodiversity unlocks employment opportunities. According to the International Labour Organization (ILO), the International Union for Conservation of Nature (IUCN) and the UN Environment Programme (UNEP), investing in nature-based infrastructure could create up to 32 million new jobs by 2030.³⁰

As mentioned previously, stakeholder engagement enables innovation and product development, resulting in new, sustainable offerings that cater to rising consumer demand for more sustainable options. Strategically addressing biodiversity can also pave the way for entering new markets with stringent environmental regulations. Also, investors are more likely to fund responsible businesses, making it easier to attract investments. Furthermore, sustainable practices typically lead to operational efficiencies and cost

savings, enhancing overall business performance. New business opportunities can be found from solving environmental problems, such as the conversion of environmentally hazardous fly ash into commercial salts.

Moreover, the work to increase biodiversity is strongly linked to efforts to strengthen resilience. Firstly, biodiversity is a central component of the entire planet's livelihood and the depletion of natural resources or increasing emissions, might result in irreversible consequences if we reach so-called tipping points, as described in the Planetary boundaries' framework by Stockholm Resilience Centre³¹. In fact, six out of the nine planetary boundaries have already been crossed, including stability and resilience of ecosystems. Consequently, efforts to improve biodiversity also increase resilience for a company by better supporting the local environment, reducing dependence on scarce virgin natural resources and by shifting to circular business models.

Strategic advice to optimise biodiversity outcomes

Sweco in UK undertook a strategic desktop review of some of Wales and West Utilities (WWU) landholdings to identify their potential for Biodiversity Net Gain (BNG) to support WWU's wider biodiversity improvement commitments. The strategy reviewed four sites, assessing their potential to provide measurable biodiversity gains. The results were used to select the best sites for improvement to optimise the use of funds for biodiversity enhancement.

Biodiversity strategy for real estate investors

a.s.r. real estate has been investing in real estate on behalf of institutional investors for more than 130 years and manages many real estate portfolios. Sweco in The Netherlands helped them develop a strategy to increase biodiversity considerations in their real estate portfolios. In practice, this has included data-analysis of the potential for greening in all their properties (paving, roofs, room for trees) and assessment of potential biodiversity gains through these greening activities. This has helped a.s.r. real estate and their funds to mitigate their biodiversity impacts, as well as manage financial risks and look for new opportunities in relation to biodiversity.



How to identify financial risks and opportunities

- Use your value chain mapping, assessment of impacts and dependencies and stakeholder engagement to identify biodiversity risks and opportunities.
- Get help from frameworks, such as TNFD, to ensure a strategic level in your work.
- Look at both operational and systemic dependencies, and related risks and opportunities, but also seek out totally new biodiversity enhancing business possibilities.
- Focus on resilience, both for the planet and for your business.

Develop a strategy that benefits both the company and the change you want to see – otherwise, there's a high risk the initiative will disappear in the next economic downturn.

Lisen Schultz, deputy director for the Stockholm Resilience Centre

5

Transform to make business for nature

Business for nature

All the previously mentioned steps will help to shift your business towards being gradually more nature aligned. To truly integrate biodiversity throughout the organisation and connect it to the business in the long term, the next step is to embed biodiversity into strategies, business models, decision-making and working methods. The basic idea is to make business for nature rather than from nature.

In strategic work on biodiversity, incorporating visions and foresight is part of future-proofing businesses. Working with visions is beneficial because it provides a clear, long-term direction that can guide efforts and policy-making, as well as inspire and unify stakeholders, creating a shared understanding and commitment to achieving specific biodiversity goals. Additionally, visions can stimulate innovative thinking, encouraging the development of creative solutions to complex environmental challenges and nurturing a proactive rather

than reactive approach to biodiversity management. Foresight serves as a tool for developing robust business strategies that aim to shape the operations towards biodiversity-positivity. By anticipating future trends and challenges, businesses can proactively adapt and contribute to preserving biodiversity.

Clearly, it is not only nature that benefits from more businesses boosting biodiversity, companies that transition stand to gain significantly as well. For instance, they can achieve cost savings by breaking risky dependencies on nature and capitalising on new business opportunities arising from biodiversity innovation.

