

Business & Biodiversity Benchmark



**A comparative study of thirty
European stock-listed companies**



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In partnership with: **PwC Netherlands**

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About VBDO

VBDO stands for Vereniging van Beleggers voor Duurzame Ontwikkeling, which translates as the Dutch Association of Investors for Sustainable Development. VBDO is convinced that a more sustainable and responsible capital market leads to a healthier and more just world. As an independent association, we have been a passionate driver, motivator and knowledge leader for responsible investment. We have been anchoring sustainability in companies since 1995. We use respect and expertise to help organisations make choices that look beyond financial gain, but also consider social, environmental and governance aspects. VBDO has been actively engaging with the boards of directors of publicly listed companies in the Netherlands for 30 years. We attend annual general meetings (AGMs) to ask constructive, critical questions to encourage companies to improve their sustainability policies and practices. VBDO is funded by our members. Our members are made up of more than 70 institutional investors as well as leading NGOs. VBDO is regarded as an important and respected discussion partner by the media, politicians and others.



Preface

“The window for meaningful action is narrowing, and the consequences of delay are becoming more tangible. We are approaching tipping points – not only in ecosystems, but also in the social and economic systems that underpin our societies”¹

Leena Ylä-Mononen, Executive Director of the European Environment Agency (EEA)

We find ourselves at a crossroads. Biodiversity loss is accelerating, and with it the risks to our economies and societies. More than half of the world’s economy depends on healthy ecosystems. As these systems degrade, the foundation of our prosperity and wellbeing weakens. The call to act is no longer abstract; it is urgent and concrete.

At VBDO, we are observing growing awareness of the importance of biodiversity among companies and investors. More organisations now recognise that having stable business models depends on nature. Biodiversity is becoming a key factor in risk management, value creation and long-term resilience. The question is no longer whether companies should act, but how fast and how effectively they can integrate biodiversity into their strategies and decision-making.

This benchmark aims to be both a mirror and a map, to reflect where companies currently stand and offer guidance on how to move forward. By assessing strategies, policies, actions and targets, we identify areas for improvement and showcase good practices that can inspire others. Transparency and knowledge sharing are vital to accelerate collective progress.

We are encouraged to see positive developments across sectors, yet the urgency remains undeniable. As the European Environment Agency reminds us, the window for meaningful action is closing. Reversing biodiversity loss requires collaboration, courage and a shared commitment from all actors in the economy.

We extend our sincere thanks to PwC, as well as to the companies, experts and partners whose engagement and insights have made this report possible. We hope this benchmark informs, motivates and empowers action towards a truly biodiversity-positive future.

Warm regards



Angélique Laskewitz
Executive Director VBDO

Foreword

Biodiversity is essential for business and economic resilience. Yet the latest Living Planet Report shows an average 73% decline in monitored species populations since 1970,² revealing the scale of the crisis. Reversing these trends will require urgent and coordinated action, and businesses have a vital role to play.

The recently published IPBES Transformative Change Assessment Report³ highlights that acting immediately to halt biodiversity loss can generate USD 10 trillion in business opportunities and create 395 million jobs globally by 2030. Companies that embed biodiversity in their strategies, policies and operations are not only helping nature but also positioning themselves to seize these economic and societal benefits.

At IUCN NL, we believe that business action on biodiversity is both an environmental imperative and a pathway to social and economic gains. Our work with people in high-biodiversity landscapes across the globe, including Indigenous Peoples and local communities (IPLCs), shows that conservation is most effective when it is inclusive and when benefits are shared fairly. Protecting biodiversity while ensuring equitable outcomes strengthens both ecosystems and the societies that depend on them, creating positive ripple effects across regions and supply chains.

The results of this benchmark reveal both progress and opportunity. While reporting frameworks such as the EU Corporate Sustainability Reporting Directive (CSRD) are improving disclosure of risks and impacts, there remains scope for companies to translate commitments into tangible policies, actionable targets and meaningful on-the-ground interventions. Practical implementation is

where real change happens, and where businesses can demonstrate leadership by sharing good practices and collaborating across sectors.

The Kunming–Montreal Global Biodiversity Framework⁴ provides a roadmap for private sector engagement, highlighting the critical contributions businesses can make towards global targets. Collaboration – within sectors, with knowledge partners and with local communities – is key to maximising impact and ensuring biodiversity action is effective, equitable and lasting.

Building on the Kunming–Montreal Global Biodiversity Framework’s Target 15, the IUCN World Conservation Congress in October 2025 approved a motion calling on companies to assess, disclose and reduce their biodiversity-related risks.⁵ This reinforces the growing global consensus that business action is central to halting and reversing biodiversity loss.

We hope this benchmark inspires companies to accelerate their efforts to view biodiversity not just as a responsibility but as a strategic opportunity, and to integrate it fully into their business thinking and operations. Together, we can work towards a future where thriving ecosystems and resilient communities are at the heart of sustainable economies.



Liliana Jáuregui
Director IUCN NL

Executive summary

This first edition of the Business & Biodiversity Benchmark assesses how 30 leading listed European companies integrate biodiversity into their strategies, policies, action and implementation frameworks, and targets and metrics. The benchmark provides a transparent and comparable overview of corporate performance, highlights frontrunners and laggards, and identifies good practices that can accelerate progress.

Biodiversity loss is now recognised as a material business risk. Following the Kunming–Montreal Global Biodiversity Framework and new disclosure frameworks such as the Corporate Sustainability Reporting Directive (CSRD), the Taskforce on Nature-related Financial Disclosures (TNFD) and the Science Based Targets Network (SBTN), companies face growing expectations to measure, manage and disclose their impacts and dependencies. This benchmark evaluates to what extent leading European firms have translated those expectations into concrete governance, strategy and measurable results.

Benchmark setup

The benchmark assesses company performance across four categories: strategy and business model, policy, actions and implementation, and targets and metrics. Together, these themes capture how developed a company's approach is to biodiversity, from intention to measurable outcomes. Indicators are based on recognised frameworks, including the Kunming–Montreal Global Biodiversity Framework and TNFD's LEAP approach. Data was collected through a structured review of public disclosures, and companies were given the opportunity to validate this. The scoring process combined quantitative and qualitative assessment to ensure accuracy and comparability. Companies were invited to review preliminary results, and verified feedback was incorporated into the final dataset.

Key findings

While awareness of biodiversity has grown substantially among European companies, integrating it into business strategy and measurable targets remains limited. Nearly all companies acknowledge biodiversity as a material topic, yet only a minority explicitly link it to their core business models, value chains or dependencies.

- Strategy and business model

Two-thirds of the companies identify biodiversity as material. They determine impacts, risks and opportuni-

ties based on CSRD guidelines. However, companies disclose little information about the value chain and location-specific impacts of biodiversity.

- Policy

Around half of the companies have adopted a biodiversity policy or integrated it into their environmental policies. However, few demonstrate clear alignment with the Kunming–Montreal Global Biodiversity Framework or measurable ambitions. Most focus on risk avoidance rather than long-term value creation.

- Actions and implementation

Operational initiatives are common, but vary in scope and effectiveness. Many focus on site-level mitigation or conservation projects, while only a few address systemic issues such as supply chains, product design or restoration.

- Targets and metrics

The weakest area is quantitative measurement. Few companies use biodiversity indicators that are specific, measurable and comparable. Targets often remain

qualitative, with vague ambitions such as 'no net loss' or 'positive impact', and lack baselines, timelines or monitoring frameworks.

A small group of frontrunners demonstrates that structured biodiversity management is achievable. These companies combine clear governance, credible targets and transparent reporting, providing practical examples for others to follow.

Sectoral differences

The benchmark reveals clear differences between the three assessed sectors: food and beverage, pharmaceuticals and extractives. Companies in the extractives sector generally show more mature approaches to biodiversity management, which reflects their direct interaction with nature and related regulatory requirements. Their policies tend to be more detailed, although they are inconsistent in implementation and measurement. Food and beverage companies increasingly recognise their dependency on nature and are beginning to integrate biodiversity considerations into sourcing practices and supply chain management. However, actions often remain limited to specific commodities or certification schemes, and measurable outcomes are still scarce. Pharmaceutical companies are at an earlier stage of integrating biodiversity into their broader strategies. While awareness is growing, biodiversity is often approached indirectly through environmental management systems

or climate-related programmes rather than as a distinct strategic focus. Across all three sectors, integrating biodiversity into governance structures, accountability mechanisms and performance monitoring remains limited. Each sector is still in the early stages of aligning with international frameworks and developing measurable indicators.

Conclusions

The benchmark reveals a clear gap between ambition and implementation. While corporate awareness and disclosure have improved markedly, there is limited measurable progress towards halting biodiversity loss. Most companies remain in the commitment phase, with few advancing to measurable impact reduction or restoration outcomes.

Nevertheless, biodiversity is moving from the margins to the core of corporate sustainability. EU regulation and investor scrutiny is accelerating change, and frontrunners are demonstrating that biodiversity strategies can coexist with strong business performance.

Recommendations

To accelerate progress, companies should:

- Map risks, impacts, opportunities and dependencies across operations and the broader value chain, linking this to long-term value creation and risk management.
- Break down siloes and collaborate internally across departments (legal, risk, procurement, operations) and externally with a broad field of stakeholders to embed biodiversity into their core business and consider innovative ways to strengthen their biodiversity strategies.
- Consult stakeholders and local communities, including Indigenous knowledge holders, to inform mitigation strategies and develop location-specific, effective biodiversity transition plans.
- Develop standardised metrics and baselines compatible with TNFD and SBTN methodologies.
- Collaborate across sectors and value chains to advance biodiversity-positive business models and harmonised disclosure.

To move from commitment to impact, companies must embed biodiversity into their strategic and financial decision-making. Those that act now will be best positioned to meet the rising expectations of investors, regulators and society.





Company ranking 2025



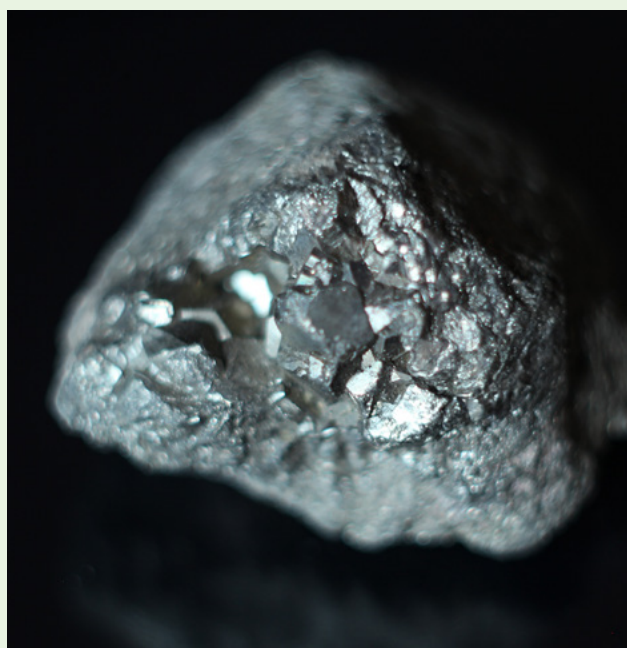
Ranking	Company name	Sector	Total score in %
1	JDE Peet's	Food and Beverage	79.0
2	Danone	Food and Beverage	78.4
3	Carrefour	Food and Beverage	73.6
4	Bayer	Pharmaceuticals	70.9
5	TotalEnergies	Extractives	69.2
6	Corbion	Food and Beverage	62.9
7	Eramet	Extractives	62.8
8	Unilever	Food and Beverage	61.3
9	AstraZeneca	Pharmaceuticals	60.6
10	Rio Tinto Group	Extractives	59.0
11	Ahold Delhaize	Food and Beverage	56.2
12	Heineken	Food and Beverage	55.3
13	Aperam	Extractives	52.1
14	Eni Group	Extractives	51.7
15	Royal Dutch Shell	Extractives	49.0
16	Repsol	Extractives	48.9
17	Novo Nordisk	Pharmaceuticals	48.7
18	Grifols	Pharmaceuticals	47.6
19	AB InBev	Food and Beverage	46.2
20	Sanofi	Pharmaceuticals	46.1
21	Merck	Pharmaceuticals	42.8
22	Royal Unibrew	Food and Beverage	42.1
23	Glencore	Extractives	39.0
24	Colruyt Group	Food and Beverage	38.7
25	ArcelorMittal	Extractives	32.9
26	UCB	Pharmaceuticals	30.7
27	Sartorius	Pharmaceuticals	20.7
28	AMG Critical Materials	Extractives	20.5
29	Recordati	Pharmaceuticals	18.4
30	argenx	Pharmaceuticals	3.4

1. Introduction

According to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), biodiversity is “the variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part”.⁶ In 2019, IPBES released its landmark report on biodiversity and ecosystems.⁷ By assessing changes in nature over the last five decades, this report illustrates the rapid deterioration of the health of ecosystems globally. It shows that ecosystems not only form the basis for the lives of all species on earth, but they also provide the basis for the global economy, our livelihoods, food security, and overall health.

