



Danish businesses & the biodiversity crisis

Opportunities & risks associated with
biodiversity loss





Preface:

The biodiversity crisis is a business crisis

The focus on businesses' impact on the environment and climate in particular has increased rapidly over the past decade. Despite the increased attention on biodiversity loss from society and regulators, businesses' awareness of their biodiversity impact remains limited.

According to the World Economic Forum, the biodiversity crisis will rank among the top global risks to the economy over the next 10 years and if the current trajectory continues it is estimated to put over half of the world's GDP at risk.

To help businesses get a head start on tackling the biodiversity crisis, WWF and Bain & Company have compiled an overview of the latest knowledge on biodiversity – and nature loss – which carries significant relevance for all Danish businesses regardless of their size.

Purpose of this report:

Presenting the facts to enable us to start an important discussion

1.

Provide an overview of the status of biodiversity that is relevant to a Danish business context

2.

Summarize opportunities and risks related to biodiversity loss identified by Danish businesses

3.

Outline potential next steps for Danish businesses across key industry sectors

The report combines insights from primary research into the supply chains of various Danish businesses with the most recent public research papers on biodiversity (e.g., IPBES, WEF, OECD, EU Commission, Danish Agriculture & Food Council, UN FAO, etc.). Primary research included a survey with 44 of the largest businesses in Denmark as well as in-depth interviews with executives from 10 of these businesses conducted by Bain & Company and WWF between October and December 2021.

The report will be accompanied by a technical report which provides further details on the Danish pressures and transitions needed.

When reading through the report, it is our hope that you will agree that the evidence is clear. Nature's decline around the world will pose momentous difficulties and costs to Danish businesses in the coming years. It might very well exceed the challenges and costs we all face with the climate crisis right now. However, there is also good news. Significant business opportunities lie ahead, if – and only if – Danish businesses take on the challenge – and soon.

This report provides you with facts – but not necessarily all the answers. Its purpose is to initiate the discussions we need to both make the right biodiversity-promoting decisions and define the role of businesses in these decisions in the coming years. We hope you will take up the challenge. We believe Danish businesses, society, welfare – and, of course, the planet – deserves it.

We would like to extend a special thank you to our Advisory Board members Camilla Austrup Hermansen (Packaging), Eva Ryberg (Energy), Laila Mortensen (Insurance), Mads Kann-Rasmussen (Manufacturing), and Niels Dengsø Jensen (Agriculture) for contributing to this report with their insights and industry expertise.



A handwritten signature in black ink, appearing to read 'Bo Øksnebjerg'.

Bo Øksnebjerg

General Secretary & CEO,
WWF



A handwritten signature in black ink, appearing to read 'Torsten Hvidt'.

Torsten Hvidt

Partner & Nordic Social Impact Lead,
Bain & Company

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Executive summary:

Businesses must act on biodiversity now to mitigate risks and reap business opportunities

The foundation for life on Earth is under pressure, putting both humanity and businesses at risk

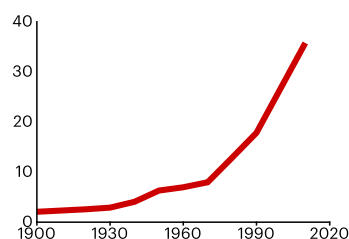
- ▶ Humanity depends on a nature in balance, and biodiversity underpins every aspect of life on Earth
- ▶ The biodiversity crisis is estimated to put half of global GDP at risk if the development continues
- ▶ Leading international experts assert that nature loss must be reversed by 2030 to halt this trajectory

Biodiversity loss is a man-made challenge – also caused by pressures from Danish business activities

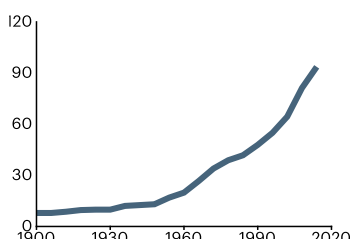
- ▶ Human activity affects biodiversity through e.g., suboptimal land and sea use and excessive pollution
- ▶ Danish businesses alter biodiversity directly through operations and indirectly through supply chains
- ▶ The impact on biodiversity is driven by all major Danish sectors; however, impact is particularly high in the agricultural and food sectors

Biodiversity loss has accelerated over the last 50 years as natural resource extraction has more than tripled

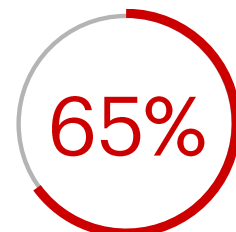
Species extinction (thousands)



Resource extraction (Gt/yr)



Businesses are unaware of benefits from improving biodiversity



of respondents are not aware of the benefits from taking a nature-positive approach

Danish businesses are aware of the threat of nature loss, but few are currently taking action or aware of the potential business opportunities of reducing biodiversity impact

- ▶ Primary research among different Danish businesses shows increasing awareness of biodiversity threats, but limited action (<10% included it in their sustainability strategy at the time of research)
- ▶ Large potential exists to mitigate significant business risks like raw material scarcity, natural hazards, and reputational damage associated with biodiversity loss
- ▶ Improving a business' biodiversity impact also offers attractive business opportunities across sectors (e.g., through efficiency gains or brand enhancements)
- ▶ To maximize impact, businesses should focus on critical transitions along their supply chain, operations, consumption, and/or built environment
- ▶ Research and pilot projects indicate that the future belongs to 'nature-positive' business models and an economy where businesses invest in restoring nature's resilience, and shift to nature-based solutions using nature as a tool to solve industrial problems

Danish businesses report several roadblocks in addressing the nature crisis. Overcoming these requires collective and individual actions. However, there are already ways to get started, and the report outlines a list of relevant questions that can help you prioritize your next steps

- ▶ Limited drivers for biodiversity action exist at a business level. This "tragedy of the commons" problem will be mitigated by new regulation expected in the next two years. By acting on biodiversity now, businesses will get ahead of competition
- ▶ The biodiversity crisis is complex and spans across supply chains – actively interacting with suppliers and customers can help reduce complexity
- ▶ The biodiversity crisis is competing for resources with other sustainability topics like climate change – holistic initiatives targeting several sustainability topics will save resources
- ▶ While international industry-wide standards are being developed by major institutions like the Science-based Targets for Nature Initiative (SBTN) and the Taskforce on Nature-related Financial Disclosures, businesses can start using existing frameworks, measurement tools, and certifications

Guide to this report

This report covers a range of different themes within the broader biodiversity area, and readers might be interested in individual subsets of themes. Some of the relevant questions covered in the different sections of this report are listed below.

Questions answered in this report

Chapter	Questions answered	Pages
The foundation of life is at serious risk	<ul style="list-style-type: none"> What is biodiversity loss? How serious is the crisis? Why is biodiversity loss a threat to businesses and societies? How does biodiversity loss relate to other environmental issues? 	12 14 15 17
The global and Danish business impact on biodiversity	<ul style="list-style-type: none"> What causes biodiversity loss? What are the main drivers that Danish businesses exert? What are the most harmful business practices for biodiversity in Denmark? What role do Danish sectors play in the biodiversity crisis? 	25 27 27 29
Seizing business opportunities and mitigating risks	<ul style="list-style-type: none"> What is the status of biodiversity action in Danish businesses? What are the risks of continuing business as usual? What are the upsides of taking action? What needs to happen to reduce impact? What does good look like? What is the future vision? What are we working toward? 	34 35 36 38 40 43
Solutions to drive action	<ul style="list-style-type: none"> What are the common challenges when starting action? What are the relevant existing and upcoming regulations to consider? How can we collaborate in/across the supply chain to limit impact? How do we prioritize between biodiversity and climate work? Which standards exist to guide our work? 	49 53 56, 70 60 62, 65, 67
Getting started	<ul style="list-style-type: none"> Where can we find more guidance and frameworks to help our thinking? How can we measure our biodiversity impact? How do we define appropriate action to limit impact? What are the things we can start doing on Monday morning? 	65 67 68 71
Appendix	<ul style="list-style-type: none"> What are the biggest biodiversity issues in my sector? 	75

The different sections of the report answer a range of questions relevant to businesses in Denmark

Glossary

Afforestation: planting trees in areas and regions previously not covered by trees

Biodiversity: the variety of life on the planet, at the genetic, species and ecosystem levels

Bottom trawling: fishing method that involves dragging heavy weighted nets across the sea floor

Carbon sequestration: the process by which carbon dioxide is captured from the atmosphere and transformed e.g., into biomass through photosynthesis

Clear-cutting: practice where all or most of the trees are removed in a selected area simultaneously

Climate resilient construction: construction practices that consider a range of different climate risks and exposures. E.g., defining ways to reduce indoor heat in hot and arid climates

Conservation: the act of protecting Earth's natural resources for current and future generations

Conversion of an ecosystem: the conversion of an ecosystem to another land type, e.g., forests to farmland and pastureland, primarily for human use, leading to the loss of the habitats and animals that were part of the original ecosystem

Crop monoculture: the farming of a single crop or organism

Degradation (environmental): the process by which the natural environment is deteriorated in a way that reduces its biodiversity

Ecological footprint: measures how much natural capital is needed to produce the

resources we consume and dispose of our waste

Ecosystem: a community of animals and plants interacting with each other and their physical environment (e.g., soil, water, nutrients and living organisms in the environment)

Effluent: liquid waste material discharged into the environment (e.g., stream, lake, ocean)

Irrigation: the process of watering land to assist in the farming and growing of crops, plants and lawns

Logging: the process of cutting, processing and moving trees

Natural capital: the world's natural assets, including water, air, all living things, soil and geology

Nature-based solutions: actions to protect, sustainably manage and restore natural and modified ecosystems in ways that address societal challenges effectively and adaptively to provide both human well-being and biodiversity benefits

Nature-positive approach: an approach that not only minimizes impact on nature, but also enhances resilience of the planet and society

Red list species: species belonging to one of the following categories: regionally extinct, critically endangered, endangered, vulnerable, almost threatened or when data is insufficient

Regenerative agriculture: approach to farming that restores degraded soils and takes environmental factors such as biodiversity impacts into account

“I believe this is a topic of the future that we need to do something about – we need to transform this belief into something concrete and tangible, to map the landscape and challenges.”

**Janda Campos, Group Director
Sustainability Engagement, Grundfos**



Chapter 1:

The foundation of life is at serious risk

Nature degradation puts more than half of the global GDP at risk– action must be taken well before 2030

Many Danish businesses recognize biodiversity loss as the next major crisis following in the shadow of the climate crisis; yet most of them recognize that their knowledge of the subject is limited. This underlines the importance of summarizing the status of biodiversity, outlining how it relates to existing sustainability frameworks, and providing a framework to help businesses better understand the main drivers of biodiversity loss, as well as the numerous business opportunities and risks it brings.

Key takeaways

- ▶ Biodiversity, the variety of life on earth, is the foundation of life and ensures stability on our planet by enabling food production, absorbing emissions, controlling floods, and much more
- ▶ In the past 50 years, our planet has witnessed an unprecedented loss of nature. 68% of the global population of mammals, birds, amphibians, reptiles, and fish has declined since 1970 and UN's Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) estimates that 25% of all plant and animal species are threatened with extinction
- ▶ Biodiversity loss is not only a problem in far-flung locations – Denmark ranks second to last on the conservation status of protected habitats within the EU with almost 95% of its protected habitats considered to have a poor or bad conservation status
- ▶ According to the UN, the dramatic biodiversity loss is caused by human activities – particularly by the agricultural and industry sectors – and constitutes an urgent threat not only to businesses but also to humanity itself
- ▶ Failing to reverse the trend before 2030 will push biodiversity beyond irreversible tipping points and, according to World Economic Forum estimates, place \$44 trillion worth of economic value at risk globally
- ▶ IPBES expects that current rates of nature decline will undermine our ability to achieve the UN's international goals, including progress toward 80% of the targets for poverty, hunger, health, water, cities, climate, and land outlined in the UN Sustainable Development Goals
- ▶ Consequently, it is imperative that society, businesses and individuals participate in addressing the nature crisis while also pursuing other sustainable development goals

Biodiversity is the foundation of life on earth

Biodiversity encompasses the variety of life on Earth at all levels: ecosystems, species, and genes.

Biodiversity underpins every aspect of life on our planet and encompasses all processes that sustain life. It is the core element that allows nature to provide humans, businesses, and societies with natural goods, such as food and materials, as well as natural services such as climate control and disease regulation.¹ The food we eat, the clothes we wear, the cars we drive, the houses we live in; it all depends on natural goods and services – and thereby on a nature in balance.

Biodiversity underpins all aspects of life

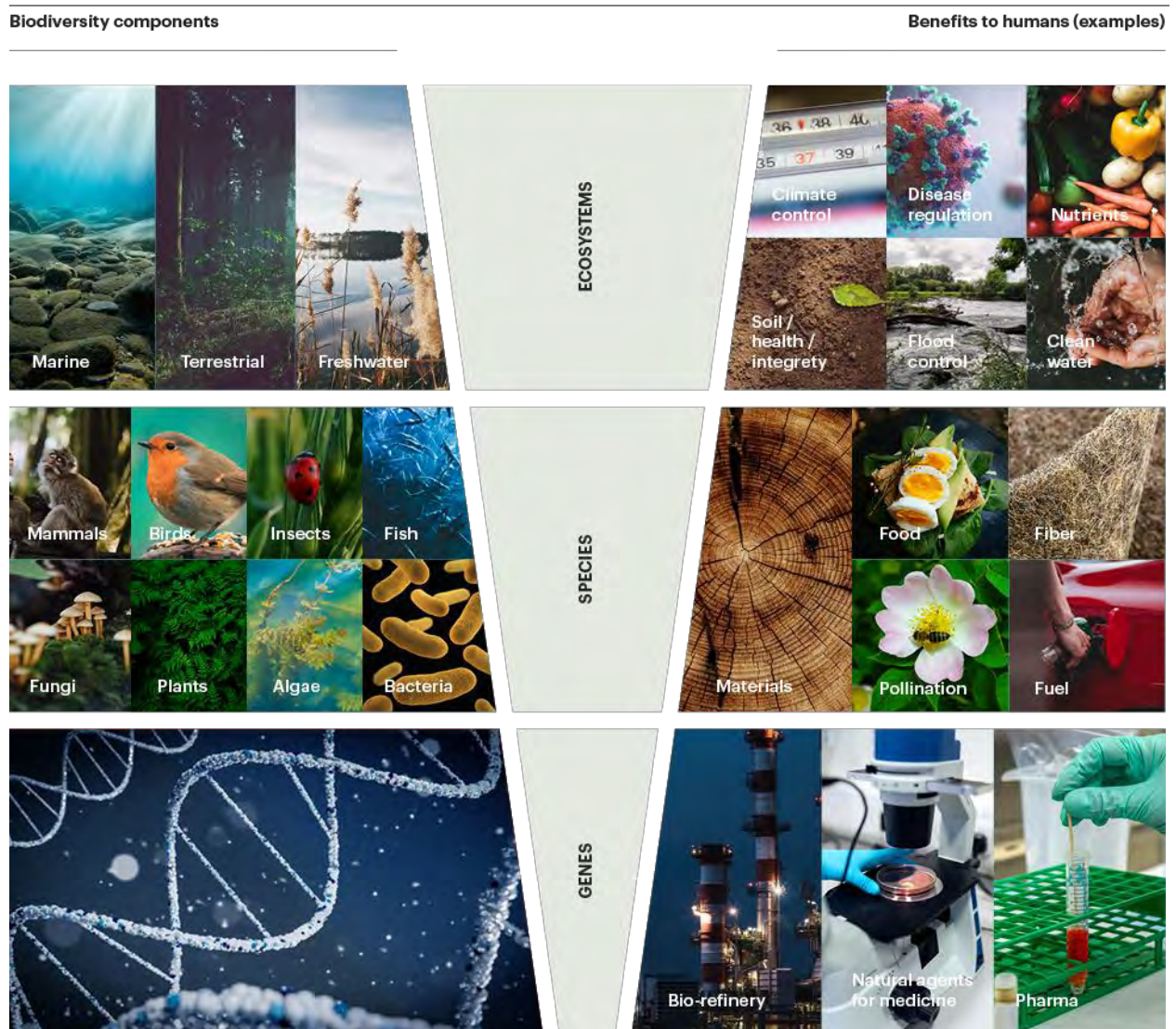


Exhibit 1: Biodiversity is the foundation of life. Spanning across ecosystems, species, and genes, it provides humans with critical natural goods and services

¹ WWF (no date a)

Put simply, our very existence and our planet's equilibrium depend on natural ecosystems that are in balance and intact. However, nature has been put under significant pressure for the past 50 years.

Global and Danish biodiversity is at serious risk

During the last 50 years, we have seen an unprecedented loss of biodiversity and nature, causing the UN to warn that we are heading for a sixth mass extinction – the first one ever to be caused by a single species. More than half of the world's GDP is estimated to be at risk.

The degradation of biodiversity has a severe impact, not only on our environment and societies, but also on businesses. Nature is supplying more goods and services to businesses and society than ever before, but the overexploitation of natural resources comes at the expense of nature's biodiversity and resilience. The UN Environment Programme estimates that 90% of biodiversity loss is caused by resource extraction and the processing of materials, fuels, and food.²

Overexploitation of natural resources accelerates species extinction

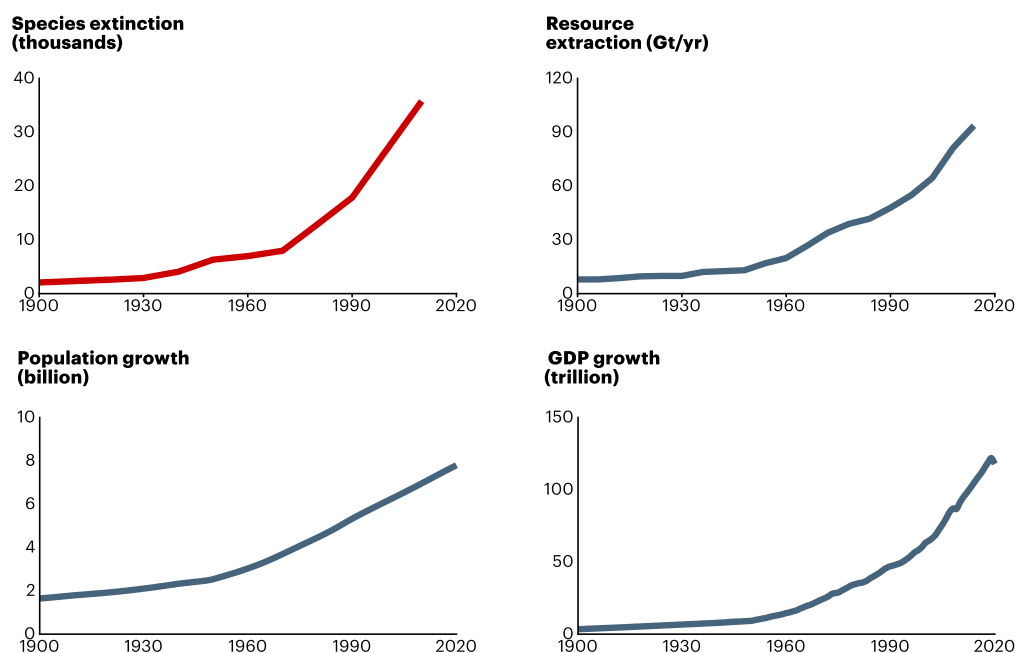


Exhibit 2: Population growth, economic growth, and consumption have fueled a 3x increase in global resource extraction by humans across supply chains between 1970 and 2017. In that same time interval, the global population of mammals, birds, amphibians, reptiles, and fish has declined at a similar, alarming rate^{3 4 5}

Note: GDP data for 1900-1950 is extrapolated based on available data for 1900, 1913, 1940 and 1950

² UNEP (2019 a)

³ Krausmann, et. al (2018)

⁴ Maddison Project Database / World Bank

⁵ United Nations Population Division (2019)

Global statistics illustrating biodiversity loss are extensive. E.g.,

75% of the world's ice-free land surface has been significantly altered through human activity⁶

68% decline in the global population of mammals, birds, amphibians, reptiles, and fish since 1970⁷

25% of the world's animal and plant species are now threatened with extinction⁸

The loss of biodiversity is not occurring “far away”. In Denmark, 15% of all Danish land and marine waters and 137 species are protected. However, only 8% of Denmark's total land area is zoned as protected under the EU's Natura 2000 guidelines – less than any other European state.⁹ In addition, almost 95% of the protected habitats and 61% of protected species are considered to have a poor or bad conservation status, placing Denmark second to last and fifth to last in the EU, respectively.¹⁰ Consequently, there is an urgent need for local action. Moreover, most large Danish businesses have a direct or indirect effect on biodiversity outside of Denmark due to their supply chains and international presence.