Synergies for a more powerful transition

Integrating biodiversity efforts with other strategic sustainability actions yields numerous synergies. Biodiversity and climate are intrinsically connected. Ecosystems depend on a balanced climate and the

climate benefits from thriving ecosystems. Driven by the principle that 'there is no net-zero without nature', companies are increasingly integrating nature-focused considerations into their climate strategies.

Similarly, a respect for human rights intersects with biodiversity, encompassing democratic, participatory decision-making regarding natural resources, ensuring indigenous land use and upholding the rights to clean water and air, as well as cultivation opportunities. Additionally, strategic work on biodiversity aligns with the circular economy model, encouraging reuse and recycling of materials and resources. The transformation of processes and value chains to become more circular is an effective business development for increased biodiversity, as much of biodiversity loss stems from our linear systems and throwaway societies.

Biodiversity in core business

There are several ways to integrate biodiversity into your core business. You can get started with your biodiversity roadmap or transition plan work by reviewing, for example, CSRD guidance for biodiversity transition plans or TNFD draft guidance. Roadmaps and transition plans or a dedicated biodiversity programme are effective tools for systematically breaking down your work into manageable steps. They provide a framework for how you should measure and set targets for biodiversity, as well as how to integrate biodiversity into your business strategy. They also offer guidance on reporting your progress.

The key to a successful biodiversity alignment with your business strategy is to regularly review your business strategy, business model and strategic decision-making processes. Furthermore, track and audit your financial activities to ensure that they support your goal of making your business nature positive. This might include, but is not limited to, investing in green technology or empowering the purchasing department to prioritise products and services with a lower environmental impact. One powerful way to showcase that biodiversity is in the core of company's economic activities is alignment with EU taxonomy



objectives and specifically the objective of protection and restoration of biodiversity and ecosystems.

Communicating your biodiversity work

By reporting and communicating biodiversity efforts transparently, companies not only contribute positively to the environment but also improve their operational and strategic standing in a world that increasingly values sustainability and responsible practices. Transparency gains trust among stakeholders, including customers, investors, employees and the wider community. Incorporating biodiversity into the sustainability reporting process and engaging with stakeholders is an effective way to establish transparent communication.

Purchasing

A report from the circular network Cradlenet reveals that, among Nordic countries, companies indicate that there is a lack of demand for biodiversity-conscious products. Simultaneously, many of these companies admit that they do not prioritise biodiversity in their own purchasing activities.³² To address this demand paradox, companies need to promote biodiversity, encouraging others to follow suit. By demanding biodiversity, businesses can create a ripple effect that promotes nature across the entire industry. In fact, the purchasing organisation is integral to biodiversity by selecting suppliers who follow sustainable practices, prioritising resource efficiency and ensuring ethical and environmentally conscious sourcing.

Strategy report on biodiversity for the city of Copenhagen

To identify where biodiversity in Copenhagen could be preserved, improved or expanded, Sweco in Denmark developed a data-driven method that maps the biodiversity potential across the entire city. Using an interdisciplinary approach, a team of biologists, landscape architects and GIS experts analysed biotic and urban parameters. The city was divided into hexagonal zones, each scored based on biodiversity-relevant data. This enabled the creation of three comprehensive 'potential maps': 1) Preservation & Improvement Areas – where existing biodiversity is high and can be strengthened further; 2) Expansion Zones – where new habitats can be introduced for plants and animals; and 3) Improvement Areas – where current biodiversity is limited but has strong potential with the right interventions.

Strategy and tools to enhance biodiversity in agriculture

Sweco in Poland is developing a Biodiversity Action Plan for a global landowning company managing large agricultural areas in the Pomerania region. This voluntary initiative stems from the company's internal environmental strategy and aims to restore and enhance biodiversity without compromising agricultural productivity. After completing a detailed biodiversity inventory, Sweco proposed tailored actions such as establishing buffer zones around field ponds to support birds and amphibians, restoring semi-natural grasslands through mowing and grazing and recreating tree belts to reduce soil erosion and increase water retention. These measures are currently being discussed with local tenants and are designed to be low-cost yet high-impact. In some cases, land users will also benefit from financial support through national agri-environmental schemes. The project demonstrates how private landowners can actively contribute to biodiversity while maintaining long-term soil health and resilience.