At the same time, the report acknowledges that it is still possible to prevent further deterioration through global transformative action. To halt biodiversity loss, it is vital to maintain the balance of our global ecosystems and eliminate the main threats to biodiversity. The Kunming–Montreal Global Biodiversity Framework (GBF) further reinforces these expectations, offering a shared global vision of “a world living in harmony with nature where by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people”.⁸

Many of the impacts on biodiversity take place in the supply chains.⁹ The sourcing of raw materials and agricultural commodities often drives biodiversity loss,



for example through deforestation, habitat loss and overexploitation. Product use and disposal also impact on biodiversity, with packaging waste and pharmaceutical residues affecting water quality and aquatic life. By addressing these impacts, companies can reduce risks, foster innovation and shift entire value chains towards a biodiversity-positive future. Furthermore, companies do not only impact but also depend on nature and ecosystem services for their operations.

The private sector has an indispensable role to play in addressing biodiversity loss, because many of the drivers behind it originate in business operations and production practices. Analyses and studies indicate that over half of the global economy is dependent on nature.^{10, 11} Declining ecosystem health poses increasing risks to business continuity and resilience. At the same time, biodiversity is often perceived as complex and difficult to operationalise, leaving many companies uncertain about where to begin or how to achieve measurable outcomes.

Given more than half of the global economy depends on biodiversity and ecosystem services, nature loss is a material financial risk. When ecosystems degrade, the stability of natural inputs such as water, soil fertility and raw materials declines, which directly affects business productivity and resilience. Degrading biodiversity can disrupt supply chains, increase costs and erode asset value across multiple sectors. It also amplifies social and regulatory risks, including conflict over land and resources, reputational damage and exposure to stricter environmental legislation. The Dutch Central Bank estimates that EUR 510 billion in loans and investments by Dutch financial institutions have a high to very high dependency on ecosystem services. Similarly, PwC analysis shows that 55% of global GDP is moderately to highly dependent on nature.¹² The European Central Bank confirms that

nature-related risks are material economic and financial risks, with growing efforts to quantify them.¹³ Loss of biodiversity therefore poses systemic risks that extend beyond environmental concerns, threatening entire company value creation processes.

As global biodiversity loss accelerates, businesses are increasingly expected to play a proactive role and underpin the urgency of the problem. VBDO has therefore, in collaboration with PwC Netherlands, developed the Business & Biodiversity Benchmark to provide investors, companies, NGOs and other stakeholders with insights into how companies are integrating biodiversity into their strategies, policies, actions and implementation, and targets and metrics.

This benchmark ranks companies on their performance, provides insights into their approaches to biodiversity and identifies where companies perform better than others. By sharing these examples, we aim to inspire companies to accelerate their own journeys so biodiversity considerations become an integral part of their decision-making and long-term value creation. Moreover, the benchmark acts as a key accountability tool at a time when aligning with global nature goals is more urgent than ever. It enables investors and other stakeholders to better understand the challenges and opportunities for companies in addressing biodiversity.

The benchmark aims to align with the CSRD (specifically ESRS E4 Biodiversity and Ecosystems) and biodiversity frameworks such as the GBF and the TNFD. These frameworks expect companies to assess and disclose their biodiversity impacts, dependencies, risks and opportunities. EU regulations are set to significantly encourage companies to improve their transparency, reporting and accountability on nature. Details about the CSRD and the frameworks can be found in Appendix 2.

This year marks the first time that the Business & Biodiversity Benchmark has been carried out in full. Establishing this benchmark allows us to track trends, measure improvements and encourage accountability for company commitment to biodiversity. Only over the coming years will it become clear how companies are developing in their approach to biodiversity, and where meaningful progress is being made.

Benchmark structure and company scope

The benchmark covers 30 companies and includes companies from high-impact¹⁴ and high-dependency sectors: food and beverage, extractives and pharmaceuticals. Information on these European listed companies and the benchmark methodology can be found in Appendix 1.

The benchmark revolves around four key categories. The assessment first examines how biodiversity is

The four categories of the Business & Biodiversity Benchmark

STRATEGY AND BUSINESS MODEL	- To what extent is biodiversity integrated into the company's strategy and business model? - Is biodiversity discussed at board level and how is it integrated into the company's materiality analysis, risk- and impact assessments, consultations, public commitments and advocacy?
POLICY	How does the company integrate biodiversity into policies for both its own operations and its value chain?
ACTIONS AND IMPLEMENTATION	How is the company taking action to achieve its biodiversity-related strategy and policy objectives?
TARGETS AND METRICS	How is biodiversity included in company targets and metrics that track the effectiveness of policies and key actions?

PILOT

In 2024, VBDO, supported by PwC, launched a pilot Business & Biodiversity Benchmark, assessing 14 European listed companies across three high-impact sectors: food and beverage, extractives (including oil and gas) and pharmaceuticals. These sectors were chosen for their significant dependency and impact on nature, making them key actors in the global biodiversity loss crisis. The 2024 pilot served to test and refine the benchmark's methodology and scoring criteria, ahead of a full rollout in 2025. Assessments were based on publicly available data, including annual and sustainability reports, corporate biodiversity policies, and public third-party disclosures such as reports from the Carbon Disclosure Project (CDP). Unlike the current benchmark, the pilot did not include a company feedback round. Therefore, the detailed scores have not been published.

The pilot highlighted how little biodiversity had been integrated into core business strategy. The average overall score was just 22%, with companies scoring lowest in the categories of strategy and business model (15%) and policy (15%), compared with actions and implementation (26%) and targets and metrics (27%). This suggests that operational steps being taken are not yet supported by clear, strategic frameworks. The pilot also showed a disproportionate focus on climate change. Land and sea use change – one of the most critical impact drivers – was the least addressed in terms of concrete actions and metrics, despite more frequent mention in policy documents. Sector performance varied: food and beverage led the way, followed by extractives, while pharmaceuticals trailed in all categories. These differences underline the need for sector-specific guidance and expectations.

embedded in company strategy and business models. It then reviews its policies, then its actions and implementation, and finally evaluates the targets and metrics in place to support biodiversity conservation.

In this report and in the benchmark, there is a primary focus on the five direct drivers of biodiversity loss, as identified by the IPBES: land and sea use change; over-exploitation; climate change; pollution; and invasive alien species. Details about how these drivers are defined are outlined in Appendix 3. We used the ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) tool to explore the sectors' exposure to these drivers. Within the policy, actions and implementation, and targets and metrics categories, the benchmark focuses on the five drivers and applies consistent indicators and point values for comparability. Across all categories, the company's value chain is included, acknowledging that most biodiversity impacts occur beyond direct operations. The benchmark therefore encourages companies to look beyond their own activities and address biodiversity loss throughout their value chains.

For a comprehensive overview of the methodology and research process, please see Appendix 1. This scoring has resulted in the ranking on page 13 of this report.

It is important to note that invasive alien species has been a core element of the benchmark. However, as data from ENCORE and the private sector remains limited, we have decided to exclude these points from the total for this first year of the benchmark. We hope this lack of data will motivate companies to further identify and research their potential impact on this biodiversity loss driver. We aim to include this driver in the score in the coming years.

The business case for biodiversity: from moral imperative to strategic asset



Thijs IJsbrandij
Senior Manager
Nature Strategy,
PwC

We live in turbulent times. Artificial intelligence, geopolitical tensions and economic uncertainty are testing resilience across sectors, and maintaining long-term strategies is challenging. One of the strategic areas that suffers from these shifting priorities is biodiversity. Recent research from the European Environment Agency (EEA) reconfirmed the importance of biodiversity, emphasising that no less than 72% of real-economy businesses and 75% of bank loans in the eurozone are highly dependent on ecosystem services.¹⁵ Despite this, both governments and businesses struggle to put the right kind of action in place to safeguard this value. The same research states that over 80% of protected habitats in Europe are in poor or bad condition, and that biodiversity loss ranks as the second-highest global risk of the coming decade. The message is clear: if we allow biodiversity loss to continue, the economic and environmental consequences will be severe.

We do, however, see signs that biodiversity has not disappeared from the business and governmental agenda. Initiatives such as the Taskforce on Nature-related Financial Disclosures (TNFD) and the Science Based Targets Network (SBTN) are slowly gaining traction. Ocean protection is advancing through new multilateral treaties on the high seas and fisheries, and nature-positive ambitions are being increasingly embedded in ESG strategies.

Still, translating ambition into action remains a challenge. Many organisations struggle to move beyond ambition and commitments and fail to put in place the necessary actions to embed biodiversity in decision-making. Discussions often circle around familiar obstacles: fragmented KPIs, unclear targets, and limited access to consistent data. These concerns are valid – but they do not tell the whole story. Better data is essential, but it is not a silver bullet. Data alone does not drive change. For businesses, change happens when biodiversity is linked to business value. When nature is framed not just as a moral imperative but as a strategic asset, action will follow.

There are abundant examples to illustrate the business relevance of biodiversity. Biodiversity loss can disrupt agricultural inputs, reduce water availability and increase exposure to climate risks. Conversely, investing in regenerative practices and ecosystem restoration can derisk operations and build long-term resilience. Infrastructure and energy projects – often delayed by lengthy permitting processes – can gain faster approvals when ecological impacts are proactively addressed. Customers increasingly reward brands that demonstrate genuine care for nature, creating opportunities for differentiation and loyalty.

*Nature is not a niche concern –
it is foundational to our economy,
wellbeing and future*

These benefits are compelling, but they are rarely achievable if driven just by company sustainability teams or even by individual companies. Biodiversity action requires cross-departmental collaboration – from procurement and operations to legal and finance. It also demands engagement across the value chain, including suppliers, regulators and customers. This is a steep challenge for sustainability professionals, who – next to owning the topical content and relevant regulation – must now learn to speak business language and build coalitions, align incentives, and turn action on biodiversity into strategic opportunities.

Nature is not a niche concern – it is foundational to our economy, wellbeing and future. The business case for biodiversity is growing stronger by the day but will not provide return within investment. It requires leadership, creativity, and a willingness to step outside traditional silos. Although challenging, companies must step up. Not just because it is the right thing to do, but because it will create value for its stakeholders. The business case for nature is simply too important and deserves our absolute best effort.

2. Category guidelines and results

This section presents the benchmark results across the four assessment categories: strategy and business model; policy; actions and implementation; targets and metrics. The first section of each category highlights the indicators on which the benchmark was built and how companies can address that category. The second section shares the results, which identify patterns and differences in sector performance. The analysis is complemented by best practice examples and practical insights for companies to strengthen their approach to biodiversity.