According to the UN, the loss of biodiversity is a direct result of human activities and, as mentioned previously, in turn constitutes an urgent threat to humanity and businesses in all regions of the world. Biodiversity loss significantly impacts nature's capacity to provide natural goods and services that businesses depend on directly or indirectly.¹¹ The primary research conducted for this report corroborates this as it shows that approximately 70% of Danish businesses perceive biodiversity loss as a threat to their business. The executives from the participating businesses were especially concerned about how biodiversity loss will influence their license to operate in the longer term. According to WEF's latest Global Risk Report, the risk of biodiversity loss should be placed at the top of the strategic agenda.¹²

Biodiversity loss is a top risk to the global economy

Risks expected to become a critical threat to the world in 5-10 years, % respondents

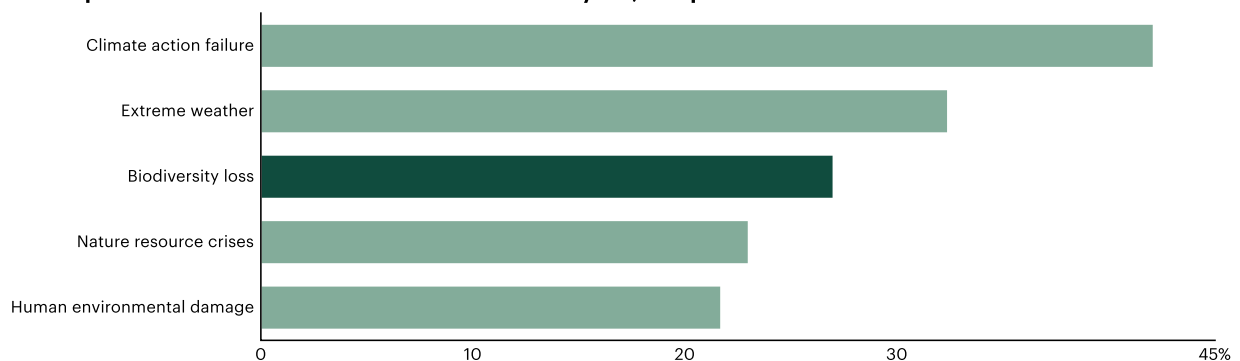


Exhibit 3: Biodiversity loss is expected to become a top-3 risk to the global economy in the next decade¹³

⁶ IPBES (2019)

⁷ WWF (2020 a)

⁸ IPBES (2019)

⁹ European Commission (2022)

¹⁰ European Environmental Agency (2020)

¹¹ UNEP (2019 a)

¹² WEF (2022 a)

¹³ WEF (2022 a)

According to the World Economic Forum (WEF), biodiversity loss is expected to become a top-3 risk to the global economy over the coming decade – along with other environmental risks like climate change and extreme weather, which are, in turn, intrinsically linked to biodiversity. According to the UN and WEF, failure to revert nature degradation before 2030 will push biodiversity beyond irreversible tipping points and put \$44 trillion worth of economic value at risk, corresponding to more than half of the global GDP.^{14 15} The UN's nature panel, IPBES, estimates that the loss of nature and Earth's ecosystem services will cost 10% of annual global growth and will negatively impact the quality of life of almost half of the world's population due to loss of access to clean water, food, and energy.¹⁶ In 2020, the decline in ecosystem functionality cost the global economy more than \$5 trillion in the form of lost natural services.¹⁷

This calls for significantly reducing the pressure humanity and businesses exert on nature. The next section highlights how biodiversity is a core but often forgotten part of the sustainability frameworks employed by businesses today.

¹⁴ WEF (2020)
¹⁵ UNEP (2019 b)

¹⁶ IPBES (2019)
¹⁷ Dobson et al (2020)

Biodiversity loss is closely related to other major sustainability topics

Biodiversity is tightly linked to other environmental and social sustainability topics. To foster sustainable development and reduce the cost of mitigating the risks, the biodiversity crisis must be solved in combination with other sustainability topics.

Interviews conducted with the participating Danish businesses emphasized the need to understand how biodiversity relates to existing sustainability frameworks and the climate crisis.

Biodiversity is the foundation of all of UN's other Sustainable Development Goals

The UN's Sustainable Development Goals (SDGs) have become a key framework for businesses' sustainability efforts. According to the Danish Industry Organization, 67% of businesses in Denmark use the SDGs as a framework.¹⁸ The SDGs are linked and many of them are interdependent. The most foundational part of the SDGs is the biosphere, which includes access to clean water, a stable climate, and biodiversity through SDG 14: Life on Land and SDG 15: Life under Water.

Biodiversity is needed for sustainable development

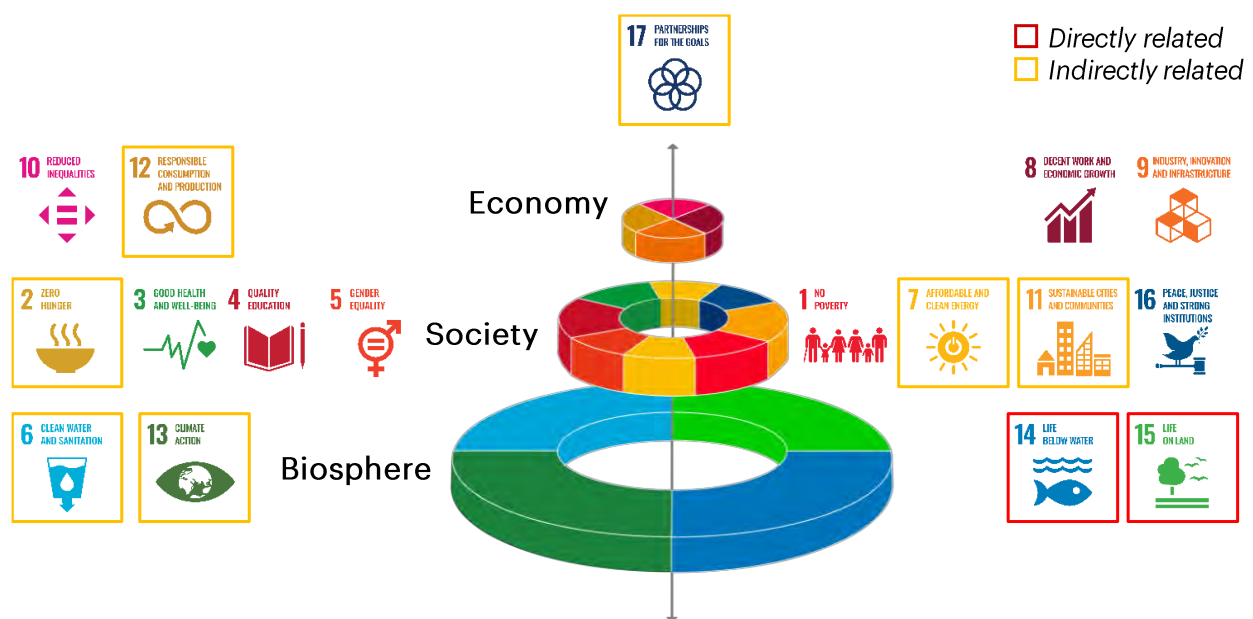


Exhibit 4: Biodiversity is the foundation for sustainable development in society and the economy¹⁹

An intact society and economy are built on an intact biosphere – if biodiversity continues to decline, societies and businesses will struggle to cope. Biodiversity loss influences many of the other SDGs. If not halted, IPBES expects that the biodiversity crisis will undermine progress toward 80%

¹⁸ Globalt Fokus and 92 Gruppen (2021)

¹⁹ Stockholm resilience center (2016)

of the targets set for poverty, hunger, health, water, cities, climate, oceans, and land. The ‘Zero Hunger’ SDG, for example, is affected by nature loss threatening global food systems.²⁰

Biodiversity is an integral part of the Environment dimension of the ESG framework

The ESG framework is another widely used structure for businesses’ sustainability efforts, and it was highlighted in many of the interviews conducted for this report. Biodiversity is directly related to most elements within the Environment dimension, including material use, waste, and circularity; biodiversity and ecological welfare; land and sea use; hazardous substances; and water stewardship. In addition, the interviews show that many businesses have emphasized their work to reduce GHG emissions under the Environment dimension, while very few emphasize working with biodiversity, despite the increasing importance of this critical challenge.²¹

The biodiversity and climate crises are interlinked

The research carried out for this report documented a strong interest in gaining a better understanding of the relationship and potential solution synergies between the climate crisis, which is known to most, and the biodiversity crisis, which is new to many. The crises impact each other.²² For example, if the Earth’s temperature increases by 2°C as opposed to 1.5°C, biodiversity loss will accelerate by 2x according to the UN Intergovernmental Panel on Climate Change (IPCC).²³

Climate change accelerates species loss

Species Loss: % of species that lose at least half of their habitat (high risk of extinction) in different scenarios (Mean values; 1.5°C, 2.0°C, 3.2°C, 4.5°C)

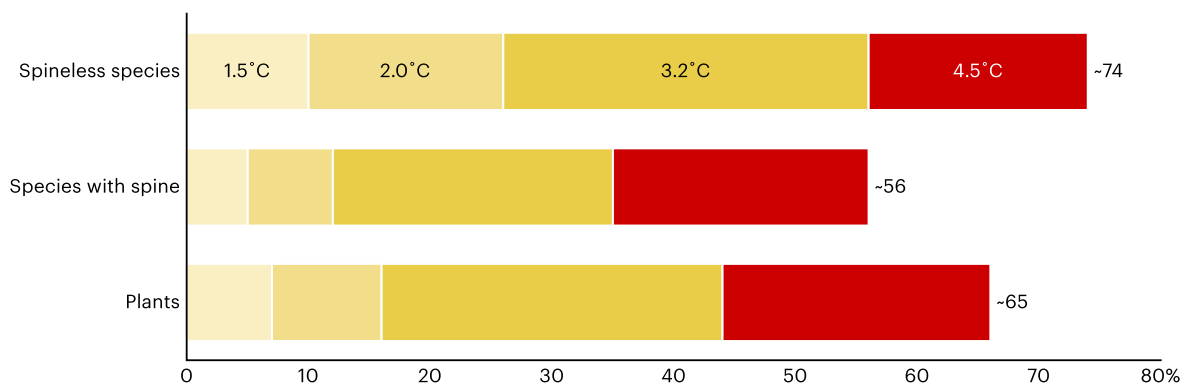


Exhibit 5: Higher temperature increases are accelerating biodiversity loss which in turn leads to lower resilience to climate change pressures and lower carbon sequestration potential

Conversely, the most recent Intergovernmental Panel on Climate Change (IPCC) report stresses the fundamental importance of protecting biodiversity due to its key role in enabling climate resilient

²⁰ IPBES (2019)

²¹ Bain analysis

²² IPBES (2021)

²³ IPCC (2022)

development and reducing climate change pressures. As an example, marine and terrestrial ecosystems remove nearly 50% of human-created CO₂ from the atmosphere. The Paris Agreement includes significant targets on the protection of especially tropical and subtropical rainforests and a reversal of the current deforestation trajectory.²⁴ The IPCC policy recommendations therefore include conservation of approximately 30-50% of global land and sea areas.²⁵ For a country like Denmark, where approximately 15% of the land area is protected (including both EU and locally-mandated protection), this would require a significant increase of protected areas.²⁶

However, biodiversity solutions alone will not solve the climate crisis nor vice versa. Solutions need to account for impact on both, and – where possible – address synergies between the two. To develop such solutions, it is important to understand how business activities relate to biodiversity – which is the topic of the following section.

Business activity is putting pressure on biodiversity

Danish businesses contribute to biodiversity loss – both at home and abroad. Improving biodiversity can offer attractive business opportunities and mitigate significant risks.

Interviews with executives from leading Danish businesses carried out for the purposes of this report reveal an urgent need for a methodology that can link specific business activities to biodiversity loss. The UN's biodiversity panel, IPBES, has identified five main global drivers of biodiversity loss: 1) Land and sea use, 2) Overexploitation of organisms, 3) Pollution, 4) Climate change, and 5) Invasive species and disease.²⁷

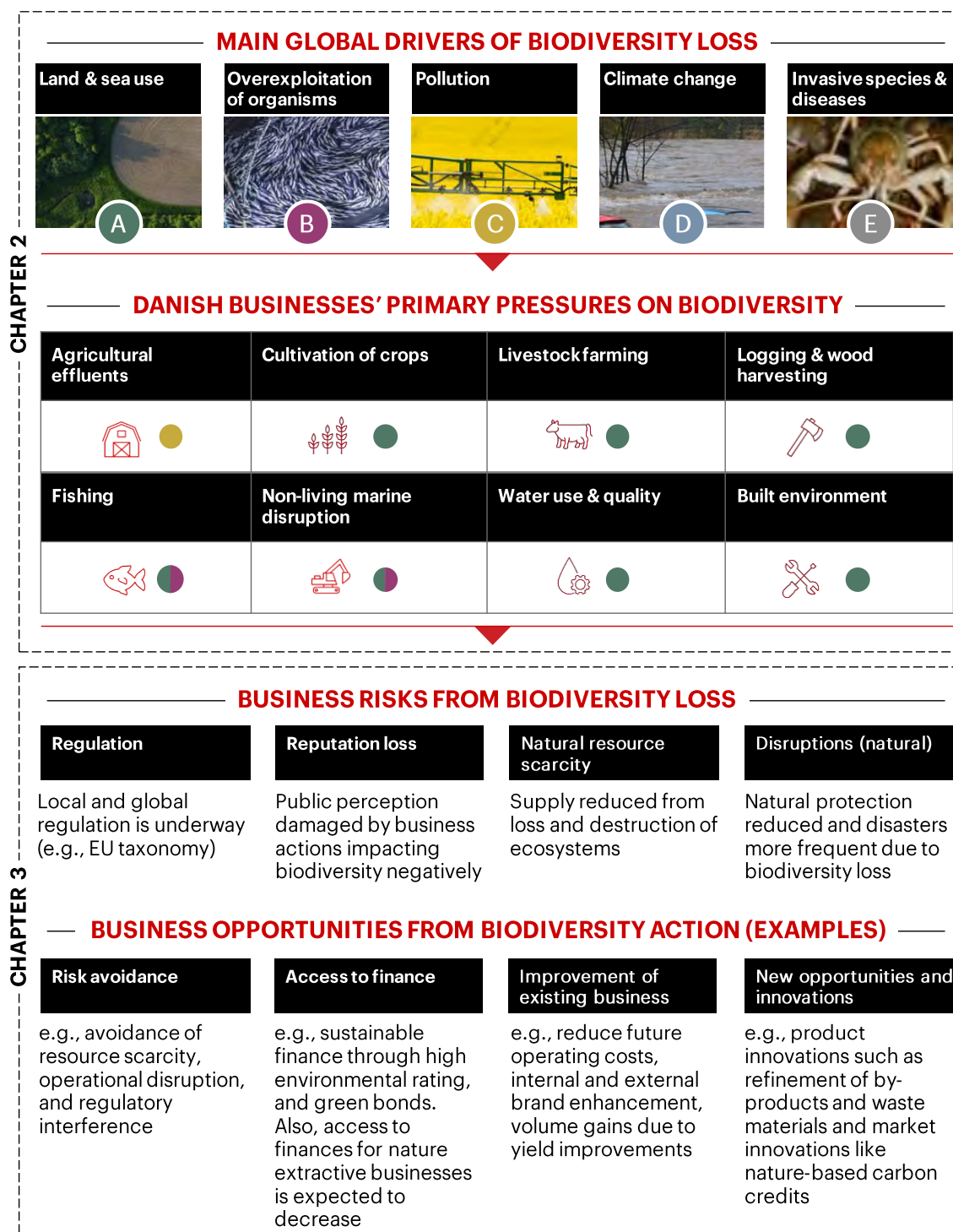
²⁴ UNFCCC (2015)

²⁵ IPCC (2022)

²⁶ European Commission (2022)

²⁷ IPBES (no date)

Human activities both cause biodiversity loss and are affected by its implications



Key global drivers of biodiversity loss

 Land & sea use
  Overexploitation of organisms
  Pollution
  Climate change
  Invasive species & diseases

Exhibit 6: Biodiversity loss is driven by global as well as Danish impacts on nature. Working proactively on improving impact opens mitigation of significant risk and numerous attractive business opportunities^{28 29}

This report is based on IPBES’s list of major pressures on global biodiversity. To put these pressures in a Danish context, we have conducted interviews with Danish biodiversity experts and have cross-checked pressures from Danish companies with IUCN’s red lists of globally endangered animals and plants, enabling us to identify the primary pressures that Danish businesses put on biodiversity (for further details, please see the approach description in the appendix).³⁰ Businesses working proactively to mitigate, eliminate or even reverse these pressures will mitigate significant business risks such as natural resource scarcity, reputational damage, regulation, and natural disasters. In addition, they will face significant business opportunities. These opportunities are available to all players that are willing to act – the businesses do not have to be big to become industry leaders.

Even though nature is under great pressure, it is not too late to act. According to the UN, we can still avoid pushing biodiversity over irreversible tipping points if nature loss is reversed before 2030.³¹ Businesses play an important role in this and can significantly reduce their impact on nature through numerous actions. Before illustrating these actions and benefits, it is important to understand in more detail how businesses affect biodiversity across different sectors. The next chapter, therefore, covers the main global drivers of biodiversity loss and how Danish businesses put pressure on biodiversity across sectors.

28 WWF (Expert interviews)
29 Bain analysis
30 IUCN (no date)

31 UNEP (2019)



“This area [biodiversity] has not been high on our agenda so far, but we recognize that we have a role to play.”

Jens Bjørn Andersen, CEO, DSV



Chapter 2:

The global and Danish business impact on biodiversity

Danish businesses exert several pressures on biodiversity, primarily through their global supply chains, but also in a local Danish context

The interviewed executives from Danish businesses recognize that their businesses have an impact on biodiversity, but the exact impact remains unclear to most of them. Consequently, it is relevant to review the main global drivers of biodiversity loss as well as the key pressures that Danish businesses put on biodiversity.

Key takeaways

- ▶ UN's biodiversity expert panel, IPBES, has identified five main global drivers of biodiversity loss: land and sea use, overexploitation of organisms, pollution, climate change, and invasive species and diseases
- ▶ Danish businesses play a part in all of these, although invasive species and diseases is less relevant in this context. The research carried out for this report identifies and scopes out eight key biodiversity pressures where Danish businesses have a significant negative impact:
 1. Agricultural effluents: nutrient run-off from manure and fertilizers
 2. Cultivation of crops: conversion of ecosystems, intense farming, and global deforestation
 3. Livestock farming: conversion of ecosystems and global deforestation (for livestock and feed)
 4. Logging & wood harvesting: lack of primary forest in Denmark, global deforestation
 5. Fishing: selective extraction and disruptive fishing techniques
 6. Non-living marine disruption: extraction of resources and destruction of marine ecosystems
 7. Water use & quality: inefficient water usage and impact on natural water systems
 8. Built environment: conversion and fragmentation of ecosystems
- ▶ Each Danish business has a direct or indirect impact on biodiversity through these pressures, but exposure to the pressures differs based on the business sector's activities

Global biodiversity loss is caused by five main drivers

As stated in the previous section, global scientific research has identified five main global drivers of biodiversity loss. All these clearly relate to human activity and are mostly driven by businesses. These drivers are relevant in a Danish business context as well, even though invasive species and diseases is less important than the four others.

Before covering actions that can help businesses reduce their impact, the following section specifies the exact effect businesses have on biodiversity. On a global level, human and economic activity affect biodiversity primarily through the five drivers outlined in Exhibit 7.

Biodiversity loss stems from five main global drivers linked to human activity






				
A	B	C	D	E
Land & sea use	Overexploitation of organisms	Pollution	Climate change	Invasive species & diseases
Modification of the environment by complete removal, fragmentation or reduction in quality of key habitats, caused by activities like unsustainable agriculture, logging, transportation, construction, and energy production	Direct overexploitation such as unsustainable hunting, fishing, harvesting, and indirect overexploitation occurring when species are unintentionally killed (e.g., fishing bycatch)	Direct impact on species by e.g., oil spill, or indirect impact on species by impacting food availability or reproductive performance	Temperature increases requiring species to adapt (if possible) or causing seasonal events such as migration and reproduction to occur at the wrong time	Non-native species competing with native species for space, food, and other resources, preying on native species, or spreading non-native diseases
				<div> <div></div> <div></div> </div> <p>(Limited relevance in Danish business context)</p>

Exhibit 7: Over the past five years, a vast amount of new scientific data has helped to identify five major global drivers of biodiversity loss^{32 33}

³² IPBES (no date)

³³ Bain analysis

While all five drivers are pivotal for understanding the biodiversity crisis, the conducted research shows that the first four drivers (A-D) are especially relevant in a Danish context. Globally, land and sea use has been identified as the most potent driver, as it includes human activity such as logging, mining, and the clearing of forested areas to grow crops and keep livestock. In the Amazon rainforest, for instance, which is home to 10% of global species, significant areas are continuously being cleared in order to plant crops such as soy, which is used to feed livestock. Due to a large dependency on soy, Denmark comes in third place in the EU with regard to global deforestation per capita caused by soy production.^{34 35 36 37}

In addition to the five direct drivers, biodiversity loss is further accelerated by indirect drivers such as human population growth, technological development, unsustainable production, and overconsumption – the latter three are closely linked to businesses. The global drivers can be difficult to relate to for a specific business, and can appear somewhat intangible, which is why the Danish pressures are explained in more detail in the following section.

³⁴ TheGuardian (2022)

³⁵ Dansk Initiativ for Etisk Handel (2020)

³⁶ WWF (2021)









³⁷ WWF (no date b)

Danish businesses place substantial pressure on biodiversity

Danish businesses have a significant impact on biodiversity both locally and globally. Eight pressures are particularly relevant in a Danish context.

The interviews conducted in connection with this report show that executives in Danish businesses recognize their impact on biodiversity, but it remains unclear to most how that impact materializes. The research identifies eight primary pressures that Danish businesses put on biodiversity (Exhibit 8). These pressures are based on IUCN's Red List for Denmark and input from Danish experts who have reviewed the significance of biodiversity impact, the role Danish businesses play in causing the pressure, and the extent to which the pressure can disrupt natural services that Danish businesses rely on.³⁸ The pressures are detailed further in the complementary technical report.

Danish businesses affect biodiversity through eight pressures

Agricultural effluents	Cultivation of crops	Livestock farming	Logging & wood harvesting
			
Nutrient run-off from manure and fertilizers entering water systems leading to eutrophication	Conversion of ecosystems and global deforestation Large share of land used for agriculture due to historical expansion, limited crop diversity and low soil quality Value chain impact (primarily soy, palm oil and rubber)	Conversion of ecosystems and global deforestation (through value chains) Large share of land directly (farming) or indirectly (feed, e.g. hay, soy) used for livestock, driven by consumption of meat/ dairy and inefficient by-product use	Lack of primary, old-growth forest in Denmark and forestry management and methods (incl. biomass sourcing) Global deforestation and habitat conversion directly (wood) and indirectly (other commodities)
Fishing	Non-living marine disruption	Water use & quality	Built environment
			
Overfishing and selective extraction of marine species including inefficient by-product use in production Disruptive fishing techniques (e.g., bottom trawling) disturbing marine species and ecosystems	Disruption and destruction of marine ecosystems through commercial activities, e.g., offshore wind construction, sand extraction & dumping, deep seabed mining and channel digging	Inefficient water use in agriculture and production Disruption of natural water systems (e.g., lakes, other wetlands, in forests) by pollution and drainage	Conversion and fragmentation of ecosystems Extensive land and sea areas dedicated to infrastructure (cities, commercial buildings and connecting transportation networks)

Key global drivers of biodiversity loss

 Land & sea use
  Overexploitation of organisms
  Pollution
  Climate change
  Invasive species & diseases

Exhibit 8 From agricultural effluents to built environment, Danish businesses impose significant pressure on national and international biodiversity within eight specific areas^{39 40}

These pressures are particularly important for Danish businesses to act upon – domestically and internationally. They result from the extraction of resources used across sectors, expanding built environment, and more. One example is no. 6) non-living marine disruption, which relates to two of the global drivers: land and sea use as well as overexploitation of organisms.