How to develop business for nature

- Consider how you can generate more for nature than what is taken.
- Focus on taking action by utilising a plan, roadmap, or programme for biodiversity.
- Seek synergies with related efforts in areas such as climate, circularity and human rights.
- Align your strategy, core business and daily operations with your biodiversity roadmap.
- Concentrate on financial activities, including investments and purchasing.

Every business can strengthen their operations by contributing to nature. Embed biodiversity into your strategy, align with international targets, and systematically reduce negative impacts in your operations and across the value chain. Collaborate to innovate solutions that enhance ecosystem services and transform these efforts into business opportunities.

Katalin Herngren, Senior Strategic Sustainability Consultant at Sweco, Sweden

Biodiversity is a
business necessity



There are financial benefits and strategic opportunities for businesses that actively integrate biodiversity into their operations. Sweco's analysis shows that while only 16% of Europe's largest companies consider biodiversity as financially significant, 82% recognise their own impacts on nature. To avoid overlooking the financial risks associated with biodiversity loss, Sweco identifies five key steps to future-proof businesses against these risks.

Nature is vital for the well-being and resilience of societies and businesses, but biodiversity loss is occurring at an alarming rate. More than 90% of biodiversity loss and water stress is estimated to be due to the extraction and processing of natural resources³³, driven by the short-term focused 'take-make-waste' economy and principles of our societies and businesses. So far, global economic models have treated nature as free goods, which has led to us neglecting the true cost of exploiting nature and the consequences of biodiversity loss.

As the consequences of biodiversity loss, accelerated by climate change, have begun to become real, a shift in values and opinions can be seen. This also means putting a price tag on nature. Most likely, continuing with business as usual will be costly in the future.

Sweco's analysis of the 50 largest European manufacturing and energy companies showed that only 16% recognise biodiversity as potentially impacting them financially, whereas 82% acknowledge the materiality of their impacts on nature. This raises the question: are we underestimating the financial impacts and long-term business risks in relation to biodiversity loss?

The decline in biodiversity and the risk of ecosystem collapse and financial loss are dire. However, systemic change towards biodiversity-conscious societies and businesses can reverse this trend. Transforming business strategies and models into biodiversity enhancing ones is critically important. Once companies systematically address biodiversity, progress accelerates. All companies can start their transformation path today by using the key steps provided.

Key Insights from the Report

1

Understand company's activities and value chains

The starting point to future-proofing business is to understand and meticulously map business' activities and value chains. This approach helps identify critical areas where biodiversity-related risks and opportunities can be embedded, leading to more sustainable and resilient operations.

2

Know your businesses impacts and dependencies

Utilising recognised frameworks and tools to measure biodiversity impacts is crucial. These measurement practices enable businesses to understand their ecological footprint and make data-driven decisions that can drive financial performance and sustainability goals.

3

Collaborate to shape the future

Strategic collaboration with other companies, local communities, governments and NGOs is essential for achieving sustainable outcomes. Engaging stakeholders fosters the transformation needed to tackle biodiversity loss, encouraging long-term investments in biodiversity.

4

Manage risks and leverage opportunities

There are significant financial risks posed by environmental degradation and immense opportunities available through biodiversity integration. Businesses that adopt nature-enhancing investments will not only reduce their ecological footprint and risk exposure but also unlock new revenue streams and enhance shareholder value. The key financial instruments highlighted in the report, include sustainability-linked bonds, nature impact funds and biodiversity certificates.

5

Transform to make business for nature

Incorporating biodiversity into business strategies not only enhances sustainability but also provides a competitive edge. Innovative strategies and models that make business out of improving the state of nature or foster the circular economy are examples of how biodiversity-consciousness can be leveraged to create new market opportunities and future-proof business operations.

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