2.1 STRATEGY AND BUSINESS MODEL

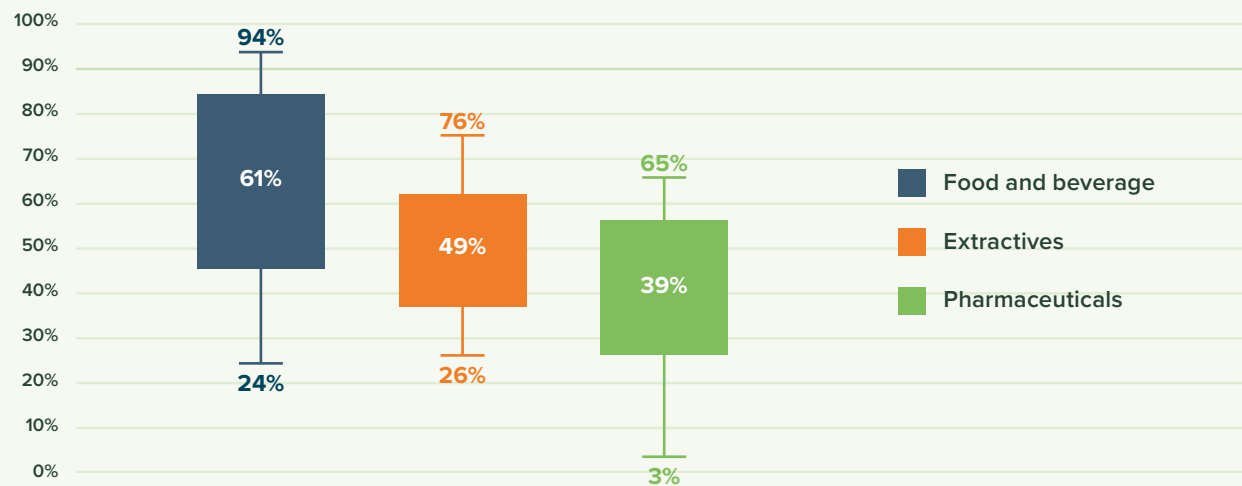
Table 1 | Materiality of biodiversity (loss driver) per sector

	Food and beverage	Extractives	Pharmaceuticals	Total (out of 30)
Biodiversity	9	9	4	22
Land and sea use change	9	2	2	13
Climate change	10	8	9	27
Pollution	8	6	8	22
Overexploitation	10	8	6	24
Invasive alien species	0	1	0	1

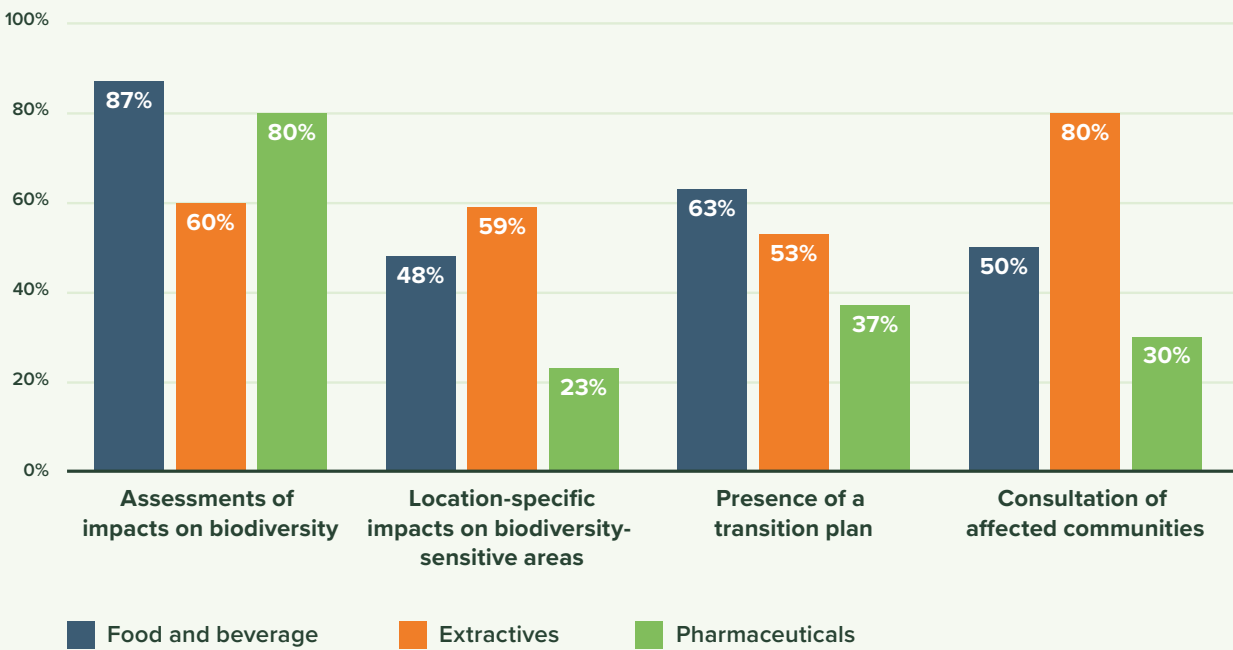
Note: Table 1 shows what topics have been identified as material by companies per sector. Not all companies address all biodiversity loss drivers when identifying biodiversity as material. Therefore, we have also looked at the materiality of topics that fit each biodiversity loss driver.



Graph 1 | Variability and average scores of strategy and business model



Graph 2 | Scores on strategy and business model elements





In this section, we outline essential aspects for companies to address in their biodiversity strategies, supported by relevant frameworks, considerations and insights. We present how companies are currently performing and highlight how they could strengthen their approaches.

We expect companies to have a biodiversity strategy in place. We have looked at several indicators to find out where companies stand.

- We examine whether biodiversity is considered a material topic.

- Companies should thoroughly understand and map their impacts, dependencies, risks and opportunities.
- Companies should identify material sites and consider biodiversity in the value chain.
- Companies should formulate a biodiversity transition plan.
- Companies should express public commitment and advocacy.

Detailed information can be found in the good practice guideline of this section

GOOD PRACTICE GUIDELINE

Double materiality

The concept of double materiality requires companies to assess how sustainability issues affect their financial performance (financial materiality), and how their operations impact on people and the environment (impact materiality).¹⁶ Once they have implemented the CSRD, companies should report on information, as outlined in the European Sustainability Reporting Standards (ESRS), on topics identified as material.

VBDO urges companies to consider all five drivers of biodiversity loss to understand how these relate to their organisation. If the sector guidance of the TNFD identifies a driver as material for a specific sector, it is

assumed to be material for companies within it. We refer to the sector guidelines of the TNFD and to the direct impacts and dependencies of ENCORE. We recognise that these standards and guidance are still developing. Therefore, the benchmark should be seen as a practical starting point. As methodologies mature and data quality improves, we expect to refine our approach to ensure it reflects both leading practice and scientific consensus.

Determining impacts, dependencies, risks and opportunities

To create a strategy that ensures a sustainable future, both for the company and the planet, companies need to understand their impacts, dependencies, risks and opportunities on biodiversity and implement them at the very foundation of their organisations. This means

safeguarding planetary boundaries and continuation of the business.

Companies often express a lack of insight into their value chains.¹⁷ Only after they map and measure their dependencies and impacts on biodiversity – and consider insights in the value chain – can they develop and implement effective biodiversity strategies.¹⁸

Biodiversity-positive strategies also provide opportunities.¹⁹ Strategies should not only focus on avoiding and minimising impact on biodiversity and natural capital, but also on preserving, regenerating and restoring natural ecosystems as well as creating transformative solutions. Integrating biodiversity-positive strategies into operations and supply chains enhances long-term resilience, reduces dependency on finite resources, and aligns with evolving regulatory and consumer expectations.

Tools such as the TNFD could provide guidance for investigating biodiversity impacts, risks and opportunities.²⁰ Once these have been identified, companies are tasked with translating the findings into actionable biodiversity strategies. These strategies should extend beyond sporadic donations to conservation efforts, focusing on mitigating the primary impacts and dependencies arising from their operations. Given that many companies directly or indirectly rely on the health of ecosystem functions and natural capital, evaluating these impacts and dependencies is crucial for their long-term viability.

Company boards should be informed and involved so they can determine strategies that prioritise a business model which considers the importance of maintaining and improving biodiversity.

Material sites and the value chain

Biodiversity is a global challenge which requires considering local and context-specific interventions. To halt biodiversity loss, it is important to be especially considerate of biodiversity-sensitive areas.²¹ The International Union for Conservation of Nature (IUCN) has created a global standard²² and guidance²³ which provide quantitative thresholds for identifying key biodiversity areas (KBAs). Under the CSRD, companies must map and disclose material sites located in or near biodiversity-sensitive areas. However, this is often not where the most relevant impact or dependency lies for companies,²⁴ so we do encourage them to consider mapping their

value chains as well at a regional, landscape level. When companies carry out their analysis, they should consult with affected communities and holders of Indigenous and local knowledge on biodiversity. This improves understanding of the local context and enables thorough insight into the relevant (social) risks and opportunities.

Biodiversity transition plans

Companies are encouraged by the ESRS E4²⁵ to develop a biodiversity transition plan. The TNFD states that “actions in such plans should prioritise real economy changes and may include: avoiding and reducing negative impacts; protecting, conserving, regenerating and restoring nature; transforming underlying systems to address the drivers of nature loss; and collaborating and engaging with Indigenous Peoples, local communities and stakeholders”.²⁶

VBDO expects plans to be in line with the Kunming–Montreal Global Biodiversity Framework goal of halting and reversing biodiversity loss by 2030 and restoring nature by 2050. Biodiversity transition plans should consider stakeholder input, and companies should be transparent about how they prioritise their stakeholders, what the consultation looks like and what is done with the outcomes of the consultation.

Public commitment and advocacy

VBDO expects companies to make a meaningful public commitment and advocate for biodiversity. This includes engaging on biodiversity issues with stakeholders such as affected communities, local communities and rightsholders, and Indigenous Peoples who are directly or indirectly impacted by their operations, for fair and equitable outcomes. Companies should reflect that their lobby activities are in favour of, or do not discourage, public policy and regulations which promote biodiversity.



STRATEGY RESULTS

Double materiality

Of the 30 companies included in the benchmark, 22 (73%) identified biodiversity as a material topic in the 2024 DMA. Comparing this with the annual reports over FY 2023, only 14 out of 30 (47%) had determined biodiversity a material topic. This indicates a positive shift, potentially driven by the reporting requirements of the CSRD. Out of the direct biodiversity loss drivers, invasive alien species is only considered material by one company. Land and sea use change follows – identified by only 13 of the 30 companies (43%) – even though it represents the largest direct driver of terrestrial biodiversity loss. The limited recognition within the extractives sector is especially notable, with only two companies considering it a material issue.

The benchmark results reveal in both the food and beverage and the extractives sectors, nine out of 10 companies recognise biodiversity as material, compared to only four out of 10 in the pharmaceuticals sector.

However, identifying biodiversity as a material topic does not necessarily translate into a coherent strategy or concrete actions. Many companies acknowledge limited visibility into their value chains and describe their efforts as a work in progress, focused on expanding risk assessments and due diligence. There is also considerable variation in how companies define and apply materiality thresholds, which indicates a lack of standardisation and maturity.

Climate change is the most frequently identified material driver, cited by 27 out of 30 companies, yet it is often not explicitly linked to biodiversity. This shows that many companies still treat climate and biodiversity as separate issues rather than interconnected. It underlines the need to distinguish between recognising individual environmental drivers and developing an integrated biodiversity strategy. While environmental due diligence is gradually improving, a lack of insight into value chains continues to hinder effective biodiversity management. Several companies note that strengthening due diligence will be a key focus in the coming years. To effectively address biodiversity risks, companies will need to adopt a forward-looking approach that recognises its growing material importance.

Several companies in the food and beverage sector are already developing and implementing holistic strategies to enhance climate change mitigation and adaptation while minimising land-use change, water consumption, and pollution. This maturity could be due to the sector’s inherent exposure to the direct impacts of biodiversity loss. Given that its operations and supply chains rely heavily on agricultural production and natural resources, it is likely to experience the effects of declining ecosystem health earlier and more visibly than extractives and pharmaceuticals. For instance, reductions in crop yields, soil degradation and the loss of pollinators immediately disrupt supply security and profitability. This therefore incentivises food and beverage companies to integrate biodiversity into their strategies and business models. This is an assumption, however, and has not been researched or validated within the scope of this paper.

Determining impacts, dependencies, risks and opportunities

Impacts on biodiversity are assessed by 29 out of 30 companies. Several companies include their value chains in their assessments. Dependencies, however, are assessed and disclosed by only 20 out of 30 companies, even if those companies identify biodiversity as a material topic. This confirms that dependency assessments are still less mature than impact assessments.²⁷ While companies are generally required to only disclose material IROs in their annual reports, we aim to go beyond CSRD reporting by questioning their next steps. We find that food and beverage companies in the scope of the benchmark outperform the other two sectors in disclosing biodiversity dependencies, because they are transparent in their reporting of the dependencies and frameworks they use, for example TNFD’s LEAP approach.

Furthermore, food and beverage companies perform significantly better in assessing biodiversity physical, transition and systemic risk across their own operations and value chains, with an average score of 53%, compared with 25% and 26% of pharmaceuticals and extractives, respectively. While some companies identify biodiversity physical risk, few assess transition or systemic risk. Only 12 of the 30 companies (40%) quantify physical risk, usually through scenario or financial risk analyses related to climate change-driven biodiversity loss.