³⁸ IUCN (no date)

³⁹ WWF (expert interviews)

⁴⁰ Bain analysis

While the pressures identified are relevant for the activity of Danish businesses, the biodiversity impact of these pressures is clearly not limited to Denmark. Through global supply chains, e.g., the import of products such as wood, soy, palm oil, and other resources, Danish businesses put strain on nature around the world. The conducted interviews for this report show that many Danish businesses are aware of the relevance of biodiversity in their supply chain and believe this to be the main lever of reducing impact. Despite this fact, research shows that many Danish businesses do not rely on certifications such as FSC, the international forest certification scheme, to ensure that their imports have as little impact on biodiversity as possible.^{41 42}

While these pressures clarify the main areas that businesses affect, the actual influence differs significantly across sectors. To understand more closely how each sector contributes to biodiversity loss, the next section will map sectors to Danish pressures.

Danish businesses' impact on biodiversity differs by sector

Despite some sectors playing a larger role than others, most major Danish industry sectors have an impact on biodiversity and can support the efforts to combat biodiversity loss. Sectors such as agriculture and food & beverage have the most impact, but the rest – from industrials & materials to healthcare – also influence the natural world and therefore have work to do.

Different sectors perform different activities and, as a result, the pressure they put on biodiversity diverges as well (Exhibit 9). This is also reflected in the level of biodiversity awareness, which varies significantly by sector.

⁴¹ WEF (2020)

⁴² Dansk Initiativ for Etisk Handel (2020)

Extractive sectors exert most pressure on biodiversity – but impact is caused across sectors

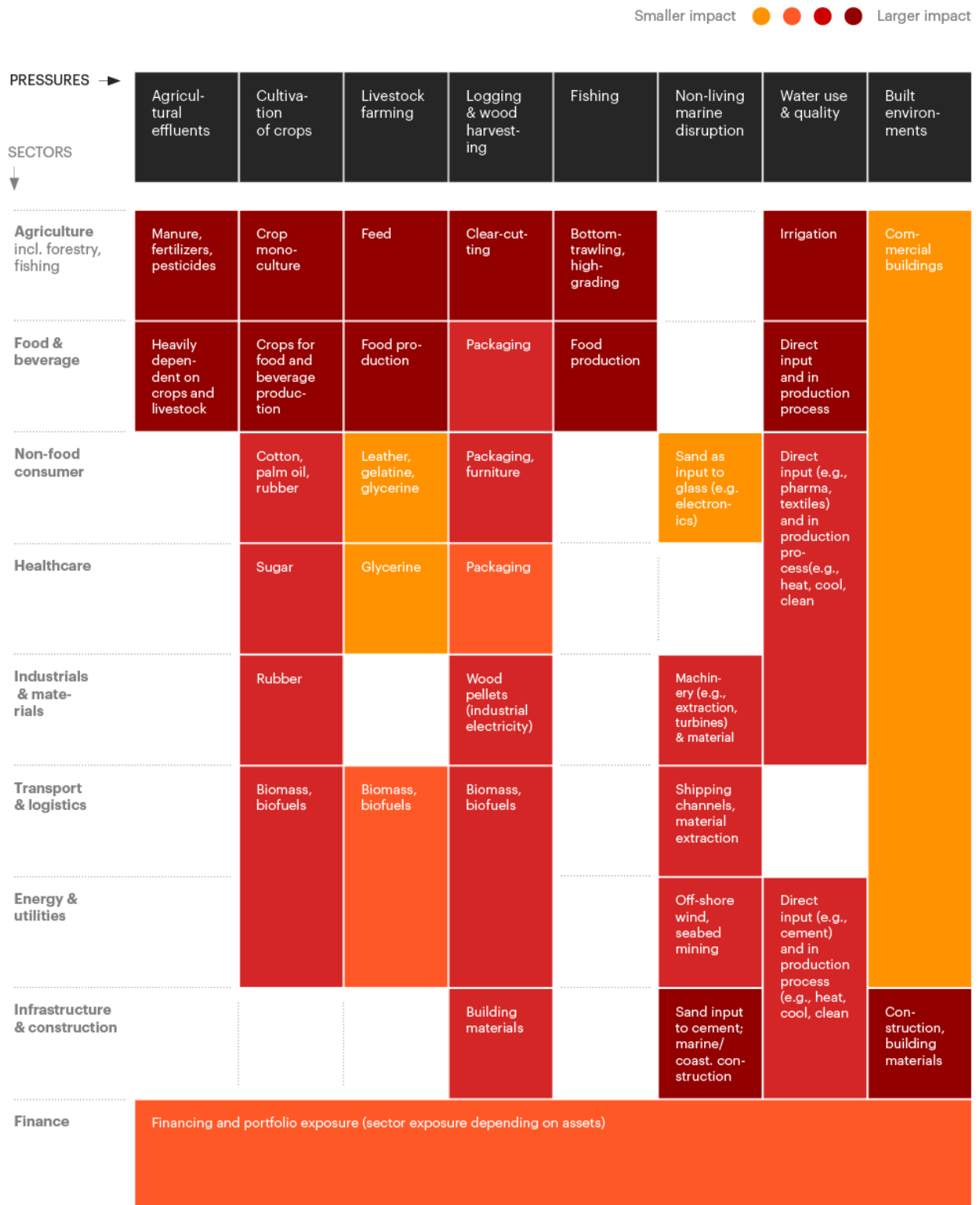


Exhibit 9: Assessing the pressures for each sector reveals varying impact and can help to prioritize countermeasures ^{43 44 45}

Notes: 1) Additional impact along global supply chains; 2) Fashion industry included under consumer goods & wholesale

The interviews and survey found higher awareness about biodiversity impact among businesses closely linked to extractive activities, i.e., especially those businesses active in the agricultural and the food & beverage sector. However, the interviews also revealed a need to increase the level of knowledge on biodiversity across all sectors, including the agriculture and food & beverages sectors. One example that came to light was a company that embarked on a major switch to biofuels in order to lower their carbon footprint but without considering how the production of biofuels impacts biodiversity. Depending on the type of biofuel (e.g., corn-based versus algae-based), the impact on biodiversity varies greatly. Fortunately, this company made the right choice, picking a kind of biofuel with lower biodiversity impact, but that was more by chance than intent.⁴⁶

All Danish sectors are related to at least one of the pressures. For example, according to the World Economic Forum, food systems are responsible for about 70% of global biodiversity loss due to habitat loss caused by agricultural practices. In Denmark, for instance, over 60% of land area is used for agriculture. Another example is infrastructure & construction which affects biodiversity by using sand as an input material for cement which can lead to non-living marine disruptions and take up space from nature when building new infrastructure.^{47 48}

The dynamics within the financial sector are different. The financial sector indirectly fuels biodiversity loss, the intensity of impact depending on portfolio exposure. Biodiversity is affected indirectly through investments financing other sectors with high impact or failing to handle issues related to climate change effectively. While the industry has certainly picked up the past few years, a survey of the 16 largest pension funds in Denmark shows that their climate related efforts are not going to meet the targets set in the Paris Agreement by 2030. Currently none of the major pension funds are working systematically on biodiversity related issues in their portfolios, although one – DANICA Pension – recently announced their intent to pursue such efforts. In the future, the highly influential financial sector will play a critical role in enabling nature-positive businesses.^{49 50}

The pressures identified in this chapter illustrate how all major Danish sectors affect biodiversity directly and indirectly. They are meant as a guide for Danish businesses to investigate their own impact and help define the actions needed to improve the biodiversity footprint.

⁴³ WWF (Expert interviews)

⁴⁴ Bain analysis

⁴⁵ ENCORE (no date)

⁴⁶ Awogbemi et. al (2021)

⁴⁷ WEF (2018)

⁴⁸ WRI (2021)

⁴⁹ IPE (2019)

⁵⁰ DANICA Pension (no date)

“A lot of change needs to happen at most companies, but the rewards could be very high for those companies that do engage.”

Jens Bjørn Andersen, CEO, DSV



Chapter 3

Seizing business opportunities and mitigating risks

Reducing impact on nature helps mitigating business risks and provides immediate benefits to Danish businesses – four transitions guide the way here and now. A sustainable future economy will depend on businesses investing more in nature.

According to research by Bain & Company and WWF, Danish businesses see biodiversity loss as a serious threat, but most have yet to set tangible goals or develop a dedicated strategy to address the issue. The research also revealed that many are not fully aware of the benefits of a nature-positive approach. This underlines the relevance of outlining the key risks that can be mitigated, the attractive opportunities that can be gained, the transitions needed to do this – and what the nature-positive economy of the future entails.

Key takeaways

- ▶ Approximately 70% of the Danish businesses surveyed see biodiversity loss as a business threat, but less than 10% of them have set tangible goals to address the issue
- ▶ Only 35% of the respondents are aware of ways to benefit from a nature-positive approach, and many of the businesses primarily see biodiversity actions as a means to mitigate risks
- ▶ Risk avoidance will play a particularly large role in motivating businesses to act, as businesses will continue to experience the impact of biodiversity loss directly and indirectly. This includes increasing costs of natural services as well as increasing risk of disruptions, regulations, and reputational consequences
- ▶ Businesses that reduce their impact on nature can earn significant and sustainable benefits through e.g., risk avoidance, brand enhancement, market expansion, product innovation, and investment opportunities
- ▶ To maximize impact, Danish businesses should focus on critical transitions across supply chain, operations, consumption, and built environment
- ▶ Global leaders on biodiversity have already defined and committed to ambitions to improve their biodiversity footprint

- ▶ While reducing impact on nature is good for business and may halt the destruction of nature at the current rate, the future economy requires that businesses move toward a more ambitious goal: to develop nature-positive business models that restore the damaged ecosystems
- ▶ According to the World Economic Forum, becoming nature-positive comes with major business opportunities: a global transition toward a nature-positive approach is estimated to provide annual business opportunities worth \$10.1 trillion by 2030
- ▶ Nature-positive business models rely on investments in nature-based solutions with some businesses already doing transformative changes across their operations

Danish businesses lack a strategic approach to biodiversity and are largely unaware of the opportunities that taking action could foster

Survey results reveal that while biodiversity loss is seen as a meaningful threat, recognition of own impact and progress toward setting ambitions are limited.

Between October and December 2021, Bain & Company and WWF conducted a survey among the largest Danish businesses to gain an understanding of their awareness, interest, and strategy regarding biodiversity. Additionally, 10 in-depth interviews were held with Danish executives to understand these elements in further detail.

Most businesses surveyed lack tangible action and awareness of the benefits around improving biodiversity impact

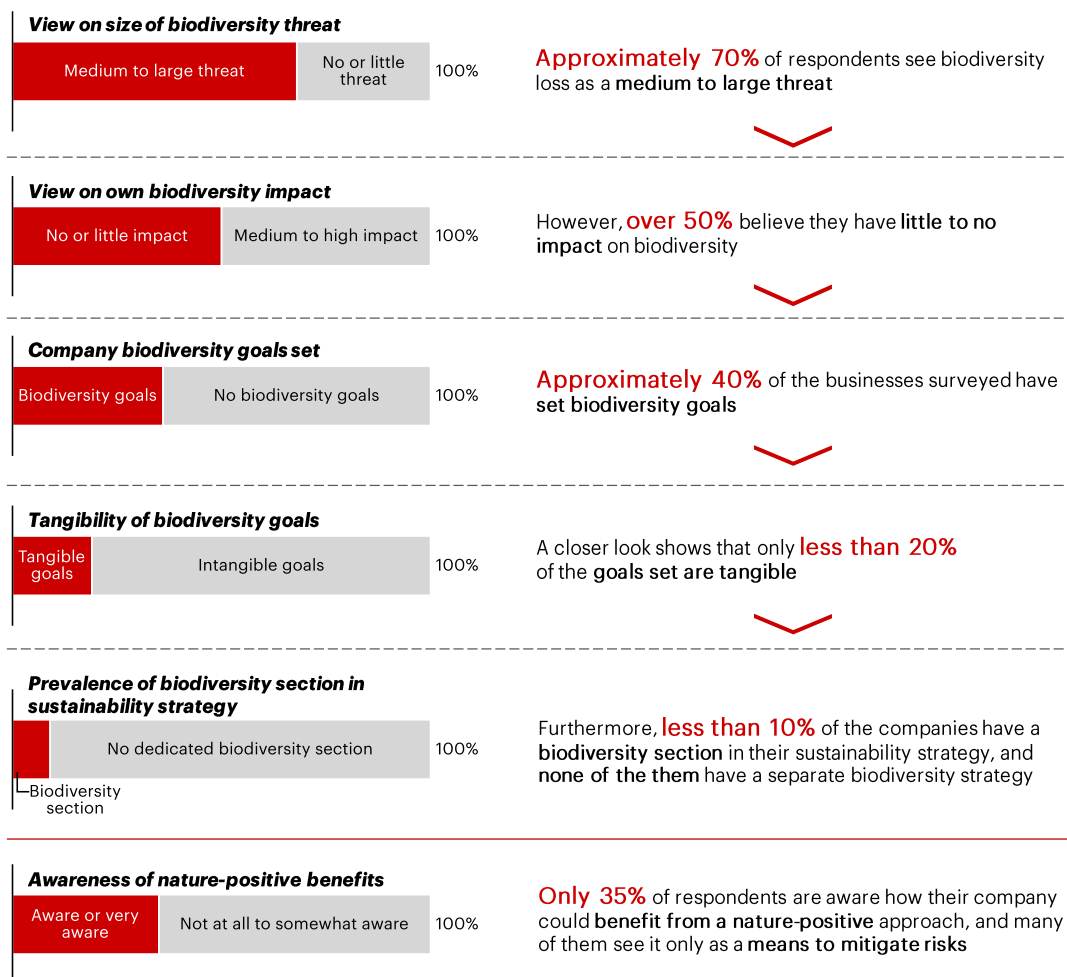


Exhibit 10: Responses from Danish businesses reveal a gap between tangible actions and the perceived threat biodiversity loss poses to businesses^{51 52}

⁵¹ Bain analysis

⁵² WWF (Expert interviews)

Biodiversity loss comes with significant business risks

As businesses will continue to experience the impact of biodiversity loss directly and indirectly, risk avoidance will play a particularly large role in motivating businesses to act.

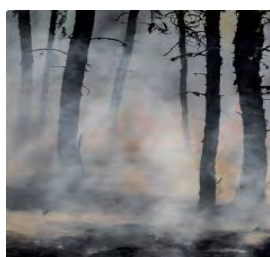
As shown by the survey results, a large majority of Danish businesses consider global biodiversity loss as a significant threat to their business. Only one business surveyed believes it poses no threat at all. If businesses are not prepared, the impact of global biodiversity loss is likely to impact all Danish businesses. Conversely, improving biodiversity provides significant risk mitigation potential.

Biodiversity poses major business risks



Resource scarcity

Scarcity and cost increases of natural goods (e.g., water, fish, wood) and decreases of natural services (e.g., carbon capture, air purification, pollination)



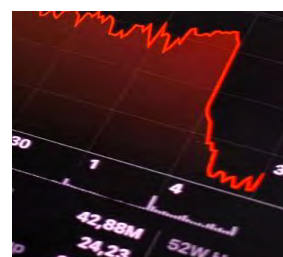
Natural hazards

Reduced resilience to climate-related natural hazards (e.g., floods, fires, storms, and temperature extremes)



Tighter regulations

Tightened policies to address biodiversity loss through taxation, penalties, licensing, and reporting



Reputational damage

Brand damage due to biodiversity negligence or misconduct, as well as difficulty accessing capital due to investor biodiversity risk mitigation

Exhibit 11: The derived effects of biodiversity loss may have significant implications for Danish businesses' profitability in both the short and long run^{53 54 55 56 57}

Implications of biodiversity loss for businesses include increasing costs of natural services, increasing risk of disruptions and regulations, as well as reputational consequences (Exhibit 11). For example, the World Bank predicts that water scarcity will hamper GDP growth by as much as 6% in some parts of the world by 2050, and businesses, such as Carlsberg, have already raised concerns regarding water risk in parts of their operations. Regulatory pressure is also expected to increase imminently with multiple new biodiversity-related regulations on the horizon. These regulations will be outlined in Chapter 4. The interviews conducted for this report revealed that many executives are particularly concerned about the reputational risks of biodiversity loss, i.e., on their social license to operate.^{58 59}

⁵³ Bain & Company (2021 a)

⁵⁴ OECD (2019)

⁵⁵ Vision of Humanity (no date)

⁵⁶ Grantham Research Institute (2017)

⁵⁷ Grantham Research Institute (no date)

⁵⁸ World Bank Group (2016)

⁵⁹ Carlsberg (2020)

Reducing impact on nature will not only help to mitigate risks, but it also creates attractive business opportunities to be outlined in the following section.

Reducing impact on nature creates attractive business opportunities

Improving biodiversity footprint comes with major benefits through risk avoidance, access to green finance, improvement of existing business, and new innovations.

As previously shown, Danish businesses’ impact on nature comes with increasingly higher risks. Mitigating these risks, however, also comes with major benefits that go well beyond pure risk reduction in the short term. Most significantly, businesses investing in reducing their footprint on nature will save money by beating competition to the most low risk and beneficial nature projects, improving their employer brand, reducing financing risks and costs, and meeting market expectations earlier than the competition, which will be forced to react to upcoming regulation in the medium term (Exhibit 12).

Significant and sustainable benefits from reducing impact on nature

1. Risk avoidance - e.g., avoidance of resource scarcity, operational disruption, and regulatory interference	2. Access to finance - e.g., sustainable finance through high environmental rating, and green bonds. Furthermore, many financial institutions are expected to limit access to finances for nature extractive businesses in the future	3. Improvement of existing business - e.g., reduce future operating costs, internal and external brand enhancement, volume gains due to yield improvements, and cost savings from efficiency gains	4. New opportunities & innovations - e.g., new technologies and product innovations such as refinement of by-products and waste materials, biobased production methodologies and market innovations like nature-based carbon credits
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Exhibit 12: Potential benefits for businesses from reducing impact on nature

Early mover businesses and governments still have an opportunity to gain a competitive advantage. However, the window to gain that advantage is short, as nature-friendly actions will quickly become the expected business practice norm – just as current ESG investments have. Over the past decade, the MSCI Emerging Markets ESG Leaders Index outperformed the broader MSCI Emerging Markets Index, with annualized gross returns of 6.1% versus 3.3%, a clear reflection of the profitability of ESG investing.^{60 61}

Unsurprisingly, a third of businesses responding to HSBC’s recent Navigator survey, which involved more than 10,000 businesses in 39 countries and markets, said that “a sense of social responsibility”

⁶⁰ MSCI (2022 a)

⁶¹ MSCI (2022 b)

will be one of the defining characteristics of successful businesses going forward. In addition, 86% of those businesses said that improving their sustainability focus will likely increase revenue over the next year.⁶²

Biodiversity-related brand enhancement can improve businesses internally by supporting their talent acquisition and retention efforts – giving them a highly sought-after advantage that many executives mentioned in the interviews. Brand enhancement will also have external benefits within an increasingly aware Danish and international consumer and B2B base. According to the European Investment Bank, 33% of the Danish population see environmental degradation as one of the three biggest challenges facing the country. Moreover, the benefits of land restoration are estimated to be 10x higher than the costs.^{63 64}

The next section will describe the transitions needed to reduce impact on nature and start reaping opportunities.

⁶² HSBC (2020)

⁶³ EIB (2022)

⁶⁴ IPBES (2019)

Four transitions guide the way

To immediately reduce impact on nature and capture opportunities, Danish businesses must engage in four transitions. Most significant reductions can be found by collaborating to find end-to-end solutions for their respective supply chains, with different sectors driving and enabling change.

The executives who participated in interviews for this report emphasized that real transitions are needed across supply chains. Based on the varying pressures exerted on nature through different sectors, it was identified which role they play in the transitions needed to substantially reduce Danish businesses' impact on nature (Exhibit 13). The transitions are explained in further detail in the complementary technical report.

Four transitions to reduce impact on nature

 1. Supply Chain	 2. Operations	 3. Consumption	 4. Built environment
Transparency and traceability of supply chains; sustainable sourcing of input materials such as soy (e.g., by promoting sustainable farming, forestry, and fishing practices), efficient land use	Adopt resource- and energy-efficient operational practices, shift into biobased raw materials, increase sustainability, and reduce effluents, waste, and pollution	Raise awareness and guide end-customers and consumers toward sustainable alternatives and habits (e.g., circular economy)	Use resource-efficient and climate-resilient construction techniques in buildings, densify urban areas with nature-integrated city planning

Exhibit 13: Transitions needed across supply chains, operations, consumption, and built environment

Businesses can realize these transitions by either transforming their own operations or collectively redesigning supply chains: different sectors play a different role in driving and enabling change within each transition (Exhibit 14).

See deep-dive pages in appendix for concrete examples of transitions per sector

Different sectors drive and enable change in each transition

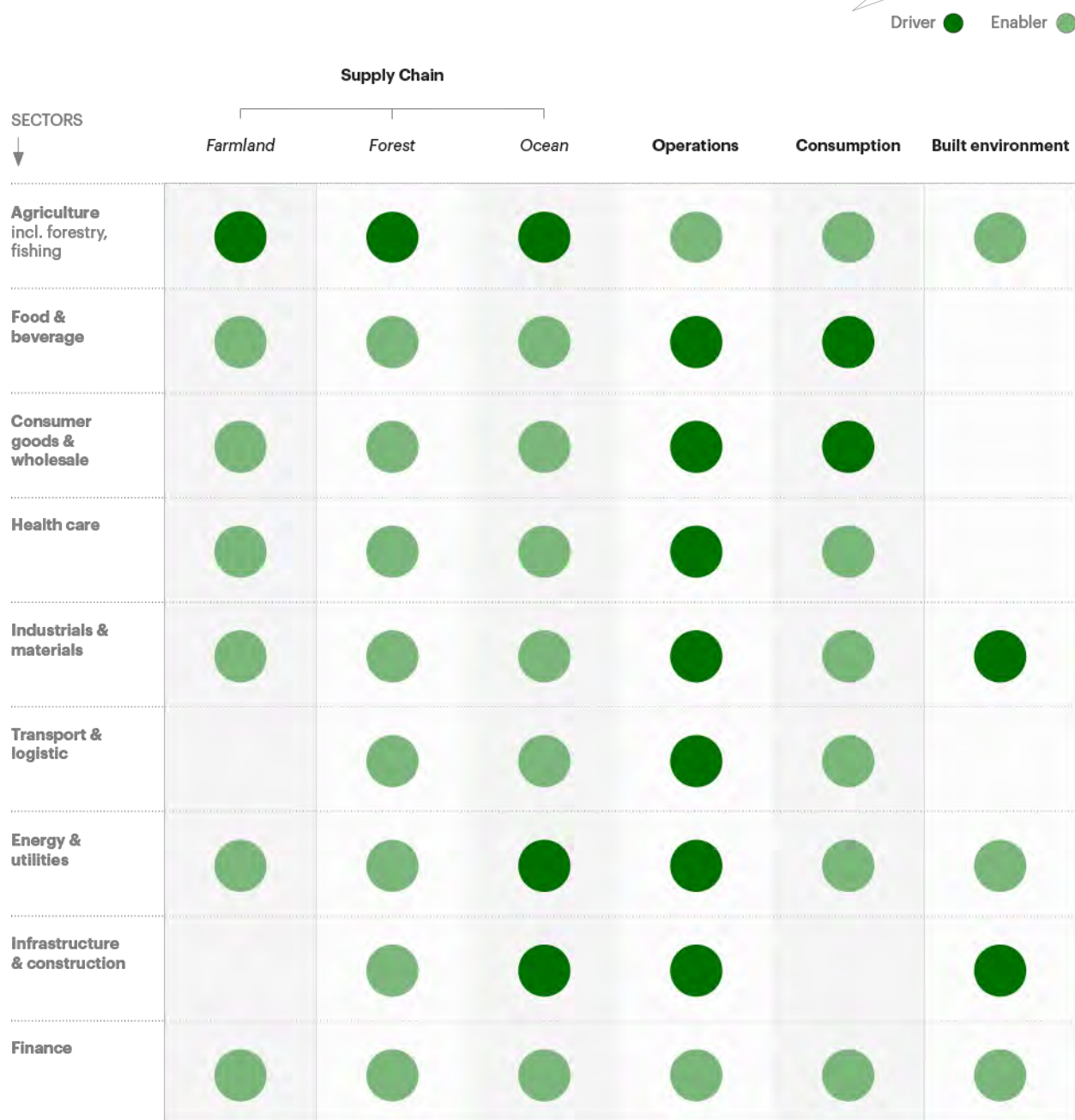


Exhibit 14: Danish sectors play varying roles between driving and enabling the four transitions^{65 66}

⁶⁵ WWF (Expert interviews)

⁶⁶ Bain analysis

For example, the agriculture sector is a key driver in transitions needed across supply chains, such as alternative animal feed. Food & Beverage as well as Consumer goods & wholesale, in turn, will be key drivers in transitions within operations and consumption, such as implementing circular production and consumption practices, while enabling transitions in the supply chain. The following section offers inspiration from businesses that have started contributing to these transitions.

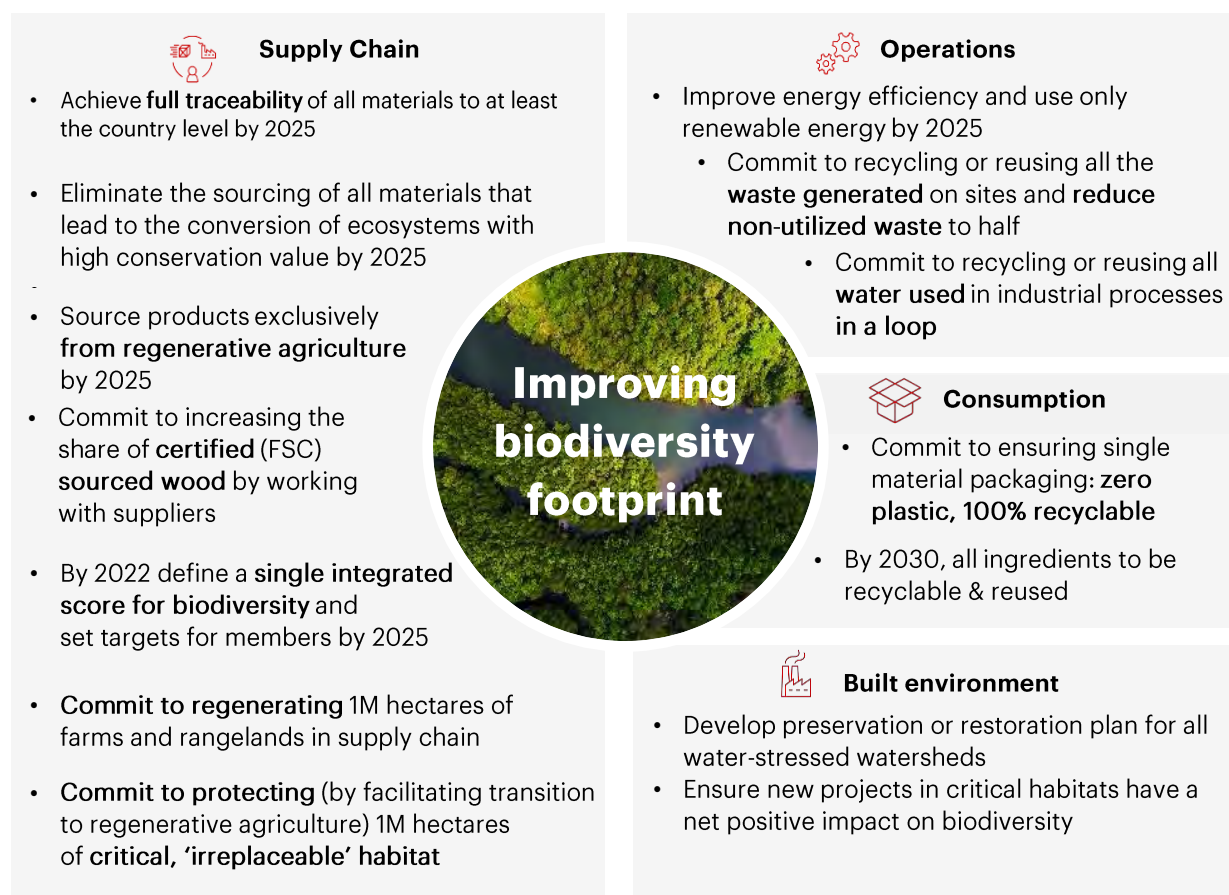
Leading businesses are starting to take action to reduce impact on nature

Multiple businesses in Europe and around the globe have already taken action to improve their biodiversity footprint by committing to various targets along their supply chain, operations, consumption, and built environment.

As previously shown by the survey results, approximately 7% of the Danish businesses included in the survey have set tangible biodiversity goals and less than 10% have a specific biodiversity strategy section in place. Furthermore, around 70% of respondents rate their current biodiversity initiatives as insufficient.

In order to both benefit from and address forthcoming disruptions, businesses need to assess their baseline footprint, set clear targets, define and prioritize actions, report on progress, and build partnerships to enable change across supply chains. Several international businesses have started this process by setting ambitions for improving biodiversity (Exhibit 15). Danone, for example, has committed to source their products grown in France exclusively from regenerative agriculture by 2025 in order to improve soil integrity and biodiversity in and around the fields.

Leading businesses set examples in defining ambitions



Based on
insights from:



Exhibit 15: Leaders on biodiversity have started to set ambitions to improve their footprint⁶⁷

Commitments like these and respective business actions are already yielding biodiversity gains. For example, Ege Carpets partnered with the Danish Nature Fund and Herning municipality to create optimum conditions for local wildlife to flourish in a new coherent area around the company's production facility in Herning called Gjellerup Enge.⁶⁸ Exhibit 16 outlines further example projects from leading businesses along the four transitions. These transitions can be funded with green financing, such as green bonds, if needed.

⁶⁷ Company websites

⁶⁸ Ege Carpets (no date)

Businesses are already taking transformative action across their entire supply chain to limit pressure on nature

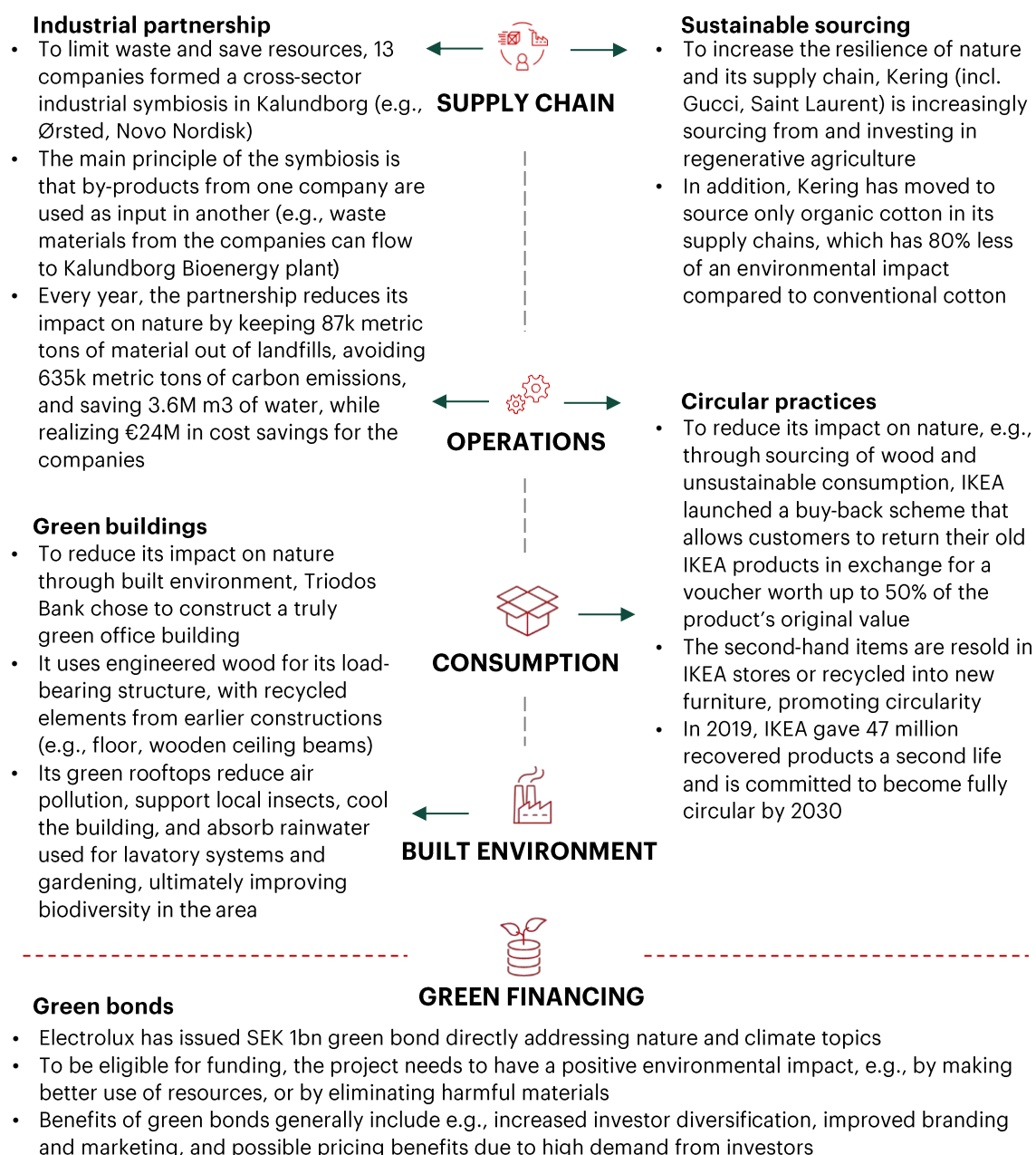


Exhibit 16: Some businesses have already started reducing their impact on nature with projects that have realized benefits for both nature and the businesses involved^{69 70 71 72 73 74 75}

⁶⁹ Kalundborg Symbiosis (no date)

⁷⁰ Electrolux (2020)

⁷¹ Climate Bonds Initiative (no date)

⁷² WWF (2020 b)

⁷³ WEF (2022 b)

⁷⁴ Dezeen (2021)

⁷⁵ Kering (no date b)

As shown, helping to halt the current destruction of the natural world can be good for businesses. Recent research, however, indicates that investing in restoring ecosystems around the world will reap even higher benefits. The next section will introduce what is meant by nature-positive business models and how they can benefit businesses.

The economy of the future is based on nature-positive business models

While reducing business impact on nature is good for business and may halt the destruction of nature at its current rate, the future has more in store. The World Economic Forum estimates approximately \$10 trillion in annual business opportunities globally for businesses willing to invest in a nature-positive economy.

The concept of a ‘nature-positive economy’ entails more than businesses not doing harm, reducing impact, and treading lightly across our world. It requires businesses and society to invest in nature to enhance the resilience of the world’s ecosystems. At its heart, the goal of a nature-positive approach is to halt and reverse the destruction of nature by 2030 with a full recovery of a resilient biosphere by 2050.⁷⁶

The concept of a nature-positive future is a disruptive idea. It encompasses a range of new business models based on regeneration, resilience, and recirculation. And it is the foundation for good governance, long-term stable societies, and healthy economies. All generating significant financial opportunities as well as stabilizing ecosystems across the globe.

⁷⁶ www.naturepositive.org (no date)

A nature-positive economy requires that businesses start moving toward nature-positive business models

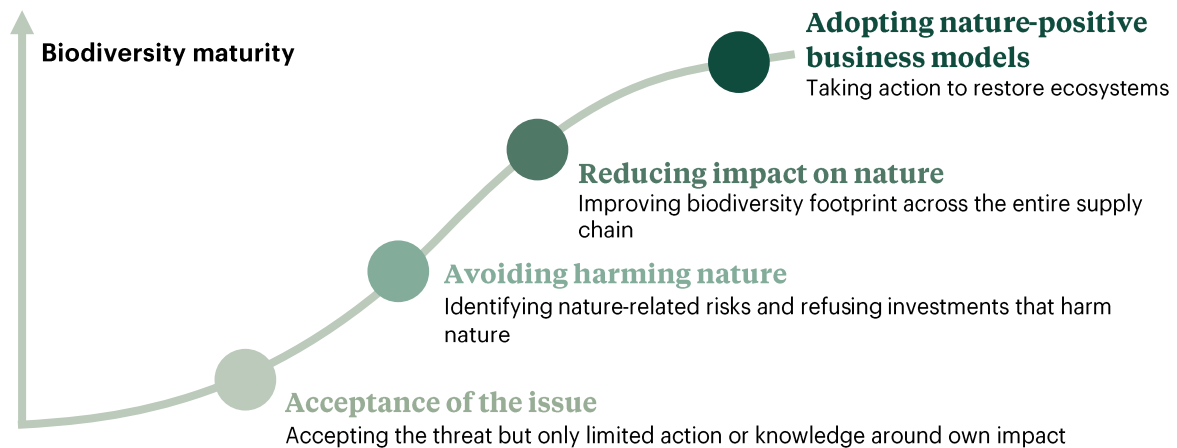


Exhibit 17: Building a nature-positive economy requires that businesses move along the maturity curve, from accepting the issue to fully adopting a nature-positive business model

According to the World Economic Forum, a nature-positive economy can unlock \$10 trillion of business opportunities annually and create 395 million new jobs in the coming eight years (Exhibit 18). The business potential in Denmark is particularly large. Given that our annual ecological footprint is 1.8x higher than what Danish nature can produce and absorb, Denmark ranks 14th on the list of countries with the highest ecological footprint in the world.^{77 78}

Large business opportunities expected from nature-positive transition



~\$10 trillion per year globally



~\$43 billion per year in DK⁷

Exhibit 18: Size of business opportunities from transitioning to nature-positive economy by 2030

⁷⁷ WEF (2022 b)

⁷⁸ Global Footprint Network (2021)

Nature-positive business models rely on investments in nature-based solutions

The World Economic Forum estimates that reaching a nature-positive economy with all of its benefits by 2030 requires \$2.7 trillion per year of redirected funding. Public funds will not be enough, thus private sector investments are needed to turn businesses nature-positive.

The investment case for a nature-positive economy is clear. However, closing the investment gap equates to quadrupling society's investments in nature, according to the World Economic Forum. The gap cannot be closed with public sector funding alone. It requires businesses to act within their respective supply chains and drive nature-positive transitions through their own business models.⁷⁹

A promising methodology to achieve this within the nature-positive framework is nature-based solutions, where societies or businesses protect, sustainably manage, and restore natural or modified ecosystems to address societal challenges or business needs. Investments in nature-based solutions and projects are a key lever for businesses to transform their operations toward becoming nature-positive.

Business models based on nature-based solutions support restoration of nature

1. Sales models generating revenue through the sale of commodities, ecosystem services, and other services generated by nature-based solutions. For example, restoring forests to increase water levels in dry areas, and selling the service to businesses using the water in operations
 2. Cost benefit models generating profits through capturing a portion of operational or capital cost savings to beneficiaries. For example, reducing costs of storm damage to coastal businesses by investing in natural systems that protect coastlines
-

Exhibit 19: Example characteristics for nature-based solutions that support nature and business

Some Danish companies are already embracing nature-based solutions. For example, Carlsberg and WWF initiated a nature-based solution in the Narayani River Basin in Nepal to mitigate shared water risks and sustain a healthy water flow, leading to improved biodiversity in the area and more resilient business operations. The efforts include restoration and construction of local wetlands, dialogue with the local government to ensure adequate regulation, and education on sustainable water use for local communities.⁸⁰

The potential for both businesses and investors is significant. Finance Earth identified over 200 nature-based projects, from which 88 unique transactions were selected that incorporated repayable investment into the capital mix, with a total disclosed value of approximately \$1.5 billion.

⁷⁹ WEF (2022 b)

⁸⁰ Carlsberg (2020)

Although most of these transactions do not disclose financial returns, the majority were identified as offering market rate returns, with targeted performance ranging from 2-12% IRR. Almost half of all investments identified used ‘blended finance’ approaches, where grant capital is used to de-risk and enhance investor returns.⁸¹

“Our world must not only become net zero, but also nature-positive, for the benefit of both people and the planet.”

G7 announcement

In addition to nature-based solutions, business should continue to drive and enable transitions along their entire supply chain to reduce their impact on nature, as discussed previously in this chapter. For example, adopting circularity in operations plays an important role in reaching a nature-positive business model overall, and actions around utilizing waste streams show a large potential for both nature and businesses.

Besides the risk mitigation potential of reducing impact on nature, there are many attractive opportunities available to all Danish businesses, big or small. A transition to a nature-positive economy will require that businesses move toward restoring nature in their operations, which comes with even higher benefits, but it also requires investments. Our interviews with executives emphasized that they face roadblocks that go beyond a limited awareness of the opportunities. The next chapter will focus on solutions to overcome these roadblocks.

⁸¹ Finance Earth (2021)

“We struggle to find the frameworks to help guide our company in the right direction, set the right targets.”

Dorethe Nielsen,
VP Corporate Environmental Strategy, NovoNordisk



Chapter 4:

Solutions to drive action

Existing solutions can help Danish businesses overcome the four perceived roadblocks to action on biodiversity

Despite upcoming regulation and businesses acknowledging that they may affect biodiversity, many Danish businesses hesitate to commit to transformational initiatives to improve their biodiversity impact largely due to four main roadblocks. However, there are ways to overcome each of the roadblocks using existing frameworks, tools, and solutions as well as working together with your suppliers – some of which may also help to solve other ESG-related challenges that Danish businesses are facing. These solutions will be key to unlocking timely action to reverse biodiversity loss before 2030.

Key takeaways

- ▶ Businesses see four major roadblocks limiting their ability to systematically address biodiversity loss:
 1. Tragedy of the commons – biodiversity loss is primarily seen as a societal problem: Limited drivers for change are seen at business level due to fear of suffering a competitive disadvantage
 2. Biodiversity is very complex – biodiversity is difficult to understand and address, particularly in your supply chain
 3. Climate has priority over biodiversity – the biodiversity crisis and actions against it are competing for resources with other sustainability issues such as climate change – businesses are overwhelmed by the multitude of topics to address
 4. Limited standardization – few standards, tools, and methodologies are available to assess biodiversity impact and measure the effect of potential actions
- ▶ Some of these roadblocks are being addressed by government authorities and NGOs, while solutions to others already exist:
 1. Governments and the financial sector are in the process of setting up a lot of new regulation and requirements for businesses to act and report on; starting the journey now provides an opportunity to get ahead of both regulators and competitors
 2. World-class supply chain collaboration will not only help tackle sustainability problems, but also set your business up for future success by building stronger connections with suppliers and customers
 3. Biodiversity loss is highly related to other sustainability topics – particularly climate change – and new types of holistic solutions tackle these topics simultaneously, thereby saving significant resources
 4. Existing tools to measure biodiversity impact can be applied or serve as inspiration until more standardized methodologies are in place, thereby saving valuable time

There are solutions to overcome Danish businesses' four roadblocks to action

While the research conducted for this report revealed a host of different reasons for the limited action taken against biodiversity loss by Danish businesses, solutions exist to help businesses overcome these roadblocks.