Table 2 | Examples of physical, transition and systemic risk identified by companies in the scope of the benchmark

	Food and beverage	Extractives	Pharmaceuticals
Physical risk	Water scarcity affecting beverage production plants	Hurricanes damaging offshore platforms Rising sea levels threatening coastal infrastructure Water stress impacting on mining operations (e.g. copper or lithium mines)	Extreme heat waves disrupting temperature-controlled supply chains (cold chain failures) Climate-linked spread of infectious diseases increasing demand unpredictably (supply-demand mismatch)
Transition risk	Stricter agricultural emissions regulations increasing costs (e.g. methane reduction requirements for dairy supply chains) Carbon pricing making energy-intensive processing more expensive Mandatory disclosure rules on sourcing (e.g. deforestation-free supply chain laws)	Rapid energy transition lowering demand for oil and coal, leading to stranded assets Emission caps or carbon pricing reducing profitability Shifts towards circular economy reducing demand for virgin materials	Regulations on waste management for active pharmaceutical ingredients (APIs) tightening compliance costs Investor pressure to disclose climate-related risks
Systemic risk	Global food price volatility causing inflationary pressure and affecting consumer demand Widespread soil degradation reducing global agricultural productivity over decades Interconnected supply chain collapse during pandemics or geopolitical conflicts	Price shocks in energy markets leading to global economic instability Regulatory shifts causing entire business models to become obsolete (e.g. bans on internal combustion engines) Investor divestment campaigns reducing access to capital	Global health crises (e.g. pandemics) overwhelming supply and distribution systems Antibiotic resistance rising due to global misuse, undermining entire therapeutic classes Economic crises reducing healthcare spending and delaying R&D investments

Table 3 | Examples of opportunities identified by companies in the scope of this benchmark

Opportunities	Sustainable agriculture to restore and regenerate soil, and improve productivity Product innovation to respond to changing customer demand and access to new markets Collaborate with stakeholders to reduce waste and improve circularity Access to nature-related green funds	Contribute to the energy transition Develop new markets linked to the circular economy Resource efficiency, particularly energy and water consumption, providing economic benefits Stakeholder engagement, stakeholder trust and learning from local traditional knowledge	Contribute to international goals by reducing negative impacts, e.g. scaling recycled wastewater Innovate production processes to enhance natural resource efficiency and minimise environmental impact Eco-design of product packaging to improve circularity New business models in the agricultural value chain due to changed climate conditions
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To truly understand how companies consider biodiversity, we examined to what extent company boards discuss their biodiversity impacts, dependencies, risks and opportunities. We found that five out of 30 (17%) companies discuss this with their boards in relation to their own operations, and 12 companies (40%) also discuss these aspects regarding their value chains. Danone, Carrefour, Eni Group, Novo Nordisk and Sanofi perform well – their boards discuss the impacts, dependencies, risks and opportunities and how they can implement biodiversity transition plans. Still, we see that eight companies (27%) do not disclose that board discussions related to biodiversity take place.

Transition plans

Based on their IRO assessments and consultations, companies are encouraged to develop biodiversity transition plans aligned with SBTN guidelines, to halt and reverse biodiversity loss by 2030. So far, 15 out of 30 companies (50%) have formulated a transition plan that covers at least one high-impact commodity or production process. Food and beverage companies are actively assessing and addressing high-impact value chains including coffee, cocoa, palm oil, sugar cane, soy and wood fibre, with the goal of eliminating deforestation and land conversion. Carrefour is taking action to combat deforestation

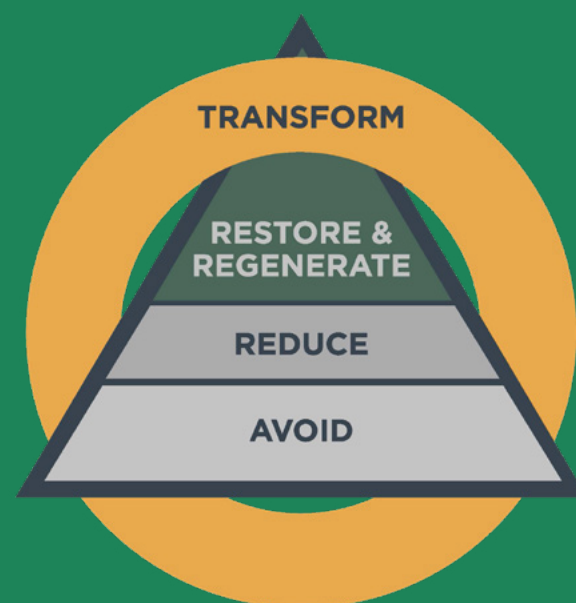
by restricting the sourcing of at-risk raw materials and by setting specific objectives and action plans for each. A dedicated Forest Committee, chaired by members of the Executive Committee, oversees these initiatives and advises on priorities and project funding. Additionally, Carrefour is working to preserve fishery resources through sustainable fishing practices and to promote more responsible textile production chains to reduce environmental impact.

We see other companies working to reduce their impact on water and climate by promoting and supporting regenerative agriculture practices. Extractives are prioritising site-level biodiversity management, focusing on issues such as pollution and invasive alien species control. They often implement plans to protect native habitats near project sites and restore degraded ecosystems through forest regeneration and conservation of local flora and fauna. For example, Eni implements an effective biodiversity and ecosystem management model, which aligns with the strategic goals and targets of the Convention on Biological Diversity (CBD) and takes into account ecological sensitivities and regulatory regimes at sites. Pharmaceutical companies incorporate environmental protection into their strategies, addressing climate change alongside broader environmental issues

GOOD PRACTICE

JDE PEET'S TRANSITION PLAN²⁸

JDE Peet's has formulated a transition plan, which recognises that the close interconnection between coffee supply chains and natural habitats could lead to nature-related risks and compromise business continuity and growth if unaddressed. By adopting the LEAP framework in its transition plan, JDE Peet's structured its approach and developed four scenarios – one where the company continues with business as usual, and one where the curve of biodiversity loss is bent – which proved to be invaluable in identifying risks and opportunities specific to their regional activities. JDE Peet's aligns with the AR3T framework developed by the Science Based Targets Network (SBTN). This framework focuses on avoiding, reducing, restoring and regenerating its impact. Additionally, the framework incorporates transformative action to drive systemic change.



Picture source: Science Based Targets Network²⁹



such as water use, waste and pollution. Their efforts often include responsible waste management, circular economy initiatives, and commitments to responsible sourcing. Novo Nordisk and AstraZeneca are prioritising water stewardship by working with suppliers to enhance water efficiency across their supply chains.

Material sites and the value chain

Material sites have been identified by 19 out of 30 companies (63%). Of these 19 companies, six have also identified material sites for the value chain, though none discloses these locations in their annual report. Four out of 30 companies adequately consider location-specific impacts on biodiversity-sensitive areas in their value chains. This was done by mapping high-impact commodities and country of origin. This is important because biodiversity loss and impacts mostly occur locally and such effects cannot simply be replaced by interventions in other locations. Therefore, businesses must assess and understand their site-specific impacts to implement location-specific measures.

In 2025, 12 out of 30 companies (40%) include consultations with affected communities and holders of Indigenous and local knowledge to avoid negative impacts on biodiversity and local livelihoods. Many others indicate they will expand such engagement, for instance through developing biodiversity action plans. However, it remains unclear whether communities are actively involved in

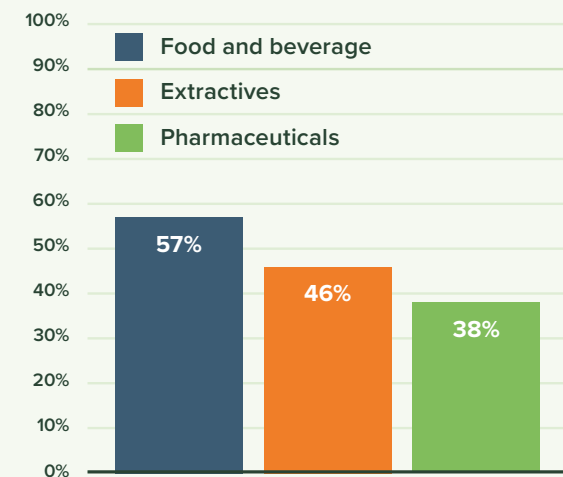
shaping these plans or merely consulted after development. Examples of good practice include JDE Peet's, which collaborates with farming communities in Honduras and Vietnam to integrate local and Indigenous knowledge into regenerative agriculture, and aperam, which engages rural communities in Brazil through continuous dialogue and joint mitigation measures at its BioEnergia site.

Public commitment and advocacy

Most companies demonstrate public commitment by participating in biodiversity initiatives or developing their own programmes. Twelve companies are vocal about their advocacy and lobbying on biodiversity and sustainability, particularly within the food and beverage sector. Examples include Ahold Delhaize's role as a founding member of the SAI Regenerating Together Programme, and Heineken's collaboration with industry peers and NGOs such as WWF to address shared environmental challenges. Leaps by Bayer channels venture investments into reducing the environmental impact of agriculture, while Merck advances research through open innovation grants and academic partnerships. TotalEnergies promotes biodiversity through educational and research initiatives, sharing environmental data via the Global Biodiversity Information Facility (GBIF). Glencore contributes as a founding member of the World Economic Forum's Circular Economy partnership.

2.2 POLICY

Graph 3 | Average sector score on policy

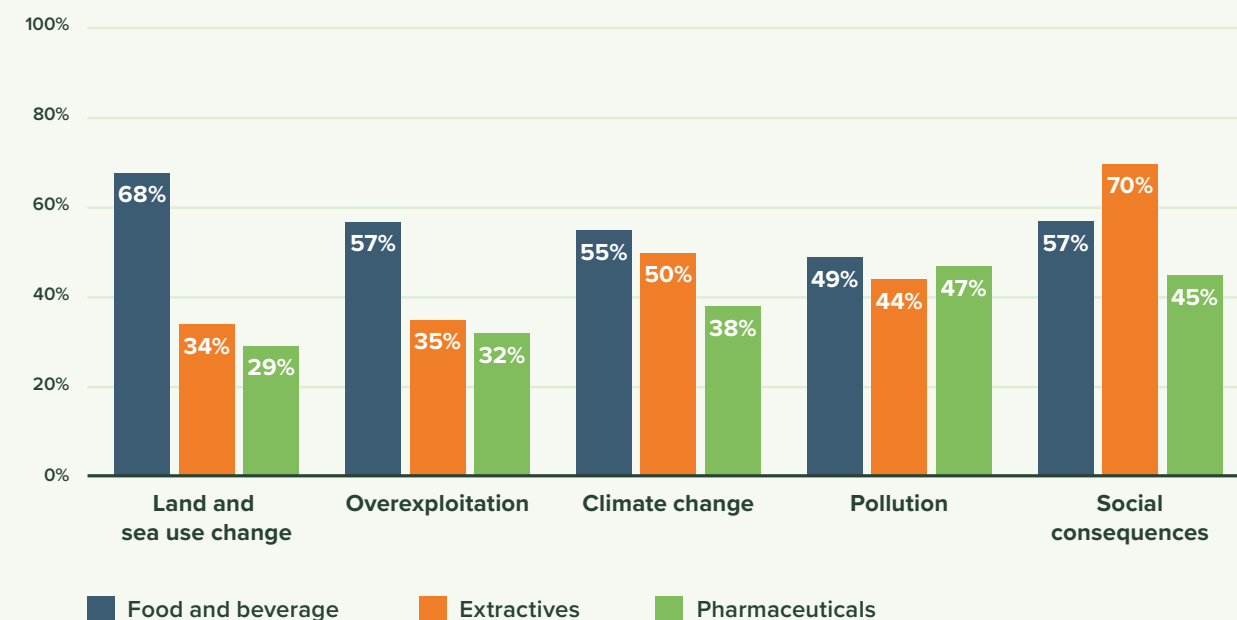


We expect companies to have policies in place that address each of the biodiversity loss drivers.

- Policies should be well informed, taking into account relevant guidelines and frameworks.
- Policies should explicitly address the relevant risks and impacts and describe their approach following the mitigation hierarchy.
- Policies should address the value chain.
- Policies should address the social consequences of biodiversity.
- These should be official policy documents, signed off by the board and include a date and scope, to ensure they are anchored within the organisation.