In-depth interviews with Danish business leaders reveal a willingness to participate in solving the biodiversity crisis, while the perceived benefits are mostly related to risk avoidance. However, initiating more systematic initiatives is met with skepticism. The primary research for this report helped identify a set of roadblocks that drive this hesitation (Exhibit 20). For example, executives mentioned that more regulation would be needed for the positive shift to lower biodiversity impact by leveling the playing field and ensuring that early movers avoid facing disadvantages.

While these considerations are highly relevant, they do not paint a complete picture of the status of development with regards to biodiversity work. Several global businesses have started their biodiversity journey and can act as role models for others (see exhibit 16 for examples). Furthermore, businesses that are hesitant to start acting on biodiversity could consider the solutions outlined in exhibit 20.

Businesses, consumers, and politicians need to work together to remove the remaining barriers to action and avoid pushing nature degradation beyond irreversible tipping points.

There are solutions to help Danish businesses overcome their four roadblocks to action

The four roadblocks to action...

... and solutions to overcome them

<p>1</p> <p>Tragedy of the commons: Biodiversity loss is currently a societal problem, and limited drivers to action exists at company level</p> <ul style="list-style-type: none"> • While the threat to society is great, direct threats for individual businesses are less pressing • Most businesses did not know of major forthcoming regulations • Due to a perceived low recognition of the problem with Danish regulators and public, businesses fear only minor benefits from early action 	<p>→</p> <p>Take proactive actions to move ahead of upcoming regulation</p> <ul style="list-style-type: none"> • Impactful regulation from e.g., the UN and EU is underway that will drive significant change across sectors and throughout supply chains • The longer we, as consumers, businesses and politicians, wait to take collective action, the bigger and more costly the crisis becomes – this cost will also be borne by individual businesses • The financial sector is developing stricter requirements for loans and investments to businesses with high biodiversity impact • Acting now will give you a head start vis-à-vis legislation and competitors who will have to follow suit eventually
<p>2</p> <p>Too much complexity: Biodiversity impact is difficult to understand and address in today's complex, global supply chains</p> <ul style="list-style-type: none"> • It takes specialists to identify biodiversity impact • Challenges and solutions differ between individual businesses, situations and geographies • A large amount of impact is caused by supply chains and consumption patterns and uncertainty exists on who is responsible for 	<p>→</p> <p>Collaborate closely with your supply chain to mitigate complexity and ensure end-to-end solutions</p> <ul style="list-style-type: none"> • World class supply chain collaborators will benefit not only with regards to biodiversity impact but also increase availability and reliability of inputs in the long run • Educating customers on how to reduce their impact will strengthen your brand, drive sales for sustainable products as well as reduce impact from consumption of products
<p>3</p> <p>One thing at a time: Biodiversity is competing with other ESG topics for resources</p> <ul style="list-style-type: none"> • Other problems, such as the climate crisis, are perceived as being more pressing by executives, customers and the public • Limited resources and bottlenecks make it difficult to address these issues simultaneously • Solving one problem may lead to others, as ecosystems are complicated and actions may spur complex interaction effects, e.g. some climate solutions, such as wind power harm biodiversity 	<p>→</p> <p>Prioritize actions that optimize for several sustainability problems</p> <ul style="list-style-type: none"> • Biodiversity, SDGs, ESG and climate change are not only highly related to, but also impacted by each other • While addressing biodiversity in isolation will add significantly to a business' list of issues to tackle, applying synergic solutions that tackle several sustainability topics will improve impact across problems while limiting the additional amount of resources required • Such solutions include collaborating with local communities, investing in solutions that benefit both biodiversity and climate, local development and economy, human rights etc. at the same time in one single project
<p>4</p> <p>Little standardization: Few standard tools, frameworks and methodologies available to guide biodiversity work and measure impact</p> <ul style="list-style-type: none"> • There is no standardized, widely acknowledged methodology to measure a business' biodiversity impact – or the effect of its mitigating actions • While regulation is underway, its exact contents are unclear • Different frameworks to describe and measure biodiversity exist but are not unanimously supported by different authorities and NGOs • New tools are available, but businesses do not have baselines to compare with yet 	<p>→</p> <p>Leverage the many frameworks, tools and certifications that are already available – new standards are expected to resemble these</p> <ul style="list-style-type: none"> • While globally consistent tools are being developed, existing tools to measure biodiversity impact as well as effectiveness of initiatives can be applied directly or serve as inspiration for businesses to help them develop their own (see chapter 5 for details) • The new authoritative tools are expected to resemble existing ones • New, more authoritative standards will be available soon – but businesses that start first may reap significant benefits, similar to climate offsets where increased demands have forced carbon price hikes in recent years

Exhibit 20: While the roadblocks to action are many, four possible ways to overcome them can help get the agenda moving

1 Take proactive actions to move ahead of upcoming regulation

The biodiversity crisis calls for collective action across sectors, businesses, consumers, organizations, and politicians. Lawmakers are adjusting regulation to level the playing field, but early mover businesses can get a head start to secure future benefits.

Like other sustainability-related problems, biodiversity loss can be characterized as a “tragedy of the commons” problem – these occur when individual actors neglect what is good for society for personal gain. While everybody benefits from well-functioning ecosystems that deliver a stable climate, access to fresh water and natural resources, few actors regard these ecosystem resources as their responsibility or invest in their preservation. This behavior has led to the unprecedented decline in biodiversity that is now threatening our economy and well-being. Still, most seem to wait for others to act first.

Businesses can deliver substantial impact at many levels, alone or with others. However, a large group of actors with a significant scope will deliver more sustained transformative change (Exhibit 21). This implies that sectors, businesses, consumers, organizations, and politicians will need to work together to find the most effective solutions that work on a grand scale.

Transformative power of collaboration



Exhibit 21: Increasing scope and shared responsibility in collaborations makes for more transformative change⁸²

Investments are a simple tool to achieve results – both on a local (e.g., rewilding own land) and global scale (e.g., in biodiversity projects run by NGOs specialized in nature preservation and protection). These projects can often be supplemented with transformational work within the

⁸² WWF analysis

businesses themselves such as WWF helping Salling Group halve their plastic dependency within their own business.⁸³ Working with supply chain business partners or industry associations can improve biodiversity by e.g., improving the sustainability of sourced products. Engaging with the entire industry or other businesses engaged in the same supply chains or geographical areas may reap large benefits, e.g., by investing collectively in climate or nature restoration projects that can transform entire landscapes and revert nature loss.^{84 85 86}

Required action from businesses, consumers, and politicians

Businesses can start the journey now by assessing their baseline impact, setting targets, identifying actions, and defining standards (Exhibit 22). These actions can come with attractive business opportunities (as outlined in chapter 3). While businesses may influence supply chains, governmental and societal changes are also necessary to reverse biodiversity loss within the next eight years. Consumers can reward businesses for their positive behavior by actively reducing consumption of products that are harmful to biodiversity, buying certified products, and recognizing steps toward lowering biodiversity impact. Finally, politicians will need to support the biodiversity agenda by leveling the playing field and enforcing action to protect nature. Legislation, subsidy allocation, tax systems, and reporting frameworks will need to be designed specifically for protection and restoration of our planet and its biodiversity – turning more land into nature, ending global deforestation, and promoting circular and nature-based industry practices. Current subsidy schemes, such as subsidies for farming, fishing, and forestry, promote nature-destroying practices. A report by The Nature Conservancy et al. shows that agricultural, fishery, and forestry subsidies in 2019 (USD 274-542B) alone were two to four times higher than annual capital flows toward biodiversity conservation.⁸⁷

⁸³ Salling group (2022)

⁸⁴ UNEP (2020)

⁸⁵ European Commission (2020 a)

⁸⁶ IEEP (2021)

⁸⁷ Paulson Institute (2020)

Transformative change requires action from businesses, consumers, and politicians

Business actions	<ul style="list-style-type: none">• Assess Baseline and set targets: Identify areas of biodiversity impact, measure own biodiversity impact and set ambitious targets to reduce impact• Define actions and build roadmap: Define set of actions to reduce biodiversity impact, including science- and ecosystem-based plans for future land use• Increase transparency: Report on impact and progress to share learnings and data with the rest of the business community, governments, and other stakeholders• Build partnerships and communities: Collaborate with others within and beyond your sector to find collective solutions, develop supply chain initiatives, and set standards (e.g., for offsetting)
Consumer actions	<ul style="list-style-type: none">• Buy responsibly: Focus on consumption of products where reduced biodiversity impact has been certified (e.g., certified wood, plant-based food, environmentally friendly cleaning products), or that are made of recycled materials (e.g., clothes made from recycled materials)• Reward action: Recognize when businesses act in favor of biodiversity and acknowledge that they will not become nature-positive overnight• Reduce & recycle: Reduce consumption of products with particularly harming effect on biodiversity (e.g., plastic bags, red meat, energy), and reuse or recycle products
Political actions	<ul style="list-style-type: none">• Adjust regulation: Design legislation to protect nature, level playing field for progressive players, define standards, and enforce action toward biodiversity – in Denmark as well as Danish impact on nature in the rest of the world• Redesign subsidies & taxes: Redesign subsidy allocation process to account for nature protection, and adjust taxation to reflect the actual price of a product, including cost of impact on nature• Align climate & biodiversity agenda: Engage citizens and businesses in developing biodiversity-friendly business practices, shift all governmental purchases into nature-friendly alternatives, develop frameworks that clarify the connection between nature and climate, and ensure that governmental carbon initiatives do not harm nature

Exhibit 22: Businesses will need to transform their sectors to limit their biodiversity impact, while consumers can play an important role in solving the biodiversity crisis by incentivizing businesses to change their ways. Politicians can level the playing field and enforce action to protect nature^{88 89 90 91}

Government regulations are underway – with significant implications for Danish businesses

Politicians are in the process of leveling the playing field with several relevant regulations and agreements implemented and underway (Exhibit 23). The appendix to this report includes a more detailed overview of these regulations. It is important to note that there are many implications for Danish businesses. New regulations are expected to come out of the global biodiversity summit, CBD COP 15, due to take place in the Chinese city of Kunming in the third quarter of 2022. UN country representatives are expected to agree on a framework of around 20 focus areas, including requirements for Western countries to reduce their impact on nature and funding nature restoration projects in the Global South.⁹² Denmark, being one of the countries with the highest impact per capita around the world, will be under pressure to act.⁹³

⁸⁸ Bain analysis

⁸⁹ WWF experience

⁹⁰ Hooper (no date)

⁹¹ WWF (2020 a)

⁹² CDB (2021)

⁹³ Global Footprint Network

EU's new green deal contains a series of initiatives that will influence business practices significantly. The EU biodiversity strategy, for example, includes targets such as the protection of 30% of EU land and sea areas.⁹⁴ This would require protection of an additional 15-21.5% of Danish land area by law (pending decision on inclusion of nationally protected land vs. protected land under Natura 2000).⁹⁵ Changes in EU's trade policies will also impose significant impacts on businesses whose products are affected. This includes Europe's draft law requiring businesses to prove that agricultural commodities destined for the EU's 450 million consumers are not linked to any – legal or illegal – deforestation.⁹⁶

In addition, regulations can help map out what the required minimum action level will be and support guidance on reporting. The EU's new taxonomy, a classification system establishing a list of environmentally sustainable economic activities, must be implemented by all major businesses beginning in 2023. The Taxonomy will support investors by defining what activities can be considered environmentally sustainable and will include requirements for reporting on six parameters including climate, circular economy, protection of water and marine resources, pollution control, and the protection of biodiversity and ecosystems for financial institutions and large non-financial institutions.⁹⁷ Other existing frameworks on biodiversity developed by non-governmental entities, such as the Nature Capital Protocol, complement these regulations.⁹⁸

Financial industry imposes biodiversity-related limitations on loans and investments

The implementation of the taxonomy has initiated a series of initiatives from the financial sector that are expected to curb investments in business practices harming nature and biodiversity. Examples include the global reinsurance company Swiss Re that declines insurance cover and investment to clients who pose harm with embedded processes that identify and avoid businesses with negative environmental impacts.⁹⁹

Danish pension fund Danica Pension is also tightening the grip on businesses with business practices that harm nature. Hence, Danica will sell shares in businesses who do not live up to the principles in UN's biodiversity convention, including businesses that are responsible for unsustainable deforestation.¹⁰⁰

These developments illustrate that businesses will be required to comply with a comprehensive set of rules in the near future. By taking action on biodiversity now, businesses can get a head start and competitive advantage over late movers, especially as the complexity of solutions may require lead time before achieving results. Lessons learned from the process of handling the climate crisis show that it is only when businesses start engaging and investing in concrete solutions that we see these solutions materialize. Hesitation and in-action from businesses will just postpone solutions and magnify the challenges to overcome.

⁹⁴ European Commission (2020 b)

⁹⁵ European Commission (2021 a)

⁹⁶ European Commission (2021 b)

⁹⁷ European Commission (2022)

⁹⁸ Nature Capital Coalition (2016)

⁹⁹ Swiss Re (2020)

¹⁰⁰ Børsen (2022)

Biodiversity-related regulation will become stricter



Regulation		Status	Implication to businesses
		<div> <div></div> Implemented <div></div> Approved <div></div> Upcoming </div>	
Paris Agreement		Implemented	The UN-backed Paris Agreement is a legally binding international treaty on climate change. Implications for biodiversity include recognizing the importance of protecting biodiversity for climate action and use of nature-based solutions in the article 6 guidelines for carbon markets.
EU Green Deal		Approved with various related policies in progress	The EU Green Deal is an ambitious set of policies designed to protect environment through eight policy areas, including biodiversity, sustainable industry, and agriculture, with large implications on different sectors like agriculture, food, construction, and financial services.
EU Biodiversity Strategy (part of EU Green Deal)		Targets are committed, to be implemented by 2030	The EU Biodiversity Strategy sets 17 key targets and 100 actions for biodiversity toward 2030. Includes EU's nature restoration targets such as the protection of 30% of member states' land and sea area.
EU Nature Restoration Law		Expected to pass EU parliament in late 2022	The EU Nature Restoration law is expected to require all member states to restore 15% of degraded land and sea area into nature – primarily at the expense of agriculture.
EU Deforestation Law		Proposed by EU commission	The EU Deforestation law proposed rules to guarantee that the products consumed on the EU market would not contribute to global deforestation. Likely to especially impact businesses sourcing or producing high-impact commodities like soy, beef, palm oil, wood, cocoa, or coffee.
EU 'Farm to fork strategy' (part of EU Green Deal)		Proposed by EU commission with committed targets	The EU 'Farm to fork strategy' aims to make food systems fair, healthy, and environmentally friendly. Likely to impact especially agriculture, food, and chemical industries with targets to e.g., significantly reduce the use of pesticides, fertilizers, and antimicrobials in food by 2030.
EU Circular Economy Action Plan (part of EU Green Deal)		New plan proposed by EU with certain policies already implemented	EU Circular Economy Action Plan targets how products are designed, promotes circular economy processes, and aims to ensure that waste is prevented. For example, the plan includes separate policies around sustainable products and plastic waste (e.g., the EU plastics strategy ensures that all packaging will be recyclable)
New EU taxonomy (part of EU Green Deal)		Released, all mandatory aspects enforced by '23	The EU taxonomy provides a framework for investors to identify sustainable investments. Reporting around nature and climate will become more standardized and mandatory for large businesses in the EU.
The post 2020 global biodiversity framework		Expected agreement in late summer 2022	COP 15 is expected to produce the biodiversity equivalent of the Paris Agreement – a post-global biodiversity framework – including targets to e.g., conserve 30% of land & sea areas, and for all businesses to report and reduce biodiversity impacts.

Exhibit 23: Regulation is expected to become stricter at a global, EU, and Danish level. This will have significant implications for Danish businesses' operations and supply chains^{01 102 103 104 105 106 107 108}

2 Collaborate closely with your supply chain to mitigate complexity and ensure end-to-end solutions

One reason for the complexity of addressing biodiversity loss is that the impact spans across supply chains. Experience shows that actively designing the supply chain for sustainability and communicating to customers will reap business advantages. Initiatives include helping to engage other parts of your supply chain, reduce complexity, and maximize impact.

As outlined earlier, businesses affect biodiversity both directly through their own operations and indirectly through supply chains. This complicates addressing a business' impact on biodiversity. A real estate developer, for example, impacts biodiversity both by fragmenting a piece of land directly during construction as well as by purchasing materials like cement that cause non-living marine disruption and potentially by leaving future tenants to depend on the use of energy generated from fossil fuels. To truly reduce impact, each business needs to tackle activities that do not fall into its own area of control. The Nature Capital Protocol, a recognized biodiversity framework, outlines three levels of biodiversity impact (Exhibit 24):

1. **Upstream (cradle-to-gate):** activities of suppliers, including energy purchased
2. **Direct operations (gate-to-gate):** covers impact generated in the area controlled by the entity and its subsidiaries
3. **Downstream (gate-to-grave):** including impact from activities linked to the purchase, processing use, recovery, recycling, and final disposal of the entity's product

¹⁰¹ UNFCCC (2015)

¹⁰² European Commission (2022)

¹⁰³ European Commission (2021 c)

¹⁰⁴ European Commission (2021 b)

¹⁰⁵ European Commission (2020 c)

¹⁰⁶ European Commission (2020 d)

¹⁰⁷ European Commission (2022)

¹⁰⁸ CDB (2021)

Biodiversity impact is exerted across the supply chain

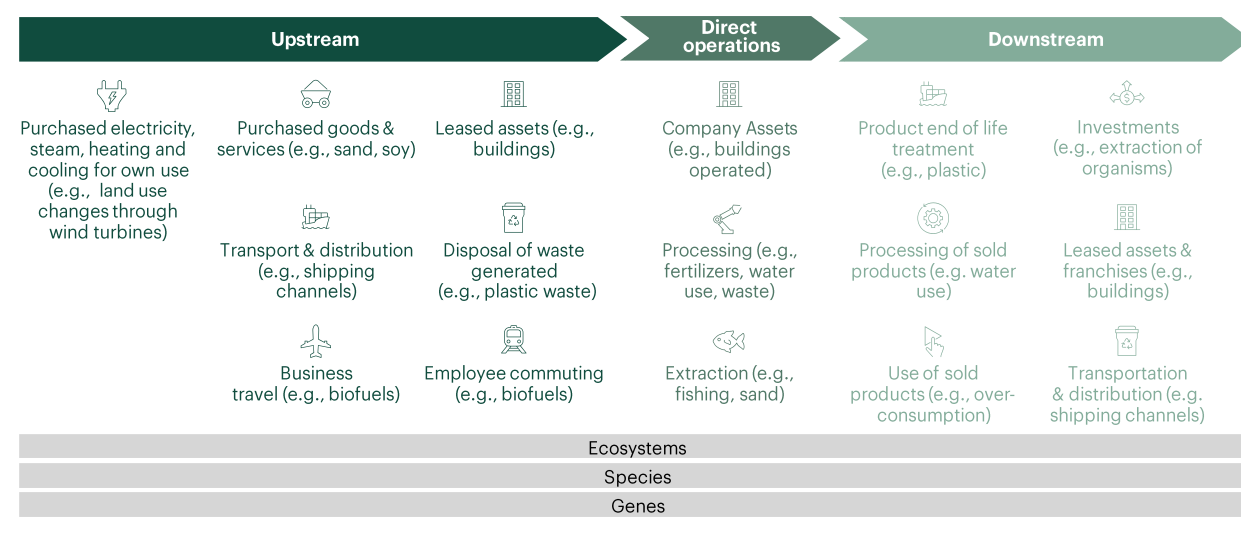


Exhibit 24: Businesses affect biodiversity in many ways. Understanding the relationship between business activities and biodiversity impact becomes easier with a holistic supply chain view^{109 110}

Building world-class supply chains fit for biodiversity

To address biodiversity impact holistically, revisiting a business' procurement practices is an important step. This includes investigating what, where, and to some extent how a business purchases goods and services:

- **What are you buying?** Investigate whether the materials sourced can be reduced in quantity by optimizing production process or replaced with biodiversity-friendlier products (e.g., renewable resources, recycled materials)
- **Who are you buying from?** Reassess the supplier landscape and identify leading suppliers in biodiversity to source from – or work with your suppliers to improve their impact
- **How are you buying?** If necessary, redesign processes, practices, and policies in your own procurement organization to ensure integration of biodiversity ambitions into the core operating principles

A common approach to sustainable procurement among industry leaders is to actively influence and manage suppliers through well-articulated sustainability standards and training to implement similar standards. Unilever, for example, has an extensive set of biodiversity-related standards available for download from their website. They were the first consumer goods company to publicly disclose its direct and indirect suppliers to eliminate deforestation from its supply chains.¹¹¹ Working closely together with suppliers can also strengthen the partnership and thereby improve future resource quality and availability. Natura Cosméticos, for example, has committed to source ingredients sustainably without harming biodiversity, especially in the Amazon region. They have

¹⁰⁹ Nature Capital Coalition (2016)

¹¹⁰ Bain experience

¹¹¹ Unilever

implemented initiatives such as partnering with the label “Union for Ethical Biotrade” (UEBT) and local sourcing of raw materials from Brazilian farmers. The UEBT provides memberships to businesses that commit to a set of initiatives that foster biodiversity and people’s rights in sourcing regions and are built on the UNCTAD BioTrade Initiative principles. Besides larger businesses like Natura of Yves Rocher, members include smaller businesses from all over the world such as Ecoflora Cares (Colombia), Somava (Madagascar) or Phytotagante (France).¹¹²

Another approach to increase the level of transparency and traceability of materials and practices in the supply chain is the use of digital tools and certifications. Nestlé, for example, is using blockchain technologies to create customer transparency on responsible sourcing by featuring QR codes on product packaging. Such tools can help track products and input materials from origin to the point of sale.¹¹³ This type of enhanced transparency can also help your business in ways that go beyond biodiversity impact reduction, including enhanced supply chain planning, boosting customer satisfaction and advocacy, and improving reliability. Biodiversity-specific tools for creating transparency through assessing suppliers’ impact, in particular with regards to deforestation and land conversion, include the Accountability Framework Initiative. It provides a self-assessment tool to review areas for improvement within a business’ supply chain, and subsequently helps set goals, define initiatives, and report on progress. Certifications are another enabler of transparency (further described in chapter 5).

Businesses should also consider investing in their supply chains to co-develop completely new sourcing models. This could include investing in circular business models, biorefined alternatives to natural products or new supply chain processes taking over excess materials from suppliers for reuse in other value streams. For example, the Dutch Rabobank provides farmers with upfront funds to invest in agroforestry.¹¹⁴

The World Economic Forum has found that sustainable procurement practices lead to up to 30% brand value increase and revenue uplifts of up to 20% driven by demand for more sustainable products. In addition, they estimate that it can lead to up to 16% reduction in supply chain cost from efficiencies.¹¹⁵ For example, BMW saved up to €170M between 2006 and 2019 due to more efficient use of resources resulting from supply chain initiatives.¹¹⁶ In addition, traceability in supply chains generally comes with significant advantages. A Bain traceability survey found that executives see particularly high value from traceability in compliance, higher reliability, customer engagement, and efficiencies.¹¹⁷

Educating customers on how to reduce their biodiversity impact

Biodiversity impact is also exerted downstream – for example, by how customers use or dispose of a product. By designing products for circular consumption, the downstream impact can be greatly reduced. Circular consumption extends product lifetime and reduces the need for extraction of virgin resources and material by sharing, repairing, and reusing models. This could imply, for

¹¹² Union for Ethical Biotrade (2022)

¹¹³ Nestlé (2019)

¹¹⁴ Rabobank (2021)

¹¹⁵ WEF (2015)

¹¹⁶ BMW (2019)

¹¹⁷ Bain & Company (2021 b)

example, programs such as Nespresso's capsule recycling program, where the business takes used aluminum capsules back and recycles the material.¹¹⁸

For businesses, this offers multiple benefits through new subscription-based business models, increased after-sales services as well as customer engagement and loyalty. In recent years, numerous apps and platforms have emerged that offer subscription-based 'product-as-a-service' models for customers to rent rather than 'buy-and-own' everything from clothes and furniture to cars and electronics. Initiatives targeted at consumers have also yielded significant business opportunities (Exhibit 25).

Financial benefits can be reaped from circularity practices



Renault earned **~€500M** in annual revenue from circularity practices



Schneider electric earns **~75%** of revenue from their Green Premiums program helping their customers reduce their environmental footprint



This carsharing pool increases cars' capacity use, and reached over **100M** members, **3B km** shared, and **\$2bn** valuation as the first French Unicorn (privately held startup company with a value of over \$1 billion)

Exhibit 25: Businesses can benefit from circularity practices across the supply chain^{119 120 121 122 123}

Many circularity initiatives do not only affect biodiversity positively, they also influence other sustainability problems. More of such holistic solutions are needed.

¹¹⁸ Nespresso company website (2022)

¹¹⁹ Reuters (2019)

¹²⁰ Schneider Electric (2021)

¹²¹ BlaBlaCar (2021)

¹²² BlaBlaCar (2022)

¹²³ Sifted (2021)

3 Prioritize actions that tackle several sustainability problems

By employing holistic solutions that tackle both biodiversity impact and other sustainability topics, businesses can save resources and time while increasing their impact.

Primary research conducted for this report revealed that many business leaders think that the biodiversity and climate crisis compete for attention – and that it is difficult to balance the two because they have limited resources available to dedicate to them. As described earlier, biodiversity is highly related to overall sustainable development. An intact society and economy are built on an intact biosphere – if biodiversity continues to decline, societies and businesses will struggle to cope. Moreover, biodiversity and climate change have a bilateral relationship, and will need to be solved simultaneously.

There are many examples of initiatives addressing several sustainable development goals at once. These include the collaboration of DANIDA, WWF, and Salling Group. It established a fully integrated tiger shrimp supply chain in Vietnam by investing in sustainable business practices at the local level. This helps local farmers get better prices for their products in return for taking care of local ecosystems.¹²⁴

Many businesses' ambition to become net-zero or net-negative carbon emitters provides great potential to holistically address local biodiversity, climate, and social issues. Using nature-based solutions such as preserving and protecting original forests for carbon credits also benefits biodiversity and local communities. By enhancing local agriculture and investing in local business development, these businesses create new jobs, bring electricity and clean water to communities. This benefits biodiversity as it halts traditional, unsustainable overuse of scarce local natural resources directly by offering alternatives or indirectly by reducing poverty and inequality. Exhibit 26 provides more examples of holistic solutions.

¹²⁴ WWF (2013)

Examples of holistic sustainability solutions that address multiple issues




Solution	Example	SDGs
Supporting local communities investing in jobs and developments in exchange for nature protection	<ul style="list-style-type: none"> Natura Cosmetic's Amazonia Programme builds sustainable production chains in the Amazon (since 2011) This has generated over BRL 2B in business volume, benefitted over 7k families, and has so far conserved 2M hectares of forest It also coordinates research and knowledge networks for biodiversity, sustainable stewardship, and eco-design 	
Community driven sustainable investments	<ul style="list-style-type: none"> Danish companies have invested in expanding their supply chain for off-grid energy and refrigeration in coastal Kenya, to support sustainable fishing practices This includes installing solar-driven cooling facilities which enable the small-scale local fishermen to sell their products in other markets instead of being forced to consume it locally 	
Reaching lifetime carbon neutrality through investments in forests, biodiversity, and indigenous people	<ul style="list-style-type: none"> Danish window producer VELUX plans to become lifetime carbon neutral by 2041 – reducing future emissions and absorbing all emitted carbon since its foundation in 1941 This includes investing in local communities as compensation for protecting five large areas with original tree cover and restoring degraded forests by planting new trees – bringing new jobs and enhancing local development for thousands of people 	

Exhibit 26: Businesses can address several sustainability goals simultaneously with solutions that take a more holistic view¹²⁵

¹²⁶ 127

¹²⁵ Natura (2019)

¹²⁶ DMDP (2020)

¹²⁷ Velux (2020a)

4 Leverage the many frameworks, tools, and certifications that are already available – new standards are expected to resemble these

While we are waiting for an authoritative standard for biodiversity impact and enhancement, businesses can act on their biodiversity impact immediately by using existing frameworks and tools.

At the time of writing, a number of frameworks and tools are available to structure biodiversity work and measure impact – but no cross-sector standards have been developed. The research conducted for this report has revealed that this is a major source of concern for businesses that want to embark on their biodiversity journey. Businesses fear that initiatives based on existing knowledge will be ill-conceived, attract criticism, or be branded as greenwashing. Some also expressed concerns that investments may be lost if projects must be changed or redone late in their project cycle as new, globally consistent standards are introduced.

However, several leading NGOs and organizations have set out to create standardization similar to what has been developed for the climate crisis. Most experts expect the following two initiatives to become the dominant standards and tools for corporate biodiversity efforts in the future (Exhibit 27).

Standards for biodiversity work are underway



Science-based targets for nature: Tools to assess, prioritize, measure, and act on nature-related issues developed by WWF, World Resources Institute, and Global Compact Network within the same framework as the widespread and successful Science-based targets initiative for climate action (expected launch in 2023)



Taskforce on Nature-related Financial Disclosures: a nature-related risk & opportunity management and disclosure framework with guidance on assessment and disclosure of nature-related risks and opportunities (expected launch in late 2023)

Exhibit 27: Leading international organizations are developing standards for dealing with biodiversity^{128 129}

Experts and NGO's interviewed for this report all state that they do not expect large differences between the existing tools and the upcoming, more authoritative standards.¹³⁰ While new and more authoritative standards will be available soon, businesses that start now may reap significant benefits as they get to 'pick the low hanging fruit'. This was also the case with climate offsets, where increased demand has forced carbon price significantly up the past few years, while early movers could secure lower prices. This also includes full ESG solutions such as integrated forests carbon credit projects. For example, international financial rating company Fitch forecasts that the demand for carbon offsets will outstrip supply by 2025, making the transition more difficult and indicating that there is no reason to delay biodiversity actions until new, authoritative standards are in place.¹³¹

¹²⁸ SBTN (2022)

¹²⁹ TNFD (2022)

¹³⁰ WWF experience

¹³¹ Sustainable Fitch (2020)

“Within two years, there is no way that we will be able to avoid addressing this topic [biodiversity]. And we would like to be prepared for that.”

Janda Campos, Group Director Sustainability
Engagement, Grundfos



Chapter 5:

Getting started

Businesses can act on their biodiversity impact right away by using existing frameworks and tools.

The UN concludes that global nature loss must be reversed no later than 2030. The high urgency to halt biodiversity loss suggests that businesses need to begin their work to limit biodiversity impact now – even if authoritative standards and frameworks are not in place yet. Fortunately, existing tools, certifications, and initiatives will take your business a long way.

Key takeaways

- ▶ While governments, NGOs, and researchers are working to finalize and publish additional (regulatory) frameworks to provide standards for addressing and measuring biodiversity impact, businesses can already start working on their biodiversity impact by:
 1. Leveraging existing frameworks for overall guidance on how to address biodiversity
 2. Selecting the most relevant tools to assess the biodiversity impact and deduct actionable targets
 3. Using the action-oriented framework “Mitigation Hierarchy” for identifying appropriate actions to limit biodiversity impact
 4. Implementing established certifications to increase supply chain transparency
- ▶ This report has emphasized that biodiversity is at serious risk globally and in Denmark. It results from human and economic activity and calls for immediate action by businesses, consumers, and politicians. Initiatives to reduce the impact can bring attractive business opportunities and mitigate risks related to biodiversity loss. Further, roadblocks to action can be addressed by getting ahead of regulation, working together with supply chains, and focusing on holistic solutions that address several sustainability areas
- ▶ Business leaders should ask themselves how biodiversity is handled in their own business to prioritize next steps. A list of relevant questions to get started is provided at the end of this chapter

Leverage existing frameworks to guide and structure your biodiversity work

Several biodiversity frameworks from international expert organizations can provide guidance on how to approach biodiversity and start the biodiversity journey.

In the research conducted for this report, many executives mentioned the need for frameworks to get an overview of what biodiversity encompasses and how their activities relate to it. Therefore, one concrete step that can be taken is to leverage already developed frameworks which describe and explain the relationship between biodiversity and businesses in detail (See Exhibit 28 for examples). For instance, the Corporate Ecosystem Valuation helps to assess the value and benefits of ecosystem services that a business depends on. This eases internal decision-making by helping to prioritize between environmental and economic objectives.

Frameworks on biodiversity help gain a deeper understanding



- **Corporate Ecosystem Valuation:** Understand how, and how much, your business depends on ecosystem services
 - **Natural Capital Protocol:** Decision-making framework supporting identification, measurement, and evaluation of direct and indirect biodiversity impact and nature dependencies (incl. supply chain boundaries, see Exhibit 24)
 - **Planetary Boundaries Framework:** Outlines the state of human impact on nine planetary boundaries at a geographic level
 - **EU Taxonomy:** Framework for investors to identify economic activities considered as environmentally sustainable (enforced by 2023)
-

Exhibit 28: Frameworks on biodiversity can guide businesses in their biodiversity efforts by giving them a better understanding of the levels of impact and outlining potential solutions (this exhibit includes hyperlinks) ^{132 133 134 135}

Both these frameworks, and the required transitions to reduce impact on nature mentioned earlier in this report (Exhibit 13), can help businesses identify high-impact initiatives to reduce biodiversity loss. A complementary technical report published along with this report will provide further details on these transitions. In addition, more detailed information on a per sector level can be found in the deep dives in the appendix.

¹³² WBCSD (2011)

¹³³ Nature Capital Coalition (2016)

¹³⁴ Stockholm Resilience Center (2022)

¹³⁵ European Commission (2022)

Once a business has obtained a general overview of biodiversity with the help of these frameworks, several tools can help them to more closely understand their own impact. Also, turning to leading businesses can aid them in defining metrics to track their progress.

Apply established tools and metrics to measure and manage impact

Selected guides, tools, and metrics can be used to assess biodiversity impact or provide inspiration for developing own tools.

The interviews conducted for this report have shown that many executives recognize their impact on biodiversity. Yet, it has also become clear that they struggle with measuring how severe this impact actually might be. Already available tools and metrics provide a good starting point for this work (see Exhibit 29 for a selection of these tools). The tools in question help businesses to understand where the impact is most substantial and subsequently enable them to focus on the right initiatives to reduce their impact. For instance, the Accountability Framework Initiative is a useful tool in assessing supplier's impact, in particular when addressing deforestation and land conversion. Starting with a self-assessment tool to review areas for improvement, the tool supports businesses in setting goals in line with stakeholder expectations, developing initiatives to reach them, and reporting on progress. It can be used by a broad range of actors from producers and processors, over traders, governments to smallholders and communities.

Existing and upcoming tools for measuring biodiversity impact

Tools developed by international organizations

- **Global Biodiversity Score:** Helps to assess the business' and supply chain's biodiversity impact along the five global drivers to identify priority areas
- **Encore:** Helps to understand the exposure to natural capital risks by identifying the impact of environmental change on the economy, and of business activities' impact on biodiversity

Geographical impact assessments

- **Integrated Biodiversity Assessment Tool:** Helps to identify geographical biodiversity risks of projects/sourcing regions and to develop action plans
- **Resource Watch:** Helps to identify nature hotspots with geographical data and heatmaps
- **WWF Biodiversity Risk Filter:** Biodiversity ratings and response plans (launch in 2022)

Supplier assessment

- **Accountability Framework Initiative:** Tool to address deforestation and land conversion through supply chains by assessing suppliers

Guidance on establishing tools

- **IUCN Article:** Outlines how to best develop and use biodiversity indicators for monitoring and target setting
- **Biodiversity Measurement Navigation Wheel:** Decision framework for selecting biodiversity measurement tools and metrics which suit the specific context of a business
- **Natural Capital Toolkit:** Lists tools to measure and value natural capital, incl. filter of applicable tools by sector (incl. value chain boundaries)
- **World Benchmarking Alliance:** Provides guidance on benchmarking methodology for businesses' impact on nature

Tools developed by businesses

- **Kering EP&L:** Measures CO₂ emissions, water consumption, air & water pollution, land use, and waste production along the supply chain, making impacts quantifiable
- **FrieslandCampina Biodiversity Monitor:** Measures a dairy farm's influence on biodiversity and incentivizes farmers to achieve high ratings

Exhibit 29: Several tools are in place to support businesses in measuring biodiversity impact either by using the existing tools or designing their own tools (this exhibit includes hyperlinks) ^{136 137 138 139 140 141 142 143 144 145}

Some businesses, like Kering and FrieslandCampina, have also developed their own tools tailored to their specific needs. For example, FrieslandCampina's Biodiversity Monitor assesses the biodiversity impact of its member dairy farms by measuring e.g., the total share of permanent grassland used and ammonia emissions.

¹³⁶ CDC (2022)

¹³⁷ ENCORE (no date)

¹³⁸ IBAT (no date)

¹³⁹ Resource Watch (no date)

¹⁴⁰ WWF Expert interviews

¹⁴¹ Accountability Framework (no date)

¹⁴² IUCN (2018)

¹⁴³ European Commission (2021 d)

¹⁴⁴ Kering (no date a)

¹⁴⁵ FrieslandCampina (no date a)

Moreover, concrete business metric examples for the required transitions introduced in chapter 3 (Exhibit 13) can serve as inspiration for what could be measured and communicated to stakeholders (Exhibit 30). By turning to leading businesses, one can get an understanding of how to track the progress and how to become nature-positive along the supply chain, operations, consumption, and built environment. For example, Danone measures some of their impact throughout the supply chain by tracking the amount of palm oil used in their production and how much food waste their products generate.

Leading businesses identified biodiversity-related metrics to measure their impact





 1. Supply Chain	 2. Operations	 3. Consumption	 4. Built Environment
<ul style="list-style-type: none"> • Palm oil used (tons) • Traceability to source (% palm oil, soy, cocoa) • Share of certified materials sourced (% FSC, RSPO) 	<ul style="list-style-type: none"> • Water extraction from surroundings (in m3) • Waste reused or recycled (% of total waste) • Environmental violations (in number) 	<ul style="list-style-type: none"> • Food waste generated (tons) • % Packaging coming from recyclable materials 	<ul style="list-style-type: none"> • Facilities in areas with (extremely) high water risk • Red listed species in proximity to production site

Exhibit 30: Leading businesses are already measuring biodiversity impact across their supply chain, operations, consumption, built environment, and reporting the progress to stakeholders ^{146 147 148 149 150 151 152}

These tools and metrics help to understand, measure, and manage the biodiversity impact of a business. While doing this, businesses need to account for the five global drivers as well as the state of biodiversity in general. As shown in a recent research by the World Benchmarking Alliance and WWF, for land and sea use it is worthwhile to consider e.g., the conversion and restoration of ecosystems. Soil health and water withdrawal are particularly relevant to measure for resource exploitation. For pollution, businesses should measure e.g., the water quality, air pollutants, plastics use, and waste. For climate change, measuring Scope 1, 2, 3 emissions is crucial. Lastly, for the overall state of nature, businesses can assess e.g., protected species adjacent to their locations. In addition to merely measuring impact, businesses will need to identify initiatives to reduce it. The Mitigation Hierarchy is an action-oriented framework that can aid in deducing appropriate action for high-impact activities to limit negative impact.¹⁵³

¹⁴⁶ Danone (2020)
¹⁴⁷ Velux (2020 b)
¹⁴⁸ FrieslandCampina (no date b)
¹⁴⁹ Unilever (2021)

¹⁵⁰ L’Oreal (2020)
¹⁵¹ Chr. Hansen (no date)
¹⁵² Ørsted (2021)
¹⁵³ World Benchmarking Alliance (2022)

Identify concrete actions to limit biodiversity impact by using the Mitigation Hierarchy

Businesses interested in reducing their biodiversity impact can use the Mitigation Hierarchy and leverage actions like avoiding, minimizing, restoring, insetting, and offsetting.

The Mitigation Hierarchy (Exhibit 31) outlines how to identify appropriate actions for a specific activity's impact. If an impact cannot be avoided, it should be investigated whether it can be minimized, restored, or inset. It should only be offset if no other option exists.

The Mitigation Hierarchy guides decision-making to find appropriate actions to limit impact

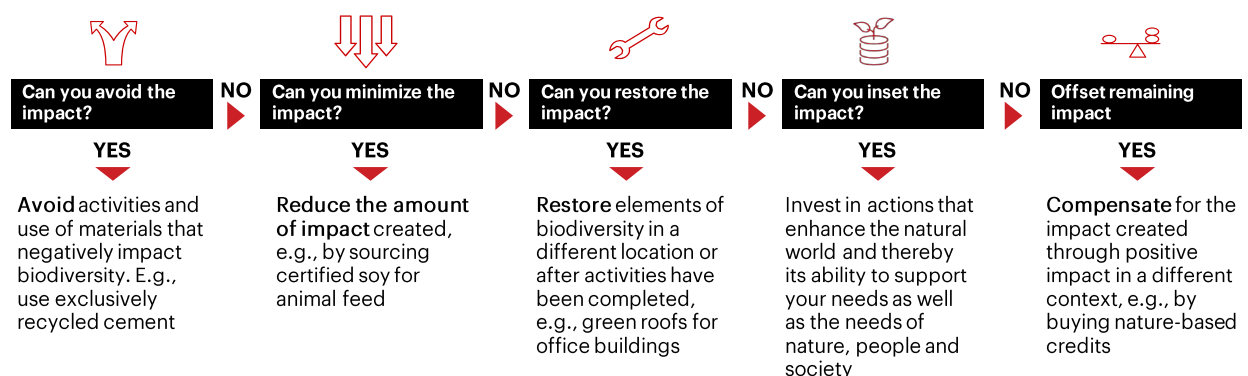


Exhibit 31: The Mitigation Hierarchy can help define what levels of action are feasible for the biodiversity impact of a business^{154 155}

One example could be agriculture production dependent on imported feed for animals, which, for the most part, is soy protein sourced primarily from South America. Soy production takes up large areas of land with monoculture production in areas that were previously rich in high value nature. 1. Here, impact could be avoided or minimized if the imported feed protein was substituted with other sources of protein that do not lead to deforestation and destruction of high value nature. This could be protein from grass or beans. 2. Impact could be reduced by demanding that the soy being sourced is not connected to deforestation (through certification schemes and/or collective action initiatives across the sector) 3. Companies should engage in restoring nature in regions where they have sourced soy, investing in a transformation of the production toward a more nature-inclusive production. 4. If this is not possible, the company could inset its activities by investing in local capability to improve biodiversity assets in the same ecosystem or preferably landscape. 5. In the rare occasion where these options are not available, it could remedy the remaining impact by e.g., conserving or restoring biodiversity elsewhere. And ultimately – if all else fails – the company must

¹⁵⁴ WWF Expert interviews

¹⁵⁵ CBD (no date)

compensate by buying nature-based credits for someone else to restore nature on the company's behalf.

As mentioned in Exhibit 29, a way to minimize impact is to purchase only certified materials. Many Danish businesses are not yet taking full advantage of this opportunity even though it can help to address complex supply chains. Therefore, it is relevant to summarize the opportunities that stem from using certifications.

Use certifications to increase transparency across the supply chain

Certifications are an established way to address and reduce the biodiversity impact of complex supply chains, next to unlocking significant monetary and non-monetary business opportunities.