Detailed information can be found in the good practice guideline of this section

Graph 4 | Scores on policy elements



GOOD PRACTICE GUIDELINE

Once companies have identified their biodiversity impacts, dependencies, risks and opportunities, the next step is to translate these insights into a clear and actionable policy framework. A formal biodiversity policy demonstrates a company's commitment to protecting and restoring nature, addressing impacts of all five drivers of biodiversity loss across the entire value chain. The policy will serve as the foundation of a mature biodiversity strategy – one that not only mitigates risks but also creates long-term value through resilience and sustainable resource use.

Next, we outline the key pillars that VBDO believes underpin a strong and effective biodiversity policy.

Well informed by guidelines and frameworks

Best practice policies should explicitly reference the standards and frameworks used to develop and guide the policy, such as the Kunming–Montreal Global Biodiversity Framework and its 23 targets, the Taskforce on Nature-related Financial Disclosures (TNFD) guidance, the EU Biodiversity Strategy for 2030, the Science Based Targets Network (SBTN), and the Corporate Sustainabili-

ty Reporting Directive (CSRD) requirements. Additionally, reference can be made to sector-specific standards such as FSC, MSC for deforestation-free sourcing, or frameworks such as the IRMA Standard for Responsible Mining and the Responsible Minerals Initiative (RMI) guidance for supply chain due diligence. The policy should clearly describe how these standards inform the company's approach.

Mitigation hierarchy

Risk and impact management should be in line with the mitigation hierarchy, as reflected in internationally recognised frameworks such as the IFC Performance Standard 6³⁰, and aligned with guidance from the Convention on Biological Diversity. The first step in the policy is to avoid activities that contribute to irreversible biodiversity loss, especially in biodiversity-sensitive areas such as World Heritage Sites or high biodiversity value areas. We look for mitigation measures for minimising unavoidable impacts, for example through sustainable land management, pollution prevention or bycatch reduction. We also analyse how companies disclose their plans to restore degraded habitats where impacts cannot be avoided or minimised.



THE MITIGATION HIERARCHY

The mitigation hierarchy^{31, 32} is a conceptual framework for mitigating biodiversity impacts. The initial stage of any activity involves applying the mitigation hierarchy of avoidance, minimisation, restoration or rehabilitation, and offsetting. As a first step, companies should seek to avoid impacts on ecosystems and species, especially those that cannot easily recover. One example is to include voluntary exclusion zones or to use green lights on offshore oil/gas production platforms, to avoid impacts on nocturnally migrating birds. Avoidance is the most effective and most certain mitigation measure. To achieve effective avoidance, biodiversity should be considered in the early stages of a project. The next step on the hierarchy is minimisation. Minimisation is reducing the impacts that cannot be completely avoided.

Effective minimisation can eliminate negative impacts such as regenerative agriculture to reduce soil degradation, reducing water consumption to ensure water availability for local communities, and decarbonising the value chain. If impacts do occur, measures can be taken to improve degraded ecosystems. Restoration returns an area to the ecosystem that was present before the impacts, whereas rehabilitation only restores basic ecological functions and/or ecosystem services – such as

planting trees to stabilise bare soil. Restoration or rehabilitation are frequently needed towards the end of a project's life cycle but may be possible in some areas during operation.

Collectively, avoidance, minimisation and restoration or rehabilitation reduce the impacts that a project has on biodiversity. However, additional steps might be required to achieve overall no net loss or net positive impact on biodiversity. Biodiversity offsets aim to compensate for residual negative impacts after mitigation measures have been put in place. For example, reforestation is a form of offsetting. However, offsets are complex, and their quality should be carefully considered. Offsetting is often associated with biodiversity credits. This is a system that assigns a value to a habitat, plant or animal, turning them into 'credits' or 'units' that can be bought or sold, thereby creating a financial incentive to conserve natural assets elsewhere. The market for biodiversity credits is still developing,³³ and an overarching observation from critics is the steady march away from environmental and climate regulation towards market-based instruments such as carbon and biodiversity offsets, which only serve to perpetuate each other's pitfalls. Biodiversity offsets are only appropriate for projects which have rigorously applied the mitigation hierarchy framework, a widely accepted approach for biodiversity conservation.³⁴

The value chain

Biodiversity policies should encompass companies' own operations as well as their value chains, both upstream and downstream. Companies can also develop policies aimed at mitigating supply chain impact, such as responsible procurement policies or supplier codes of conduct. Being transparent and clear on expectations with suppliers facilitates a broader shift towards biodiversity protection. Including the value chain is particularly important, as this is often where the greatest impacts occur, for example through extracting raw materials, processing goods, and using and disposing products.

To strengthen accountability and traceability, companies can look to established chain of custody systems that verify responsible sourcing across sectors. For instance, the Forest Stewardship Council (FSC) ensures timber and forest products come from responsibly managed forests, while the Marine Stewardship Council (MSC) provides full traceability for seafood sourced from certified sustainable fisheries. The Fairtrade Trader Standard integrates social, economic and environmental safeguards throughout commodity supply chains. In the mining sector, the Initiative for Responsible Mining Assurance (IRMA) offers a rigorous third-party certified Chain of Custody Standard, which links responsibly mined materials to downstream buyers. Strengthening traceability through such systems helps companies translate policy commitments into tangible supply chain accountability and demonstrate credible progress towards biodiversity protection. It also enables greater visibility of nature-related impacts and dependencies, meaning companies can better assess and address biodiversity risks across their value chains.

Addressing social consequences of biodiversity impacts

Biodiversity loss drivers, human rights and business activities are strongly interconnected. Indigenous Peoples, local communities and other affected rightsholders are often disproportionately impacted, as their cultural identities, livelihoods and survival depend on healthy ecosystems. For businesses, this interconnection creates both risks and responsibilities. Failing to address biodiversity impacts can contribute to human rights violations, reputational damage and legal liabilities, while proactive stewardship of nature helps realise and protect human rights.

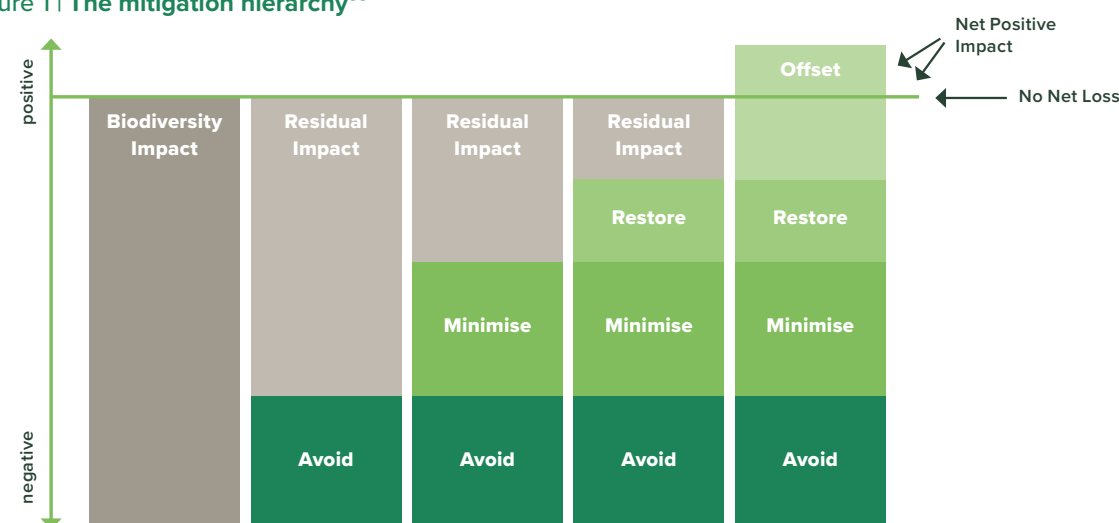


Companies should therefore consider the potential social impacts of biodiversity loss within their policies and practices. This includes establishing accessible and effective grievance redress mechanisms, in line with the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights,³⁶ to ensure affected communities raise and resolve concerns. In addition, businesses must respect the right to free, prior and informed consent (FPIC) of Indigenous Peoples, a binding principle under international human rights law that safeguards their right to self-determination and participation in decisions affecting their lands, territories and resources.³⁷ Such rights-based approaches should be clearly reflected in corporate biodiversity and human rights policies.

Formalised and approved (board approval)

The biodiversity policy should be formally approved by the board of directors or equivalent highest governance body to signal a clear commitment from the organisation. Board-level approval ensures biodiversity and sustainability are treated as strategic priorities, integrated into overall business governance, and aligned with the company's long-term goals and risk management. It also increases accountability and reinforces the expectation that the policy will be implemented effectively across all levels of the business. The company must assign clear accountability for implementation to senior management, with oversight mechanisms such as a sustainability committee. Without formal endorsement from the board, policies may lack the authority, visibility and resources for driving meaningful action.

Figure 1 | The mitigation hierarchy³⁵



POLICY RESULTS

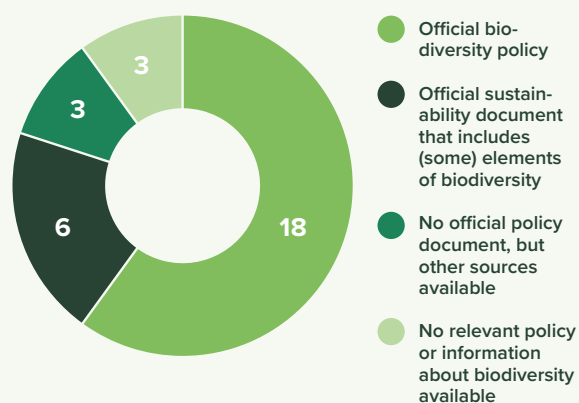
Overall

In evaluating biodiversity policies, food and beverage companies within the benchmark achieve an average score of 57%, followed by extractives at 43% and pharmaceuticals at 37%. The assessment examined whether companies have established policies that sufficiently address the biodiversity loss drivers. Overall, the variation in policy scope and quality highlights distinct sectoral approaches to biodiversity, which we explore in the following section.

We observe great differences when it comes to the policies that companies publish.

- Some companies have specific biodiversity policies. We view policies as official policy documents when they include a date and scope and are signed off by the board.
- Most companies have official policy documents that are not explicitly about biodiversity but address (at least one of) the biodiversity loss drivers.
- Several companies have only addressed biodiversity in their annual reports or in other sources. This information is not published as part of an official policy, which has implications for implementation. This includes web-pages or sources that describe a company's approach to mitigating biodiversity, for example impact reports. It is often unclear who has oversight and whether the topic is discussed throughout the organisation and by the board.

Graph 5 | How biodiversity is incorporated in policies



- There are companies that have no biodiversity policies and do not provide sufficient information on biodiversity management in their annual reports.

Policies provide a clear framework to support the long-term strategy and to make sustainability ambition actionable. They help sustainability expectations be widely embraced across the organisation, rather than fragmented across departments.

We see companies increasingly engaging with their suppliers on sustainability topics. Several companies have a Supplier Code of Conduct, which addresses biodiversity topics in the supply chain. This is essential to mitigate risks and to guarantee long-term supply security. Setting clear expectations for suppliers solidifies commitment to biodiversity and provides concrete frameworks for action.

Land and sea use change

For policies on land and sea use change, food and beverage companies outperform companies in extractives and pharmaceuticals, respectively scoring 68%, 33% and 29% of the total points. We see considerable differences between and within sectors. For example, half of the pharmaceuticals do not disclose any type of policy on land and sea use change, while food and beverage companies such as Unilever and Danone have very elaborate policies on this driver.

What stands out is that there are not always location-specific measures to limit company contribution to this driver, nor is there a description of how companies seek to mitigate harm at sites near biodiversity-sensitive areas. While companies frequently mention general biodiversity goals, for instance focusing on reducing their environmental footprint, they often do not describe how they will address differences between sites. This shows that companies currently fail to link their biodiversity policies to locations where their operations or suppliers impact on biodiversity and do insufficiently explain the steps they are taking at those sites to reduce or prevent biodiversity harm.

Overall, companies predominantly focus on their own operations, with many leaving out their value chains. There is ample room for improvement here, as a significant portion of the impact can be traced back to a company's value chain.