Many of the interviewed executives mentioned that they face difficulties in improving the biodiversity impact exerted in their upstream or downstream supply chain. This is no surprise given the fragmentation and complexity of certain supply chains. Certifications will play a key role going forward, as they increase transparency on practices applied by other stakeholders. Certifications are a useful tool to implement the standards a business has decided on throughout the supply chain. They provide an opportunity for all participants to address the key pressures on nature while realizing multiple benefits. In the case of palm oil, for example, benefits include managing reputational or compliance risks, increasing sales volumes, and selling at a price premium due to certified palm oil sourcing.^{156 157}

The World Economic Forum estimates that an accelerated growth in sustainably certified produce starting from today's relatively low volumes could create a global market opportunity worth \$20 billion by 2030 – a value exclusively based on increasing the adoption of certification for soy, palm oil, coffee, and cocoa. In addition, for certified forest products, WEF assesses the market opportunity to be \$165 billion by 2030. Exhibit 30 provides a non-exhaustive overview of established certifications that are already being used by many leading businesses today. For example, the leading window producer Velux uses the FSC certificate to ensure the sustainable sourcing of wood products and reports the share in its sustainability report (currently 99.6% is certified).^{158 159}

¹⁵⁶ WWF (2012)
¹⁵⁷ Eco-Business (2018)

¹⁵⁸ Velux (2020 b)
¹⁵⁹ WEF (2020)

Examples of certifications that help businesses address complex supply chains

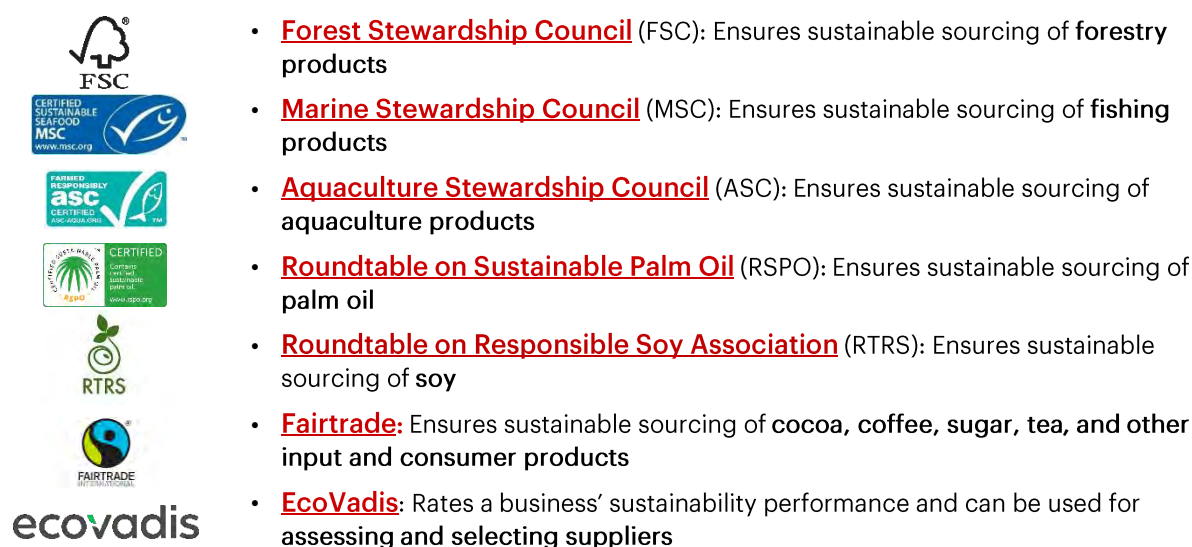


Exhibit 32: When making sourcing decisions, businesses can choose certified products to minimize their biodiversity impact (this Exhibit includes hyperlinks referring to the certification)

Next steps

In conclusion, this report has emphasized that biodiversity is at serious risk globally as well as in Denmark. Biodiversity loss results directly from human and economic activity, and consequently requires that industries, businesses, consumers, and politicians reduce their impact on biodiversity significantly. These initiatives can bring attractive business opportunities, such as improvements to business operations, and mitigate risks related to biodiversity loss, such as risks from regulation. Roadblocks to action – including tragedy of the commons, the complexity of addressing biodiversity across the supply chain, and competing sustainability problems – can be addressed through impending regulation, active supply chain management, and holistic sustainability solutions. While remaining gaps to standardization are being filled by authorities and international organizations, existing tools and frameworks can support immediate action to help Danish businesses get a head start.

Exhibit 31 lists questions particularly relevant for board members, executive management, and sustainability professionals to ask in their everyday work to drive action going forward. Based on the primary research conducted for this report, it is likely that many business leaders will need to reply “no” to a subset of the below questions. Business leaders can use that subset as initial guidance on where to focus their efforts to close the gaps. This report has provided frames and tools for how to start addressing these areas, it is now up to businesses to take steps toward a nature-positive future with those tools in mind.

Questions for Monday morning action

Board level and executive management themes

- Do we know our biodiversity footprint?
- Do we know our largest biodiversity exposures (e.g., activity, supplier, investment)?
- Do we have hard targets for our biodiversity impact?
- Do we know what risks the biodiversity crisis poses for our industry?
- Do we know what legislation will affect our industry?
- Do we know how we perform on biodiversity vs. competitors or comparable businesses?
- Do we know what opportunities the biodiversity crisis will create for our business?
- Do we know the most important and impactful actions we can take right now to reduce our biodiversity footprint in the short term?
- Do we have a strategy to reduce impact and seize/develop opportunities?
- Do we know how biodiversity is linked to our general ESG efforts and reporting?
- Do we know who in the organization is responsible for managing biodiversity risks and opportunities?

Sustainability professionals' themes

- Do we know how to measure our biodiversity impact?
- Do we know which sector-specific regulations and reporting standards will be relevant for our business?
- Do we know the ecosystem impact of our production processes?
- Do we know where our raw materials and other input come from, and what their biodiversity impact is?
- Do we know the life cycle of our products and their biodiversity impact?
- Do we have targets for biodiversity impact?
- Do we know which initiatives we can implement to reduce our impact?

Exhibit 33: Business leaders who aim to participate in the transition should ask themselves a set of questions to prepare for next steps



Appendix

Sector deep-dives - reading guide

THE PURPOSE OF THE SECTOR DEEP-DIVES

While companies increasingly recognize the severity of biodiversity loss, many find it difficult to understand how they directly and indirectly impact nature as part of their sector and how to start moving toward a more nature-positive approach.

By summarizing the most relevant considerations for individual sectors from this report, the deep-dives can act as a source of inspiration for companies thinking how to improve their impact on nature.

- 1 Summarizes sector's key pressures on nature and their impact channel
- 2 Gives an overview of the main nature-positive opportunities in the sector
- 3 Outlines case examples and possible next steps toward a more nature-positive business model

WHAT INFORMATION CAN BE FOUND ON EACH PAGE

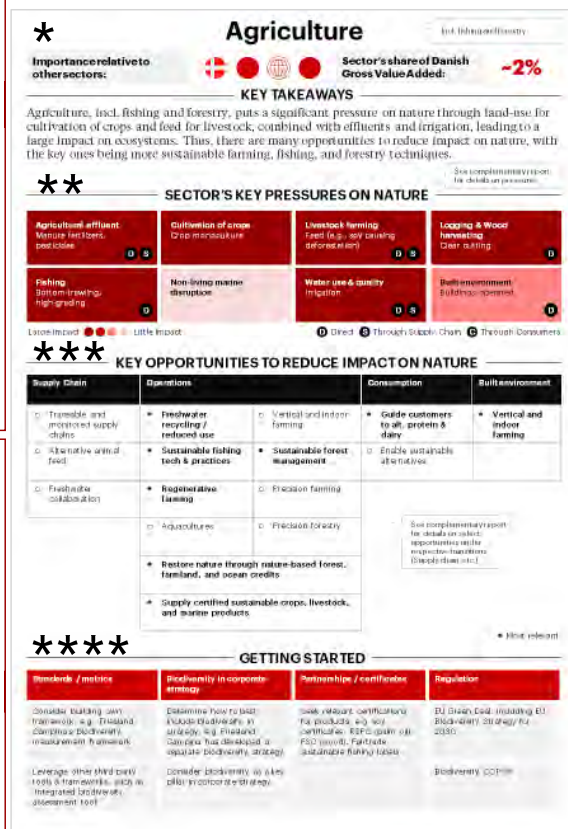
* RELATIVE IMPORTANCE & SIZE

Outlines the relative importance of the sector regarding its impact on nature compared to other sectors in Denmark and globally. Additionally, the section shows the sector's share of Danish private Gross Value Added (GVA) to illustrate the relative size of the sector (GVAs do not add up to 100% as e.g., services are excluded from the overviews)

** SECTOR'S KEY PRESSURES ON NATURE

Summarizes the sector's key pressures on nature and illustrates their impact on a scale small, medium, and large. Additionally, the segment outlines example activities putting pressure on nature within the sector and whether the impact happens directly, through supply chain, or through customers

Example industry deep-dive*



*** KEY NATURE POSITIVE OPPORTUNITIES

Illustrates some possible nature-positive opportunities that could be considered along the sector's supply chains, operations, consumption, and built environment to reduce impact on nature. The opportunities have been color-coded based on their ability to address different key global drivers behind biodiversity loss

**** HOW TO GET STARTED

Lays out case examples to inspire companies to get started by e.g., outlining useful biodiversity metrics, biodiversity strategy examples, partnership & certificate options, and relevant regulation in the sector

Agriculture

Incl. fishing and forestry

Importance relative to other sectors:



Sector's share of Danish Gross Value Added:

~2%

KEY TAKEAWAYS

Agriculture, incl. fishing and forestry, puts a significant pressure on nature through land-use for cultivation of crops and feed for livestock, combined with effluents and irrigation, leading to a large impact on ecosystems. Thus, there are many opportunities to reduce impact on nature, with the key ones being more sustainable farming, fishing, and forestry techniques.

See complementary report for details on pressures

SECTOR'S KEY PRESSURES ON NATURE

Agricultural effluent Manure fertilizers, pesticides D S	Cultivation of crops Crop monoculture D S	Livestock farming Feed (e.g., soy causing deforestation) D S	Logging & Wood harvesting Clear cutting D
Fishing Bottom-trawling, high-grading D	Non-living marine disruption D	Water use & quality Irrigation D S	Built environment Buildings operated D

Large impact ●●●● Little impact

D Direct S Through Supply Chain C Through Consumers

KEY OPPORTUNITIES TO REDUCE IMPACT ON NATURE

Supply Chain	Operations		Consumption	Built environment
<ul style="list-style-type: none">○ Traceable and monitored supply chains	<ul style="list-style-type: none">● Freshwater recycling / reduced use	<ul style="list-style-type: none">○ Vertical and indoor farming	<ul style="list-style-type: none">● Guide customers to alt. protein & dairy	<ul style="list-style-type: none">● Vertical and indoor farming
<ul style="list-style-type: none">○ Alternative animal feed	<ul style="list-style-type: none">● Sustainable fishing tech & practices	<ul style="list-style-type: none">● Sustainable forest management	<ul style="list-style-type: none">○ Enable sustainable alternatives	
<ul style="list-style-type: none">○ Freshwater collaboration	<ul style="list-style-type: none">● Regenerative farming	<ul style="list-style-type: none">○ Precision farming	<div>See complementary report for details on select opportunities under respective transitions (Supply chain, etc.)</div>	
	<ul style="list-style-type: none">○ Aquacultures	<ul style="list-style-type: none">○ Precision forestry		
	<ul style="list-style-type: none">● Restore nature through nature-based forest, farmland, and ocean credits			
	<ul style="list-style-type: none">● Supply certified sustainable crops, livestock, and marine products			

See complementary report for details on select opportunities under respective transitions (Supply chain, etc.)

● Most relevant

GETTING STARTED

Standards / metrics	Biodiversity in corporate strategy	Partnerships / certificates	Regulation
Consider building own framework (e.g., Friesland Campina's biodiversity measurement framework)	Determine how to best include biodiversity in strategy (e.g., Friesland Campina has developed a separate biodiversity strategy)	Seek relevant certifications for products (e.g., soy certificates, RSPO (palm oil), FSC (wood), Fairtrade, sustainable fishing labels)	EU Green Deal, including EU Biodiversity Strategy for 2030
Leverage other third party tools & frameworks, such as 'Integrated biodiversity assessment tool'	Consider biodiversity as a key pillar in corporate strategy		Biodiversity COP 15

Sources: WWF Expert interviews; Bain analysis; ENCORE (no date); European Commission (2020 b); European Commission (2021 e); UN (2022); Danone (2020); ABA (no date); EPA (2018)

Food & beverages

Importance relative to other sectors:



Sector's share of Danish Gross Value Added:

~8%

KEY TAKEAWAYS

The Food & Beverage sector puts significant pressure on nature through the food-related cultivation of crops, livestock farming, fishing, and water use. There are numerous opportunities to reduce impact on nature, such as creating traceable supply chains, sourcing sustainable input materials, and adopting circular operations. To get started, businesses can define a detailed biodiversity strategy and consider metrics such as 'share of certified materials used in food'.

See complementary report for details on pressures

SECTOR'S KEY PRESSURES ON NATURE

Agricultural effluent Heavily dependent on crops and livestock S	Cultivation of crops Crops for food and beverage production S	Livestock farming Livestock for food production S	Logging & Wood harvesting Packaging S
Fishing Fish for food production S	Non-living marine disruption	Water use & quality Direct input and in production process D S	Built environment Buildings operated D

Large impact ●●●● Little impact

D Direct S Through Supply Chain C Through Consumers

KEY OPPORTUNITIES TO REDUCE IMPACT ON NATURE

Supply Chain		Operations	Consumption	Built environment
<ul style="list-style-type: none"> Traceable and monitored supply chains 	<ul style="list-style-type: none"> Freshwater collaboration 	<ul style="list-style-type: none"> Resource-efficient and circular ops. 	<ul style="list-style-type: none"> Guide customers to alt. protein & dairy 	<ul style="list-style-type: none"> Repurpose & renovate existing structures
<ul style="list-style-type: none"> Alternative animal feed 	<ul style="list-style-type: none"> Sustainable fishing tech & practices 	<ul style="list-style-type: none"> Freshwater recycling / reduced use 	<ul style="list-style-type: none"> Enable sustainable alternatives 	<ul style="list-style-type: none"> Energy efficient buildings
<ul style="list-style-type: none"> Sustainable farming, e.g., regenerative 	<ul style="list-style-type: none"> Aquacultures 	<ul style="list-style-type: none"> Refinement of by-products & waste material 	<ul style="list-style-type: none"> Joint industry communication 	
<ul style="list-style-type: none"> Nature-based farmland and ocean credits 	<ul style="list-style-type: none"> Sustainable forest management 	<ul style="list-style-type: none"> Zero waste practices 	<ul style="list-style-type: none"> Shifting to planet-compatible diets 	
<ul style="list-style-type: none"> Source sustainable / certified crops, wood, livestock, and marine products 				

See complementary report for select details under respective transitions (Supply chain etc.)

● Most relevant

GETTING STARTED

Standards / metrics	Biodiversity in corporate strategy	Partnerships / certificates	Regulation
Consider metrics such as "Share of certified materials used in food", "Food waste generated", and "Share of products traceable to source"	Determine how to best include biodiversity in strategy (e.g., Danone has made individual strategies for carbon neutrality, regenerative agriculture, water stewardship, and circular economy of packaging)	Consider partnerships such as "Every Bottle Back" initiative	EU Green Deal, including EU Biodiversity Strategy for 2030
		Seek relevant certifications for products & source certified raw materials (e.g., soy certificates, RSPO, Fairtrade)	UN Global Plastics treaty planned to be implemented in 2024

Note: Includes grocery retail

Sources: WWF Expert interviews; Bain analysis; ENCORE (no date); European Commission (2020 b); European Commission (2021 e); UN (2022); Danone (2020); ABA (no date); EPA (2018)

Consumer Goods and Wholesale

Importance relative to other sectors:



Sector's share of Danish Gross Value Added:

~11%

KEY TAKEAWAYS

Consumer Goods and Wholesale sector puts pressure on nature through the cultivation of crops, such as cotton used in the fashion industry, packaging materials, and water use in the production. There are opportunities to reduce impact on nature, such as traceable and monitored supply chains and promoting circular consumption. To get started, businesses can turn to leading companies as best practice examples, e.g., Kering.

See complementary report for details on pressures

SECTOR'S KEY PRESSURES ON NATURE

Agricultural effluent	Cultivation of crops Cotton, palm oil, rubber S	Livestock farming Leather, gelatine, glycerine S	Logging & Wood harvesting Packaging, furniture S
Fishing	Non-living marine disruption Sand as input to glass (e.g., electronics) S	Water use & quality Direct input and in production process D S	Built environment Buildings operated D

Large impact ●●● Little impact ●

D Direct **S** Through Supply Chain **C** Through Consumers

KEY OPPORTUNITIES TO REDUCE IMPACT ON NATURE

Supply Chain		Operations	Consumption	Built environment
● Traceable and monitored supply chains	○ Freshwater collaboration	● Resource-efficient and circular ops.	● Promote circular consumption	○ Repurpose and renovate existing structures
○ Sustainable farming, e.g., regenerative	○ Sustainable forest management	● Freshwater recycling / reduced use	● Enable sustainable alternatives	○ Energy efficient buildings
● Source sustainable / certified crops, wood, livestock, and marine products		○ Refinement of by-products & waste material	○ Joint industry communication	
○ Promote industry standards for sand extraction		○ Recycling of sand products		

See complementary report for select details under respective transitions (Supply chain etc.)

● Most relevant

GETTING STARTED

Standards / metrics	Biodiversity in corporate strategy	Partnerships / certificates	Regulation
Consider metrics such as "Share of certified materials used in products", "Share of packaging from recyclable materials", and "Share of products traceable to source"	Determine how to best include biodiversity in strategy (e.g., Kering launched a separate biodiversity strategy in 2020)	Consider partnerships such as Kalundborg symbiosis	EU Green Deal, including EU Biodiversity Strategy for 2030
		Source certified raw materials (e.g., FSC for wood, RSPO for palm oil)	UN Global Plastics treaty planned to be implemented in 2024

Note: Includes the fashion industry

Sources: WWF Expert interviews; Bain analysis; ENCORE (no date); European Commission (2020 b); European Commission (2021 e); UN (2022); Danone (2020); ABA (no date); EPA (2018)

Healthcare

Importance relative to other sectors:



Sector's share of Danish Gross Value Added:

~6%

KEY TAKEAWAYS

Healthcare sector puts pressure on nature through sourcing of raw materials (e.g., sugar which requires large use of land) and through the use of water in operations. The main opportunities to reduce impact on nature center around creating traceable supply chains, sourcing sustainable input materials, and adopting freshwater recycling. To get started, businesses can define a biodiversity strategy and consider metrics such as 'share of waste reused or recycled' to track progress.

See complementary report for details on pressures

SECTOR'S KEY PRESSURES ON NATURE

Agricultural effluent	Cultivation of crops Sugar S	Livestock farming Glycerine S	Logging & Wood harvesting Packaging S
Fishing	Non-living marine disruption	Water use & quality Direct input and in production process D S	Built environment Buildings operated D

Large impact ●●●● Little impact

D Direct **S** Through Supply Chain **C** Through Consumers

KEY OPPORTUNITIES TO REDUCE IMPACT ON NATURE

Supply Chain		Operations	Consumption	Built environment
● Traceable and monitored supply chains	○ Freshwater collaboration	● Resource-efficient and circular ops.	● Enable and promote sustainable alternatives	○ Repurpose and renovate existing structures
○ Sustainable farming, e.g., regenerative	○ Sustainable forest management	● Freshwater recycling / reduced use		○ Energy efficient buildings
● Source sustainable/certified input products, such as sugar, marine organisms, and wood		○ Refinement of by-products & waste material		

See complementary report for select details under respective transitions (Supply chain etc.)

● Most relevant

GETTING STARTED

Standards / metrics	Biodiversity in corporate strategy	Partnerships / certificates	Regulation
Consider metrics such as "Total water extraction", "Share of waste reused or recycled", and "Share of packaging from recyclable materials"	Determine how to best include biodiversity in strategy (e.g., Pfizer's strategy includes goals and actions for waste, water stewardship, and packaging among others)	Consider partnerships such as "Pharmaceuticals in the Environment" (PIE)	EU Green Deal, including EU Biodiversity Strategy for 2030
			UN Global Plastics treaty planned to be implemented in 2024

Sources: WWF Expert interviews; Bain analysis; ENCORE (no date); European Commission (2020 b); European Commission (2021 e); UN (2022); Danone (2020); ABA (no date); EPA (2018)

Industrials and materials

Importance relative to other sectors:



Sector's share of Danish Gross Value Added:

~10%

KEY TAKEAWAYS

Industrials & materials sector puts pressure on nature through sourcing materials with high impact on nature, e.g., sand and rubber. There are opportunities to reduce impact on nature by creating traceable supply chains, sourcing sustainable input materials, and adopting circular operations. To get started, businesses can consider partnerships, such as the Kalundborg symbiosis, and define biodiversity targets.

See complementary report for details on pressures

SECTOR'S KEY PRESSURES ON NATURE

Agricultural effluent	Cultivation of crops Rubber S	Livestock farming	Logging & Wood harvesting Wood pellets (industrial electricity) S
Fishing	Non-living marine disruption Machinery (e.g., extraction, turbines) D S	Water use & quality Direct input and in production process D S	Built environment Buildings operated D

Large impact ●●● Little impact

D Direct S Through Supply Chain C Through Consumers

KEY OPPORTUNITIES TO REDUCE IMPACT ON NATURE

Supply Chain	Operations	Consumption	Built environment
<ul style="list-style-type: none"> Traceable and monitored supply chains 	<ul style="list-style-type: none"> Resource-efficient and circular ops. 	<ul style="list-style-type: none"> Enable and promote sustainable alternatives 	<ul style="list-style-type: none"> Develop sustainable and circular building materials
<ul style="list-style-type: none"> Freshwater collaboration 	<ul style="list-style-type: none"> Freshwater recycling / reduced use 		<ul style="list-style-type: none"> Repurpose and renovate existing structures
<ul style="list-style-type: none"> Certified sustainable forest management and farming 	<ul style="list-style-type: none"> Refinement of by-products & waste material 		<ul style="list-style-type: none"> Energy efficient buildings
<ul style="list-style-type: none"> Source sustainable/certified input materials (e.g., sand, rubber, wood, biofuels) 			

See complementary report for select details under respective transitions (Supply chain etc.)

● Most relevant

GETTING STARTED

Standards / metrics	Biodiversity in corporate strategy	Partnerships / certificates	Regulation
Consider metrics such as "Share of certified materials used in products", "Share of waste reused or recycled", and "Share of packaging from recyclable materials"	Determine how to best include biodiversity in strategy (e.g., Atlas Copco has set actions along UN's "Clean Water" and "Responsible consumption and production" goals)	Consider partnerships such as Kalundborg symbiosis	EU Green Deal, including EU Biodiversity Strategy for 2030
Measure the number of environmental violations and follow up on them		Source certified raw materials (e.g., FSC for wood, RSPO for palm oil)	UN Global Plastics treaty planned to be implemented in 2024

Sources: WWF Expert interviews; Bain analysis; ENCORE (no date); European Commission (2020 b); European Commission (2021 e); UN (2022); Danone (2020); ABA (no date); EPA (2018)

Transport and logistics

Importance relative to other sectors:



Sector's share of Danish Gross Value Added:

~5%

KEY TAKEAWAYS

Transport & Logistics sector puts pressure on nature through the cultivation of crops for biofuels and logging & wood harvesting for packaging materials. There are opportunities to reduce impact on nature such as traceable and monitored supply chains and adopting shipping channels and port practices with limited marine disruption. To get started, businesses can consider setting clear targets and building partnerships such as the IPBC.¹

See complementary report for details on pressures

SECTOR'S KEY PRESSURES ON NATURE

Agricultural effluent	Cultivation of crops Biomass, biofuels S	Livestock farming Biomass, biofuels	Logging & Wood harvesting Biomass, biofuels S
Fishing	Non-living marine disruption Shipping channels, material extraction D S	Water use & quality	Built environment Buildings operated D

Large impact ●●● Little impact

D Direct **S** Through Supply Chain **C** Through Consumers

KEY OPPORTUNITIES TO REDUCE IMPACT ON NATURE

Supply Chain	Operations	Consumption	Built environment
<ul style="list-style-type: none"> Source sustainable/certified input materials (e.g., biofuels, packaging) 	<ul style="list-style-type: none"> Resource-efficient and circular ops 	<ul style="list-style-type: none"> Enable and promote sustainable transport and logistics (incl. reduce single-use packaging) 	<ul style="list-style-type: none"> Aim to limit habitat deterioration due to own buildings (e.g., logistics hubs)
<ul style="list-style-type: none"> Traceable and monitored supply chains 	<ul style="list-style-type: none"> Adopt shipping channels and port practices with limited marine disruption (e.g., sand dredging) Avoid distribution vehicles that spread non-GHG air pollutants from fuels and chemicals Report environmental violations (e.g., pollution from oil and chemical leakage, antifouling paints) 		<ul style="list-style-type: none"> Energy efficient buildings

See complementary report for select details under respective transitions (Supply chain etc.)

● Most relevant

GETTING STARTED

Standards / metrics	Biodiversity in corporate strategy	Partnerships / certificates	Regulation
Consider metrics such as "Share of certified materials used in products"	Set clear targets and formulate a biodiversity strategy (e.g., Bolloré Logistics)	Consider partnerships such as IPBC ¹	EU Green Deal, including EU Biodiversity Strategy for 2030
Measure the number of environmental violations and follow up on them		Signing the Buckingham Palace Declaration to commit to stopping illegal wildlife trafficking	EU Taxonomy

¹IPBC: International Biodiversity Property Council

Sources: WWF Expert interviews; Bain analysis; ENCORE (no date); European Commission (2020 b); European Commission (2021 e); UN (2022); Danone (2020); ABA (no date); EPA (2018)

Energy and utilities

Importance relative to other sectors:



Sector's share of Danish Gross Value Added:

~4%

KEY TAKEAWAYS

Transport & Logistics sector puts pressure on nature through the cultivation of crops for biofuels and logging & wood harvesting for packaging materials. There are opportunities to reduce impact on nature such as traceable and monitored supply chains and adopting shipping channels and port practices with limited marine disruption. To get started, businesses can consider setting clear targets and building partnerships such as the IPBC.¹

See complementary report for details on pressures

SECTOR'S KEY PRESSURES ON NATURE

Agricultural effluent	Cultivation of crops Biomass, biofuels S	Livestock farming Biomass, biofuels S	Logging & Wood harvesting Biomass, biofuels S
Fishing	Non-living marine disruption Off-shore wind, seabed mining D S	Water use & quality Direct input (e.g., cement) and in production process (e.g., heat, cool, clean) D S	Built environment Buildings operated, onshore wind farms D

Large impact ●●●● Little impact

D Direct **S** Through Supply Chain **C** Through Consumers

KEY OPPORTUNITIES TO REDUCE IMPACT ON NATURE

Supply Chain	Operations	Consumption	Built environment
<ul style="list-style-type: none"> Source sustainable/certified input materials (e.g., biofuel and biomass) 	<ul style="list-style-type: none"> Resource-efficient and circular ops. Avoid habitat fragmentation e.g., when drilling for oil at sea, coal mining, and during pipelines/infrastructure building Reduce pollution and report environmental violations 	<ul style="list-style-type: none"> Enable and promote sustainable consumption of energy 	<ul style="list-style-type: none"> Construct sites for sustainable energy with minimal impact on nature (wind farms in industrial areas, solar cells on roofs, avoiding sand dredging)

See complementary report for select details under respective transitions (Supply chain etc.)

● Most relevant

GETTING STARTED

Standards / metrics	Biodiversity in corporate strategy	Partnerships / certificates	Regulation
For consumers: Intensity of energy consumption (kWh/ton of product); % of renewable energy	Considering both climate change and biodiversity in new projects (e.g., floating windmills)	Form partnerships like Kalundborg symbiosis	EU Biodiversity Strategy 2030
	Shell has developed a separate biodiversity strategy	Leverage raw material certificates (e.g., FSC)	EU Green Deal
		Consider water stewardship collaboration as done in Turkey	EU Taxonomy

Sources: WWF Expert interviews; Bain analysis; ENCORE (no date); European Commission (2020 b); European Commission (2021 e); UN (2022); Danone (2020); ABA (no date); EPA (2018)

Infrastructure and Construction

Importance relative to other sectors:



Sector's share of Danish Gross Value Added:

~9%

KEY TAKEAWAYS

Infrastructure & Construction sector puts significant pressure on nature through non-living marine disruptions by e.g., extracting sand as input material for cement and through the built environment. There are opportunities to reduce impact on nature by using alternative input materials and ensuring nature can thrive on and around the built environment. To get started, businesses can turn to best practice examples on nature-positive buildings such as Triodos Bank's new office.

See complementary report for details on pressures

SECTOR'S KEY PRESSURES ON NATURE

Agricultural effluent	Cultivation of crops	Livestock farming	Logging & Wood harvesting Building materials S
Fishing	Non-living marine disruption Sand input to cement; coastal construction S	Water use & quality Direct input (e.g., cement) & in production process (e.g., heat, cool, clean) D S	Built environment Construction, building materials D

Large impact ●●● Little impact

D Direct **S** Through Supply Chain **C** Through Consumers

KEY OPPORTUNITIES TO REDUCE IMPACT ON NATURE

Supply Chain	Operations	Consumption	Built environment
<ul style="list-style-type: none"> Source sustainable / certified input materials (e.g., wood/sand substitutes to reduce sand extraction) 	<ul style="list-style-type: none"> Sustainable marine construction 	<ul style="list-style-type: none"> Guide clients to alt. building materials 	<ul style="list-style-type: none"> Develop nature-integrated urban areas and infrastructure (e.g., green rooftops, wild parks)
<ul style="list-style-type: none"> Recycled sand products 	<ul style="list-style-type: none"> Freshwater recycling/reduced use 		<ul style="list-style-type: none"> Energy efficient buildings
<ul style="list-style-type: none"> Traceable and monitored supply chains 	<ul style="list-style-type: none"> Resource-efficient and circular ops. 		<ul style="list-style-type: none"> Repurpose and renovate existing structures
<ul style="list-style-type: none"> Promotion of industry standards for sand extraction 	<ul style="list-style-type: none"> Reporting of environmental violations 		

See complementary report for select details under respective transitions (Supply chain etc.)

● Most relevant

GETTING STARTED

Standards / metrics	Biodiversity in corporate strategy	Partnerships / certificates	Regulation
Consider BREEAM or LEED sustainability standard to assess biodiversity aspects in building ratings	Scan for best-practice nature-positive buildings such as Triodos Bank's new office	Leverage raw material certificates (e.g., FSC)	EU Renovation Wave
		Consider partnerships such as IPBC ¹	EU Green Deal
			EU Taxonomy

¹IPBC: International Biodiversity Property Council

Sources: WWF Expert interviews; Bain analysis; ENCORE (no date); European Commission (2020 b); European Commission (2021 e); UN (2022); Danone (2020); ABA (no date); EPA (2018)

Finance

Importance relative to other sectors:



Sector's share of Danish Gross Value Added:

~8%

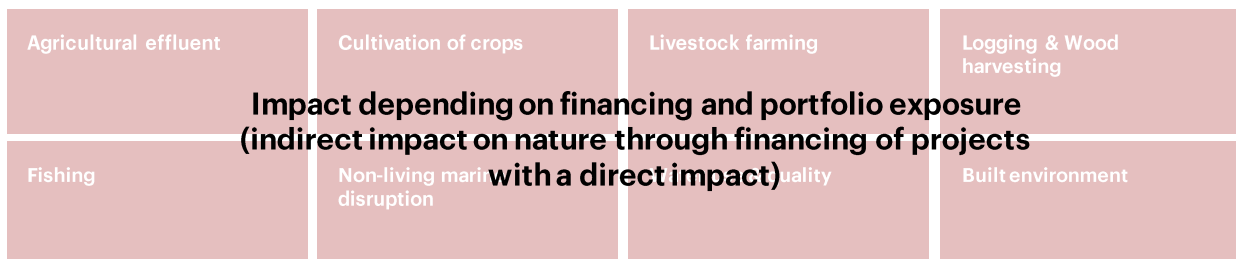
THE IMPORTANCE OF THE FINANCE SECTOR

With the future of the world's biodiversity at stake, **the financial sector is fundamental to fueling a sustainable transition across all sectors**. WEF estimates that **\$2.7 trillion in annual investments are required** to capture the **\$10.1 trillion annual business opportunities** related to transitioning to a nature-positive world economy by 2030.

An analysis of the FTSE All World Index consisting of the 4,100 largest companies around the globe shows that **integrating ESG in investment decisions has a positive effect on financial returns; high ESG-rated stocks have outperformed the market by 150%** since 2007 and shown higher resilience during the COVID pandemic. Furthermore, Bain research suggests that European banks pursuing loans and bonds linked to sustainable investments have higher costs of diligence and reporting. However, **these costs are offset by a -32% lower cost of risk over five years**.

The next step for the financial sector is thus to **ensure zero impact on nature** (e.g., no deforestation) from their investments and **minimize the risk of stranded 'nature-degrading' assets**. This is, for example, relevant for the top ten European financial institutions that hold \$98 billion connected to companies within the beef and soy supply chains that are at high risk of being associated with deforestation in the Amazon and the Cerrado.

SECTOR'S KEY PRESSURES ON NATURE



Large impact ●●● Little impact

Ⓓ Direct Ⓔ Through Supply Chain Ⓒ Through Consumers

GETTING STARTED

Standards / metrics	Biodiversity in corporate strategy	Partnerships / certificates	Regulation
Leverage existing options (e.g., HSBC Euronext ESG Biodiversity Screened Index series providing investments screened for biodiversity impact)	Conservation Finance as a separate field within finance that is mainly focussed on a positive impact on biodiversity	Consider joining partnerships like CPIC ¹	EU Sustainable Finance Regulation
			EU Green Deal
			EU Taxonomy
			Convention on Biological Diversity (CBD) Framework

Sources: WWF Expert interviews; Bain analysis; ENCORE (no date); European Commission (2020 b); European Commission (2021 e); UN (2022); Danone (2020); ABA (no date); EPA (2018)



Global regulation

Biodiversity COP 15

The COP 15 is the 15th meeting of the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) taking place in China (in the third quarter of 2022). It is expected that the members will finalize the post-2020 global biodiversity framework, targeted toward providing a roadmap to “living in harmony with nature” by 2050. The framework is expected to define 21 targets and 10 milestones proposed for 2030, and it can be seen as the ‘Paris Agreement’ for biodiversity.

COP 15 is expected to be the equivalent of the Paris Agreement for biodiversity – targets include conserving 30% of land & sea areas and for all businesses to report and reduce biodiversity impacts

UN plastics treaty

UN negotiators have agreed on a roadmap for a global plastic treaty that would address the full lifecycle of plastic, including its production and design, to tackle plastic pollution and its environmental impact. The negotiators aim to complete an agreement by the end of 2024. The final treaty is expected to be legally binding, hence it will require nations to commit to solving their plastic pollution. If the current draft is approved, it would have a large impact on companies that produce plastic or use it in packaging.

Production of virgin plastic will likely be curbed by governments with increased global focus on recycling

Paris agreement

The Paris Agreement is a legally binding treaty signed by 196 countries on climate change, aiming to limit global warming below 2°C. The utmost importance of ensuring integrity of all ecosystems and the protection of biodiversity in addressing climate change is noted explicitly, and protecting ecosystems is an important element of the long-term global response to climate change. In addition, Article six of the agreement, which covers the use of carbon markets in the fight against climate change, also affects biodiversity. The article provides guidelines on how countries can use internationally tradable mitigation outcomes to reach their climate commitments. Companies can already offset part of their emissions through voluntary carbon markets, where nature-based solutions, such as afforestation projects, play an important role.

Implications for biodiversity within the international treaty on climate change are included in recognizing protection of ecosystems as an important element of fighting climate change and in the use of nature-based for carbon offsetting which is subject to Article 6

CBD (2020)
CBD (2021)

WEF (2022c)
UN (2022)

UNFCCC (2015)
IISD (2015)



EU regulation

EU Green Deal

The EU Green Deal is a coordinated set of policies and legislations with eight policy areas aiming at overcoming the challenge of environmental degradation. It includes initiatives targeting biodiversity, for example:

- **Biodiversity strategy 2030:** Please see more below.
- **Farm-to-fork strategy:** Incl. targets for 2030 such as 50% reduction in use of chemical pesticides, 50% nutrient loss reduction, 20% reduction in fertilizer use, and the aim for 25% of total farmland to be organic
- **EU Circular Economy Action Plan:** Targets how products are designed, promotes circular economy processes, and aims to ensure that waste is prevented. Includes e.g., 'Sustainable products' policy prioritizing reducing and reusing materials before recycling as well as measures to ensure all packaging will be recyclable by 2030
- **EU Deforestation law:** Proposed rules would guarantee that the products consumed on the EU market would not contribute to global deforestation. Sets mandatory due diligence rules for companies which want to place commodities such as soy, beef, palm oil, wood, cocoa, and coffee on the EU market
- **EU Nature restoration law:** The EU Nature Restoration law is expected to require all member states to restore 15% of degraded land and sea area into nature – primarily at the expense of agriculture
- **EU Taxonomy:** Please see more below.
- **European Green Deal Investment Plan:** At least €1T of sustainable investments through facilitating public and private investments supported by EU budget

EU has ambitious plans to protect ecosystems, with large implications for agriculture and businesses dependent on natural capital

EU biodiversity strategy 2030

All EU member states have committed to the EU biodiversity strategy and its 17 targets and 100 actions in 2020. The strategy's goal is to halt nature loss and improve biodiversity in the EU. Targets include legally protecting 30% of sea and land area, restoring 30% of habitats in unfavorable condition, and reversing the decline of pollinators. In 2023, the EU Commission will assess the progress and approach in each member state and could impose a legally binding governance if needed.

Denmark will likely impose several legislations to adhere to the targets, having various implications for sectors such as agriculture

European Commission (2020 b)
European Commission (2020 c)
European Commission (2020 e)

European Commission (2021 f)
European Commission (2020 f)

European Commission (2021 b)
European Commission (2021 c)

New EU Taxonomy

The new EU taxonomy provides a framework for investors to identify economic activities considered as environmentally sustainable. It sets mandatory requirements on disclosure of activities in line with the taxonomy for financial institutions and large non-financial companies and a share of founded activities in line with the taxonomy. It establishes environmental objectives focusing on climate change mitigation (mandatory reporting), climate change adaption (mandatory reporting), sustainable use of marine resources (mandatory from '23), circular economy (from '23), pollution prevention (from '23), and protection & restoration of biodiversity and ecosystem (from '23).

Reporting around nature & climate will become more standardized and mandatory for large businesses in the EU

European Commission (2022)



Danish regulation

Danish regulation and frameworks

Denmark's regulation, legislation, and frameworks regarding nature and biodiversity largely follow standards set by the EU, including:

- **The Natura 2000:** A network of protected areas within the EU. In Denmark, 18% of marine areas are designated as Natura 2000 sites, while only 8.5% of land areas are part of the network. It is expected that this area will increase to meet the upcoming targets of the EU Biodiversity strategy
- **The Nature Protection Act and the Forest Act (2019):** Recent revisions in 2019, for example, put larger emphasis on protecting and increasing nature and forests, and restoring areas for wildlife
- **Danish Marine Strategy Plan:** The plan foresees that 29% of Danish waters are conserved with 4.1% of sea area being designated as strictly protected. However, the EU biodiversity strategy suggests that strictly protected areas should cover 10%, putting pressure on Danish legislators
- **The Act for Nature National Parks (2021):** Provides a framework for biodiversity protection on public lands with plans to expand the framework to also cover privately owned land. Most recently, it was decided to establish 75,000 hectares (~1.7% of Denmark) of “untouched forests” with no timber production
- **Maritime Spatial Planning Act (2021):** Together with Danish Marine Strategy, the act establishes the framework for spatial planning in the Danish marine areas
- **Danish Deforestation strategy (2021):** Set various targets for Danish legislation regarding deforestation, such as making public procurement deforestation-free by 2025 at the latest, which are aligned with the new EU Deforestation law (see EU regulation section)

Denmark will follow standards set by the EU and is likely to increase its protected areas and promote circular & nature-based solutions impacting agriculture & food businesses especially

Approach to writing this report / methodology

General approach

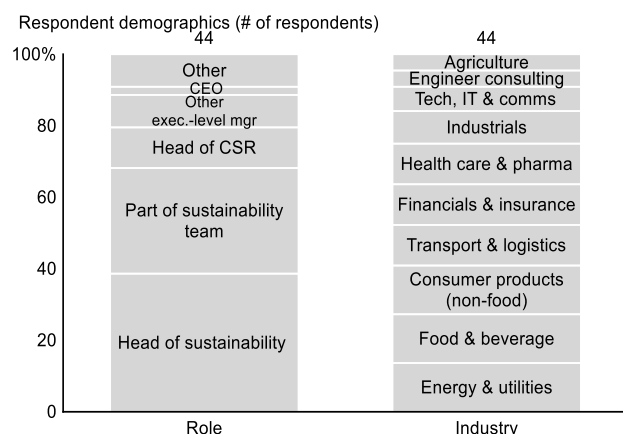
The report combines insights from primary research (please see Company survey & in-depth interviews below) with existing reports and knowledge on biodiversity (please see References/Bibliography section). It has been complemented with observations from WWF's and Bain & Company's local and global expertise in working directly with businesses on biodiversity and sustainability topics more broadly.

Company survey

Bain & Company and WWF conducted a survey among the largest Danish companies to understand their interest and strategy around biodiversity.

The survey was conducted between October and December 2021, and it included 12 multiple choice questions and 3 fill-in questions.

The survey received 44 responses in total with respondents coming from various roles and industries (please see Exhibit on the right).



Company in-depth interviews

Following the survey, Bain & Company and WWF completed 10 in-depth interviews with the leading Danish companies from different industries to understand their individual impact and actions around biodiversity. Interviewed companies included e.g., DSV, Novo Nordisk and Grundfos.

The interviews were completed between November 2020 and January 2021 and the questions covered topics such as individual company's perceived impact on biodiversity, strategy & opportunities, as well as possible barriers to improving biodiversity impact.

Approach to selected key pressures

The IUCN lists 44 threats to biodiversity (referred to as "pressures" throughout this report) that are mapped to each species. The mapping of near threatened and threatened species to each biodiversity pressure at a global level and at a Danish level indicate the most important pressures, solely judged on the *number* of impacted species. This, coupled with interviews from WWF experts within the relevant fields, has been used to pinpoint the most important focus areas from a Danish business perspective and to guide the selection of the prioritized areas. However, it should be noted that marine pressures are underrepresented on red lists of threatened species, which explains why non-living marine disruption has been added as an additional priority.

As not all pressures are relevant from a business perspective, the assessment of business relevance, published by WEF, has been used to point out where businesses can be most impactful and lead change. The assessment considers the role of business in causing the pressure and disruption risk to businesses.

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About WWF and Bain



WWF – World Wide Fund For Nature

WWF is the world's largest and most experienced independent conservation organization, with over five million supporters and a global network active in more than 100 countries. Our mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature. We will do this by conserving the world's biological diversity, ensuring that the use of renewable natural resources is sustainable and promoting the reduction of pollution and wasteful consumption.



Bain & Company

Bain & Company is a global consultancy that helps the world's most ambitious change makers define the future. Across 63 offices in 38 countries, we work alongside our clients as one team with a shared ambition to achieve extraordinary results, outperform the competition, and redefine industries. We complement our tailored, integrated expertise with a vibrant ecosystem of digital innovators to deliver better, faster, and more enduring outcomes. Our 10-year commitment to invest more than \$1 billion in pro bono services brings our talent, expertise and insight to organizations tackling today's urgent challenges in education, racial equity, social justice, economic development, and the environment. In addition, over the past five years only, Bain has worked on over 950 projects with our clients on sustainability and responsibility in a number of different ways – including in strategy, operations, investing, disruptive models, and results acceleration. Since our founding in 1973, we have measured our success by the success of our clients, and we proudly maintain the highest level of client advocacy in the industry.

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