Overexploitation

While 80% of the companies in the benchmark identify a form of overexploitation as material, their policies do not yet represent that. The food and beverage sector scores 57%, but the other sectors score 34% and 32% of the total points respectively. Therefore, while companies are aware of the materiality of (over)exploitation, there is significant room to strengthen and expand policies on this topic. They rarely refer to exploitation, but many do disclose in their annual reports that they adhere to location-specific water management practices and conduct risk assessments in water-stressed areas, yet these commitments are often not clearly reflected in formal policy documents.

Climate change

Despite 90% of companies identifying climate change as material to their business, they have not finalised policies on this driver. Most know that climate change affects them through risks such as drought, extreme weather or regulation and therefore list it as a material topic in their sustainability reports. Companies focus on minimising climate change by reducing greenhouse gas emissions and improving energy efficiency. We see opportunity for companies to further address the value chain and to implement climate change policies that also take suppliers in scope.

Pollution

Interestingly, scores for policies on pollution lie closer together across the three sectors. Compared to other

biodiversity drivers, pharmaceutical companies perform relatively better in this area. We assume this is the effect of the sector's stronger regulatory focus and operational dependence on strict pollution control. For example, UCB has published an Environmental Sustainability Policy, which addresses pollution prevention and reduction throughout the medicine life cycle. This also highlights the broader importance of avoiding and limiting pollution as a key driver of biodiversity loss, particularly for companies whose manufacturing processes involve chemical use, drainage, or waste emissions. Despite this, the overall moderate scores indicate that while companies are demonstrating awareness and commitment, this needs to be translated into comprehensive, measurable and site-specific pollution prevention policies.

Invasive alien species

Few companies have policies in place for invasive alien species. Pharmaceuticals scores 0% on this driver. Food and beverage scores only 2%. We found that Unilever has included a statement in its Sustainable Agriculture Principles 2024 that it aims to avoid introducing invasive alien species. Extractives scores 7%. Repsol included a general statement in their policy about paying attention to the introduction of invasive alien species. TotalEnergies has a biodiversity action plan which addresses invasive species and seeks to keep this under control at (some) of its sites.³⁸ Change is gradually taking place, but there is much to do. Please note that this biodiversity loss driver is not included in the companies' scores.

GOOD PRACTICE

GRIFOLS' HUMAN RIGHTS POLICY³⁹

Grifols provides a strong example of how companies can link human rights and biodiversity loss drivers within their environmental strategies. Grifols explicitly recognises the interdependence between healthy ecosystems and fundamental human rights such as access to life, health, food, water and sanitation. The company has implemented measures to promote the sustainable use of resources and reduce emissions that contribute to climate change, thereby supporting both environmental protection and community wellbeing. Grifols also has

a special focus on water-scarce regions, where manufacturing use could otherwise affect local availability. By integrating human rights considerations into its biodiversity and resource management policies, Grifols demonstrates how companies can address environmental impacts while simultaneously safeguarding the rights of communities. The policy is informed by international agreements and standards, including UNESCO's Universal Declaration on Bioethics and Human Rights. The policy also includes an official scope and date of approval by Grifols' board of directors.

Addressing social consequences of biodiversity impacts.

On this policy aspect, extractives score best with an average of 70%, followed by food and beverage with 57% and pharmaceuticals with 45%. However, we also see great differences between industry peers, as nine companies do not address this topic at all.



Over the three sectors, we see that 21 out of 30 companies (70%) address social consequences of biodiversity impacts. Several companies are implementing free, prior and informed consent (FPIC). This is the case for eight out of 10 extractives companies. For food and beverage, this is seven out of 10. FPIC is only the case for three out of 10 pharmaceuticals. Grievance mechanisms are also not always in place. Robust grievance mechanisms are essential to protect the rights of workers and (potentially) affected communities and ensure accountability and responsible business practices. We strongly urge companies to implement grievance mechanisms to handle complaints and facilitate remediation.

Looking for a new symbiosis with nature: Candriam's approach to biodiversity risks



After decades of relying on resource-intensive economic models, the world is facing an environmental crisis of unprecedented scale – what scientists describe as the sixth mass extinction of biodiversity. Preserving biodiversity is fundamental to the survival of ecosystems and humanity alike. Yet, biodiversity remains largely invisible in our economic and financial systems, partly due to its complexity.

The EU's nature-related disclosure requirements and the Kunming–Montreal Global Biodiversity Framework have set ambitious 2030 targets to protect nature. For investors, these developments translate into both transition risks and opportunities – making biodiversity not only an environmental priority but also a material financial issue.

Recognising this urgency, Candriam has developed a comprehensive biodiversity approach that integrates biodiversity risks at the core of its sustainable investment approach.

Candriam's biodiversity model: placing nature at the heart of investment decisions

Our biodiversity model examines two dimensions:

1. Companies' exposure to biodiversity impacts and dependencies – in line with the concept of double materiality.
 - a. We evaluate companies' activities (the "What") and their impacts on biodiversity by analysing physical flows using a Life Cycle Analysis model, coupled with maps of each country's biodiversity

status. When data is unavailable, we use turnover per activity as a proxy. The BIA-GBS framework¹ is central to our approach.

- b. We assess companies' exposure to key biodiversity issues (the "Where") at a localised, asset-based level.

2. Companies' management of biodiversity (the "How"): we evaluate their strategies, performance, targets, and any potential controversies.

These insights feed into our proprietary biodiversity matrix, which assesses whether companies are managing biodiversity appropriately in light of their exposures and impacts. Our analysis focuses on nine key biodiversity themes: Water, Forests, Wildlife, Local Populations, Protected Areas, Pollution, Governance, Strategy, and Restoration.

The specifics of our approach: localised asset-level analysis

Unlike carbon emissions, which can be aggregated into a single metric such as tons of CO₂, biodiversity footprint is inherently spatial and context dependent.

Our approach integrates geospatial data that maps both companies' operations (including the value chain) and local environmental conditions such as water stress or protected areas. This contextualised view lies at the core of our biodiversity risk modelling.

¹ Provided by Carbon4 Finance and CDC Biodiversité

Recent advancements in our model now allow us to translate environmental impacts into monetary terms – assessing how environmental degradation could affect corporate revenues once transition risks materialise. This enables us to address a critical question: *what would be the financial cost if companies were required to compensate for their annual environmental impacts?*

This represents a major step forward in making biodiversity risks financially visible.

Integrating biodiversity into investments

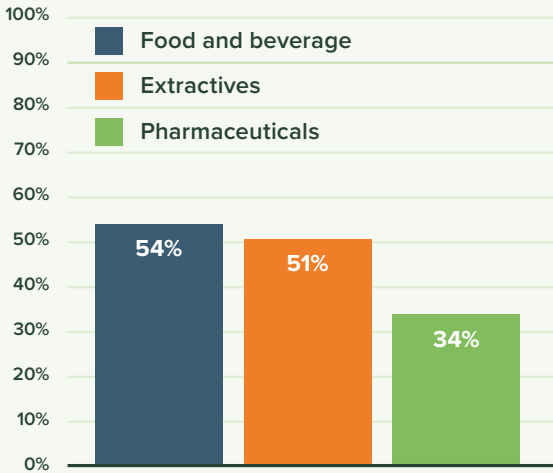
At Candriam, we integrate biodiversity across three levels of our investment processes:

- We exclude sectors or activities that are incompatible with sustainable biodiversity protection – at a basic level, fossil fuels or pesticides; at a more granular level, non-certified palm oil, environmental controversies or lack of a comprehensive biodiversity strategy.
- We integrate biodiversity into ESG analysis, assessing companies' impacts and dependencies and the robustness of their biodiversity management.
- We develop outcome-oriented shareholder engagement strategies supported by quantified biodiversity targets and trajectories to drive measurable improvements.

We believe that financial institutions can be key players in restoring the planet's natural capital. By integrating biodiversity into our investment processes, we anticipate risks and protect our clients' portfolios, but also drive the systemic change for a sustainable future – one where finance and nature thrive in true symbiosis.

2.3 ACTIONS AND IMPLEMENTATION

Graph 6 | Average sector score on actions and implementation

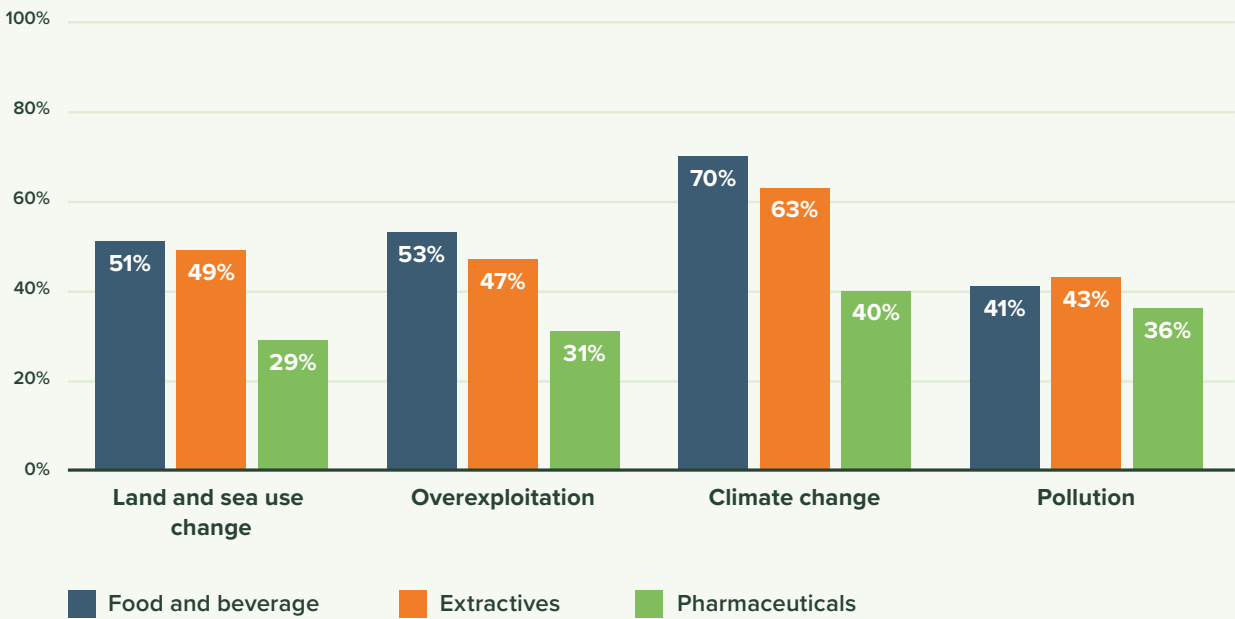


We expect companies' biodiversity actions and implementation to:

- Follow the mitigation hierarchy
- Consider biodiversity-sensitive areas and threatened species
- Incorporate stakeholder collaboration
- Drive systemic change.

Detailed information can be found in the good practice guideline of this section.

Graph 7 | Scores on actions and implementation elements



GOOD PRACTICE GUIDELINE

VBDO believes formal policies to address the biodiversity loss drivers should be translated into effective actions and implementation for managing the risks and impacts identified in their biodiversity assessments.

Mitigation hierarchy

VBDO expects companies' actions to align with the mitigation hierarchy. As part of our assessment, we examine whether companies have clearly defined time frames and locations for their biodiversity actions. Time frames are essential for setting measurable goals, tracking progress, and ensuring accountability over the short, medium and long term. For example, avoiding impacts during breeding seasons or avoiding deforestation in biodiversity-rich areas greatly reduces long-term damage.

Biodiversity-sensitive areas and threatened species

Companies may have significant dependencies and impacts and/or face elevated nature-related risks and opportunities in locations in or near biodiversity-sensitive areas. According to the TNFD, these areas are critical for biodiversity and ecosystem integrity, present high physical water risks, or provide essential ecosystem services, particularly those benefiting Indigenous Peoples and local communities.⁴⁰ Accordingly, if companies identify locations close to biodiversity-sensitive areas, they should prioritise actions to mitigate harm.

Impacts on biodiversity-sensitive areas and threatened species often occur in the supply chain. Without traceability, companies cannot effectively evaluate the biodiversity risks linked to suppliers and production regions. Traceability helps companies avoid sourcing from areas with high conservation concerns or illegal activities. The EU Deforestation Regulation (EUDR) is designed to minimise the import of products linked to deforestation and forest degradation. However, implementation of the EUDR has recently been postponed, which highlights the challenges of aligning global supply chains with biodiversity protection.

To mitigate impacts at biodiversity-sensitive sites, companies can take strategic, operational and collaborative actions. In the oil, gas and alternative energy sector, companies are encouraged to develop biodiversity action plans (BAPs) by Ipieca.⁴¹ Ipieca is the global oil and

gas association for advancing environmental and social performance across the energy transition. BAPs are tailored strategies that outline how biodiversity impacts at project sites will be managed, monitored and mitigated. These plans should be regularly updated based on monitoring outcomes and stakeholder feedback.

Stakeholder collaboration

Stakeholder collaboration is fundamental to effectively mitigate biodiversity loss, because complex and interconnected biodiversity drivers require diverse perspectives, knowledge systems, and expertise. No single entity can address these challenges in isolation. Collaborative efforts involving governments, NGOs, Indigenous communities, scientists and the private sector often result in more innovative and context-specific solutions for tackling multiple drivers of biodiversity loss simultaneously.

VBDO seeks to understand the stakeholder engagement process and how comprehensive and representative the list of consulted stakeholders is. Meaningful stakeholder engagement is a two-way, ongoing process built on mutual good faith and open communication, often beginning before decisions are made. It involves actively seeking input from those likely to be affected and using that feedback to inform business decisions. This engagement is essential throughout the due diligence process, particularly when identifying and mitigating risks related to adverse impacts.⁴² It also ensures relevant stakeholders are given the opportunity to participate in shaping and implementing the engagement activities themselves.

Moreover, companies must consider the social dimensions of their biodiversity actions. Biodiversity conservation and restoration efforts can have far-reaching impacts on communities, both positive and negative. Companies must disclose how their activities affect local populations, particularly vulnerable groups such as Indigenous Peoples, who often have deep cultural and spiritual connections to the land and play a critical role in biodiversity stewardship.

Companies are encouraged to go beyond mitigating harm and actively seek opportunities to generate social co-benefits, such as strengthening local livelihoods, supporting community-led conservation initiatives, and

respecting traditional knowledge. Transparency in both the stakeholder engagement process and the social outcomes of biodiversity actions is key to building trust and achieving long-term, equitable and effective results.

Systemic Change

A systemic approach goes beyond one-off or incremental efforts to improve biodiversity. In a business context, this could include promoting industry-wide environmentally sustainable business practices, educating customers about responsible consumption, or partnering with knowledge institutions or municipalities to create innovative solutions, benefiting both companies and society. With a well-designed approach to biodiversity actions, companies have the potential to drive systemic change, shifting their impacts on the underlying drivers of biodiversity loss and influencing broader societal values and behaviours.

ACTION AND IMPLEMENTATION RESULTS

Overall

Across the five drivers of biodiversity loss, we observe promising initiatives for addressing and mitigating their respective impacts. Generally, companies show great progress on biodiversity roadmaps, including actions with time frames and locations, often placing priority on

mitigation actions for biodiversity-sensitive areas and threatened species. However, many companies disclose very little about the stakeholder engagement process and the impacts or benefits of the actions on affected communities and broader society.

Land and sea use change

For actions and implementation of policies on land and sea use change, companies in the food and beverage sector have an average score of 51%, extractives average 49%, while pharmaceuticals lag with just 29%. Most oil and gas companies address land and sea use change by establishing voluntary exclusion zones to protect ecologically sensitive areas from oil and gas exploration or production. These zones include all sites on the UNESCO World Heritage List and Arctic Sea ice areas.

An important example of land use change is deforestation, driven by the expansion of agricultural land linked to producing commodities such as palm oil, soy, coffee, cacao, barley, maize and sugarcane. We found eight out of 10 companies in the food and beverage sector and Novo Nordisk (from the pharmaceuticals sector) committed to 100% deforestation and land conversion free supply chains of high-impact commodities. This aligns with the objectives of the EU Deforestation Regulation, which mandates that products sold in the EU do not originate

from recently deforested land or have contributed to forest degradation ahead of its official implementation.⁴³

One way to address biodiversity loss drivers in agriculture is to implement regenerative agriculture practices. Agriculture-driven land use change is a major cause of ecosystem destruction,⁴⁴ putting around two million species at risk, especially in tropical regions where biodiversity is highest and conventional farming methods further harm these fragile ecosystems. The Rainforest Alliance promotes regenerative agriculture within a climate-smart framework, tailoring methods to local climate threats such as drought or flooding to build long-term resilience.⁴⁵ Other areas include agroforestry; water management strategies; integrated soil, weed and pest management; and improving crop productivity and incomes for farmers, with a focus on empowering women, who make up 60% of the agricultural workforce in developing countries. Several companies in scope implement practices in the supply chain which focus on redesigning farms to enhance biodiversity and improve productivity and farmers' livelihoods. Five out of 10 companies in the food and beverage sector – an industry heavily reliant on agricultural products – and Bayer (in the pharmaceuticals sector) have implemented initiatives to strengthen ties with local farmers, learn from local and Indigenous knowledge, and empower farmers to adopt best practices. With these efforts, companies are significantly reducing negative impacts of their value chains, while creating benefits for (smallholder) farmers.

Another effort companies have taken is biodiversity conservation. Biodiversity conservation is the protection of species, ecosystems and biodiversity-sensitive areas to maintain the health and resilience of nature. These efforts go beyond mitigating impacts from own operations and aim to make a positive impact on biodiversity and communities. Examples include ArcelorMittal's Biodiversity Conservation Program in Liberia, Grifols' conservation activities in North Carolina, Spain and Germany, the protection and preservation of the Grifols Centenary Forest, and Eramet's Lékédi Biodiversity Foundation.

Overexploitation

Companies are becoming increasingly aware of the impacts associated with the exploitation of natural resources, particularly water. Under this biodiversity loss driver, we mostly encounter water stewardship initiatives. Scores on overexploitation are on average

53% in the food and beverage sector, 47% in extractives and 31% in the pharmaceuticals. Businesses both depend and impact on freshwater resources. When these resources are degraded, it can lead to physical risks for operations, as well as regulatory, reputational and other business risks.⁴⁶ The WWF Water Risk Filter framework or the WRI Aqueduct Water Risk framework can help companies understand operational risks and identify sites in water-stressed areas. Many companies in the benchmark consistently use water risk assessment tools to identify local challenges and implement appropriate measures to reduce impacts. Key water-saving actions include process optimisation, maintenance interventions, adopting new technologies, and treating or recycling wastewater. Importantly, most companies identified sites in water-stressed areas and are directing their resources to improve water availability. This not only minimises regulatory and legal risks, such as the potential loss of a licence to operate, but also prevents negative impacts on communities, and safeguards fragile ecosystems. For example, AB InBev works with local communities, including farmers, in its watershed work. Heineken focuses on water efficiency and long-term restoration of priority watersheds, especially in water-stressed areas.

Exploitation refers to the harvesting of plants and animals at rates that are faster than their populations can recover from. Examples include overfishing and unsustainable logging. To ensure products sold do not contribute to overfishing, Ahold Delhaize and Carrefour are promoting sustainable fishing and aquaculture in the value chain. Suppliers must comply with certification schemes for seafood, including the Global Sustainable Seafood Initiative (GSSI) standards or the Aquaculture Stewardship Council (ASC) standards, which include controls relevant to direct exploitation of marine resources, habitats and conversion of marine ecosystems (sea use change), and the environmental impacts associated with aquaculture feed, for example deforestation or unsustainable fishing practices.

Additionally, many pharmaceutical companies depend and impact on the horseshoe crab. Horseshoe crab blood is used for endotoxin testing to ensure patient safety of injectable medicines. Horseshoe crabs are found in limited areas and face pressures including fishing, pollution, habitat loss, storms and increased industrial use, which are leading to their decline. To alleviate pressure on the species, AstraZeneca is implementing a





strategy aligned with the SBTN action framework to adopt more efficient water testing methods and transitioning to synthetic alternatives where permitted. It is also collaborating with industry and local groups to promote these alternatives and support species recovery.

Climate change

The three sectors all score best on their actions and implementation for mitigating climate change. The food and beverage sector leads with an average score of 70%. The extractives sector scores an average 63%, followed by pharmaceuticals, with an average 58%.

Twenty-eight out of 30 companies in scope are already implementing climate change mitigation plans aligned with the goals of the Paris Agreement. Decarbonisation levers include enhancing energy efficiency, shifting to renewable energy, electrifying transportation fleets, and implementing technological innovations that are essential for reducing emissions and removing carbon from the atmosphere. Transition plans often involve the value chain, necessitating collaboration with suppliers to reduce their greenhouse gas emissions. For example, AstraZeneca's Scope 3 decarbonisation strategies include partnering with manufacturers of active pharmaceutical ingredients (APIs), encouraging suppliers to adopt science-based targets, and driving product innovation.

Pollution

Companies score similarly for their actions and implementation on pollution. This category encompasses air, soil and water pollution, plastic waste, and landfill disposal. While some companies address pollution as part of their integrated agricultural innovations or environmental management systems, reporting on this topic is often limited.

Plastic pollution is a global problem. The UN Environmental Programme (UNEP) has found that “every year 19–23 million tonnes of plastic waste leaks into aquatic ecosystems, polluting lakes, rivers and seas”.⁴⁷ Also, plastic pollution from food and beverage packaging contaminates our food with microplastics and chemicals, which impacts on human health and the environment.⁴⁸ Most companies in scope are working towards reducing the use of plastics in packaging and increasing packaging recyclability.

VBDO encourages companies to develop and implement actionable plans to address pollution at every existing and new project site. Five out of 10 companies in the extrac-

tives sector, and AstraZeneca and Sanofi (pharmaceuticals), already require sites to assess biodiversity context and develop action plans tailored to the local environmental context, outlining how biodiversity impacts at project sites will be managed, monitored and mitigated. Companies in this sector often determine accidental spills as a major concern for environmental pollution. Some report having emergency response plans in place. However, not all companies have a strong focus on prevention.

Invasive alien species

Although mitigation activities related to invasive alien species do not count towards the final score of this year's benchmark, some companies in the extractives industry have demonstrated commendable actions aligned with the mitigation hierarchy. Shell implemented an ecological restoration programme aimed at preserving native species. TotalEnergies, Eni Group, Rio Tinto and Repsol explicitly take mitigation of invasive alien species into account in their management models, even though only TotalEnergies determine invasive alien species material to their company.

Corbion and AstraZeneca reported that their actions are in line with the Cartagena Protocol on Biosafety, which ensures the safe handling, transport and use of living modified organisms (LMOs) resulting from modern biotechnology. While some companies in scope mention impacts and risks associated with introducing invasive alien species, there is often insufficient information in their annual or sustainability reports.

Systemic change

Companies can undertake additional conservation actions beyond the mitigation hierarchy which have positive effects on biodiversity but are difficult to quantify: advocacy, education and research, capacity building, training of farmers, and engagement with local stakeholders.⁴⁹ Sixteen out of 30 companies have implemented initiatives aimed at driving systemic change by promoting environmental stewardship and changing social behaviours. For example, Grifols, in collaboration with the RIVUS Foundation, invests in research, education and volunteer initiatives to promote the conservation and preservation of river basins in Spain. Grifols supports the foundation's environmental awareness programmes in schools.

GOOD PRACTICES

TOTALENERGIES' BIODIVERSITY ACTION PLANS⁵⁰

TotalEnergies has biodiversity action plans in place at material sites and new projects. They seek mitigation and restoration and take action by addressing deforestation, land degradation and sensitive and invasive alien species, in collaboration with local stakeholders and NGOs. In 2024, TotalEnergies had three large-scale projects aimed at having a biodiversity net gain target. Through these action plans, it collaborates with NGOs and other sectors to learn from their expertise on biodiversity net gain. TotalEnergies sought government involvement and developed its biodiversity action plan in line with the International Finance Corporation (IFC) performance standards.

CARREFOUR'S COMMODITY ZOOM PRINCIPLE⁵¹

In the food and beverage sector, impacts and dependencies on biodiversity usually occur in the upstream value chain. Companies identify high-impact commodities, such as palm oil, soy, coffee, tea, cacao, barley, maize or sugarcane, that are linked to deforestation and pollution. To understand and mitigate these impacts, companies must map their supply chains of country of origin and pressure category. Carrefour carried out an in-depth analysis to identify and measure the main impacts of its value chain on biodiversity and to target raw materials and activities. An example of its 'commodity zoom' principle is to calculate regional biodiversity

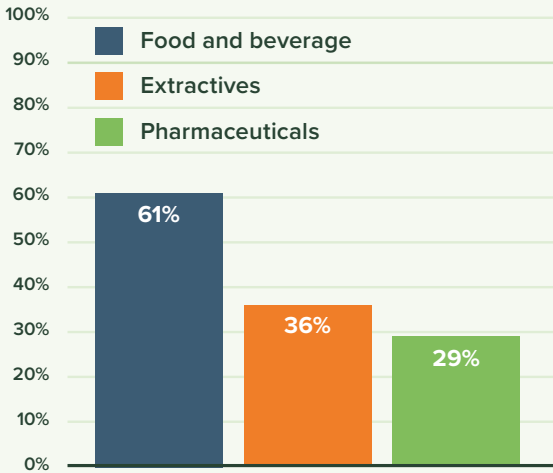
pressure and vulnerability in areas such as environmental integrity and water stress. This allows Carrefour to determine issues at local level and formulate scientific targets and action plans.

ENI GROUP AND INVASIVE ALIEN SPECIES⁵²

Eni Group confirmed its commitment to operating responsibly and promoting continuous improvement in the management of biodiversity and ecosystem services (BES) towards the goal of no net loss or net gain of biodiversity. Its BES management model considers all five direct drivers of biodiversity loss and sets out activities for managing risks and impacts of the company's activities by implementing biodiversity action plans. Eni recognises its potential negative impact via unintentional introduction of invasive alien species either through direct pathways as 'stowaways' on vehicles and vessels, in ballast water and hull fouling, or through indirect pathways related to habitat alteration and degradation. It manages this risk and impact by using indigenous and non-invasive alien species for landscaping and rehabilitation works, and by measuring and monitoring as identified in its environmental and social impact assessment (ESIA) or biodiversity action plan (i.e. ballast water management; hygiene and maintenance protocols for vehicles, vessels and equipment). Eni also partners with NGOs and international institutions, local research institutes and universities, associations, and joint programmes in the energy sector to conserve biodiversity (for example Ipieca, who published guidance on invasive alien species in the energy sector).

2.4 TARGETS AND METRICS

Graph 8 | Average sector scores on targets and metrics

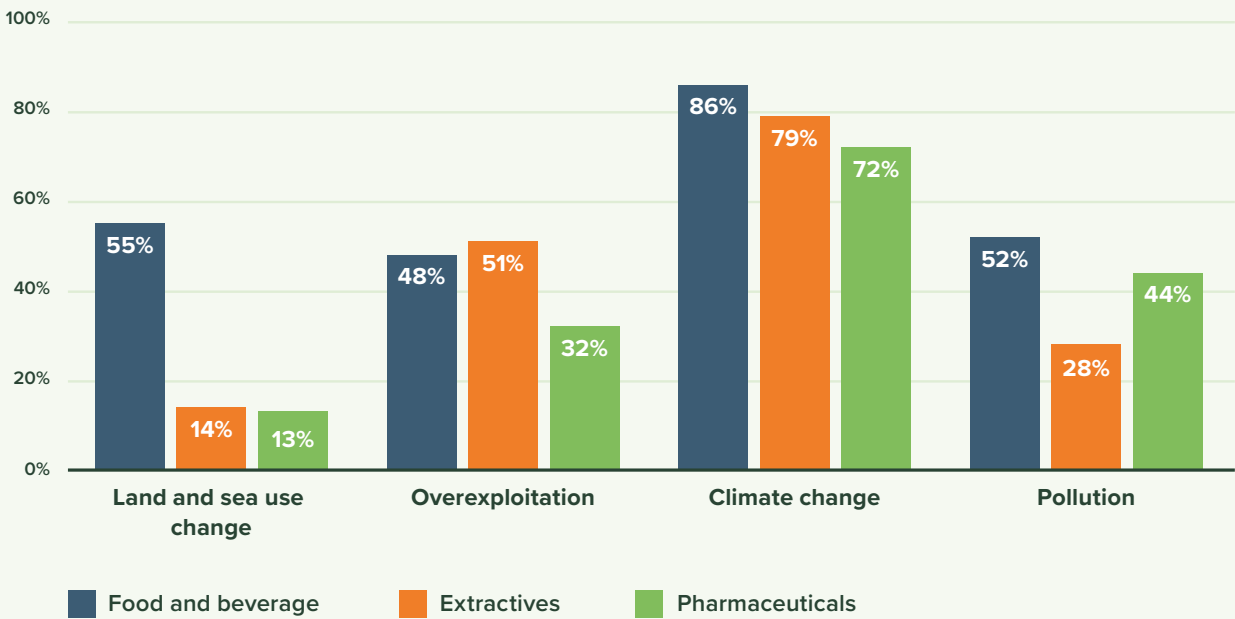


We expect companies to set targets that address the biodiversity loss drivers.

- Targets should consider relevant frameworks and ecological thresholds.
- Targets should include a time frame, baseline value and base year.
- Targets should include data and metrics, and progress should be disclosed.
- Companies should disclose their operating (OpEx) and capital expenditure (CapEx) plans to support these efforts.

Detailed information can be found in the good practice guideline of this section.

Graph 9 | Scores on targets and metrics elements



GOOD PRACTICE GUIDELINE

VBDO expects companies to set biodiversity targets and KPIs and be transparent about their progress. These targets and KPIs may vary significantly depending on the sector. The targets and metrics category builds on previous categories by examining how companies monitor and evaluate the effectiveness of their policies and key actions.

Relevant frameworks and ecological thresholds

Targets should be set based on frameworks such as the GBF, the EU Biodiversity Strategy for 2030, TNFD and the Science Based Targets Initiative (SBTi). Science-based targets are key for staying within ecological limits and avoiding tipping ecosystems into collapse. Detecting and understanding these ecological thresholds – which involves analysing complex data – is crucial for anticipating ecosystem disruptions and enabling timely intervention.^{53, 54} Biodiversity considerations should be incorporated in the environmental impact assessment, including prioritising sites that are critical for biodiversity and for mitigating biodiversity loss. However, it is important to recognise that because biodiversity is complex and context-specific, it is challenging to measure it consistently across regions and sectors. Many metrics are still evolving. As a result, ongoing research and the development of robust, science-based methodologies is needed to improve accuracy, comparability and relevance of biodiversity data. When companies have set their science-based targets, they can be submitted for validation.⁵⁵

Data and metrics

VBDO evaluates whether the targets are defined with clear time frames and geographical scope. Setting one target for a company's entire geographic reach will not lead to the right actions in the right places at the right time. For instance, water-related issues are inherently local. Therefore, targets related to water use must be tailored to local conditions.⁵⁶ It is important for companies to report on performance data and the scientific foundation behind how progress is measured, for transparency and accountability. This clarity supports informed decision-making and allows for timely corrective actions.

Operating Expenditure and Capital Expenditure

To achieve targets such as reducing emissions or implementing water management systems, companies

are encouraged to disclose their operating expenditure (OpEx) and their capital expenditure (CapEx) plans. This demonstrates how their financial investments align with their policy objectives and the transition towards their sustainability goals.

TARGET AND METRIC OUTCOMES

Overall

The food and beverage sector scores notably better in this category than the other sectors, with an average score of 60%. Extractives and pharmaceuticals score an average of 36% and 29%, respectively. These lower scores are largely because many companies in those sectors have not (yet) set targets on land and sea use change, exploitation and pollution.

It is encouraging to see companies establishing science-based targets for biodiversity to halt and reverse biodiversity loss by 2030.⁵⁷ While methodologies and industry standards are still being developed, many companies have expressed their commitment by working on biodiversity roadmaps and partnering with industry peers and researchers.

Land and sea use change

The difference in scores between sectors is greatest for targets on land and sea use change. The food and beverage sector leads the way with an average score of 55%, while extractives and pharmaceuticals average 14% and 13%, respectively. Companies in the food and beverage sector most evidently set targets for deforestation and land conversion free supply chains, including a time frame in line with relevant frameworks. Still, there is much progress to be made. This sector is greatly dependent on agricultural products, and companies in scope are working towards responsible sourcing. Companies in the pharmaceuticals sector may also rely on high-impact commodities within their supply chains, such as agricultural inputs, raw plant-based materials or animal-derived substances. These impacts are often overlooked by the sector, as their reports tend to be focused on the manufacturing or product-use phases, but the sourcing of ingredients and materials can carry substantial environmental risks. In recognising this, many pharmaceutical companies have begun to express commitment to setting formal, science-based targets for biodiversity and nature. Oil, gas and mining companies



recognise they contribute directly to land use change. Some companies have expressed intentions to net zero deforestation, by avoiding biodiversity-sensitive areas or initiating afforestation projects to offset their impacts.

Overexploitation

Extractives scores 51% on average, food and beverage scores 48% on average, while pharmaceuticals scores only 32% on average. Targets addressing exploitation of natural resources commonly focus on reducing water consumption and improving water-use efficiency. These targets are typically supported by quantifiable metrics derived from scientific methodologies. By grounding these metrics in science, companies can more accurately assess their impacts on local water systems and track improvements. Encouragingly, data shows that many companies are performing in line with their targets, proving that their water stewardship actions are effective and yielding meaningful results. Six out of 10 companies in the pharmaceuticals sector have set formal targets for their water use and are showing great progress towards achieving these goals. However, they are often not science-based, which partly explains their low average score compared to other sectors.

Climate change

Targets and metrics for tracking the effectiveness of policies and key actions on climate change obtain the highest score for all three categories. This mirrors the pattern of climate change consistently ranking as the strongest-performing driver. These high scores are largely attributed to widespread and transparent company reporting on their emission reduction targets and metrics, particularly for Scope 1, 2 and 3 emissions. Twenty-five out of 30 companies in scope set SBTi-validated GHG emission reduction targets in line with the Paris Agreement.

Pollution

Scores for targets and metrics related to pollution are similar to those for overexploitation. The food and beverage sector scores 52% on average, pharmaceuticals 44% on average, and extractives 28% on average. Extractives clearly falls behind here, despite their operations being met with considerable pollution.⁵⁸

The food and beverage industry set targets for plastic use and landfill waste. Companies are seeking to reduce plastic use in packaging, reduce the use of virgin

plastics, and increase recyclability. This is in line with the ambitions of achieving a circular economy. Pharmaceutical companies are also focusing on reducing their plastic footprint and minimising waste from production, based on the Kunming–Montreal Global Biodiversity Framework. They are also minimising emissions to air and water and to handling substances of (very) high concern in line with the REACH regulation. While companies in the extractives sector commonly set targets for reducing GHG emissions, they often fall short in adequately addressing other forms of pollution linked to their operations, such as air, soil and water contamination. Noise pollution, water discharge and dust emissions significantly impact on surrounding ecosystems, yet they tend to receive less attention in formal sustainability strategies. These impacts are typically managed within health, safety and environment (HSE) systems, which are said to drive continuous improvement at the site level. However, there is a noticeable lack of formalised targets, clear reporting and alignment with biodiversity-related frameworks. This gap in transparency and strategic focus limits stakeholders' ability to assess how effectively these companies are managing their broader environmental footprint.

Invasive alien species

Notably, none of the companies in scope disclosed targets related to the introduction of invasive alien species in their annual reports. This is likely due to the absence of industry-specific guidance on the matter. While some companies state they adhere to international standards (for example the IMO Ballast Water Management (BWM)

Convention and the Cartagena Protocol) and best practices for managing invasive alien species, these frameworks typically do not mandate establishing company-wide targets. Overall, there is a lack of reporting in this category.

In 2025 the Convention on Biological Diversity (CBD) published an Invasive Alien Species Toolkit for Target 6 of the Kunming–Montreal Global Biodiversity Framework, which was developed under the Secretariat of the CBD by IUCN and members of the Species Survival Commission (SSC)'s Invasive Species Specialist Group (ISSG) with valuable inputs from other members of the CBD's Interagency Liaison Group. The toolkit supports developing actions at the national level for achieving Target 6 – namely, identifying and managing pathways of introduction; preventing introduction and establishments of priority invasive alien species; and eradicating and controlling invasive alien species in priority sites.⁵⁹

The SBTN is also continuously developing and wants to broaden its scope by addressing additional pressures of invasive alien species in the future.⁶⁰ We are hopeful this will advance companies in their journeys to set targets on invasive alien species.

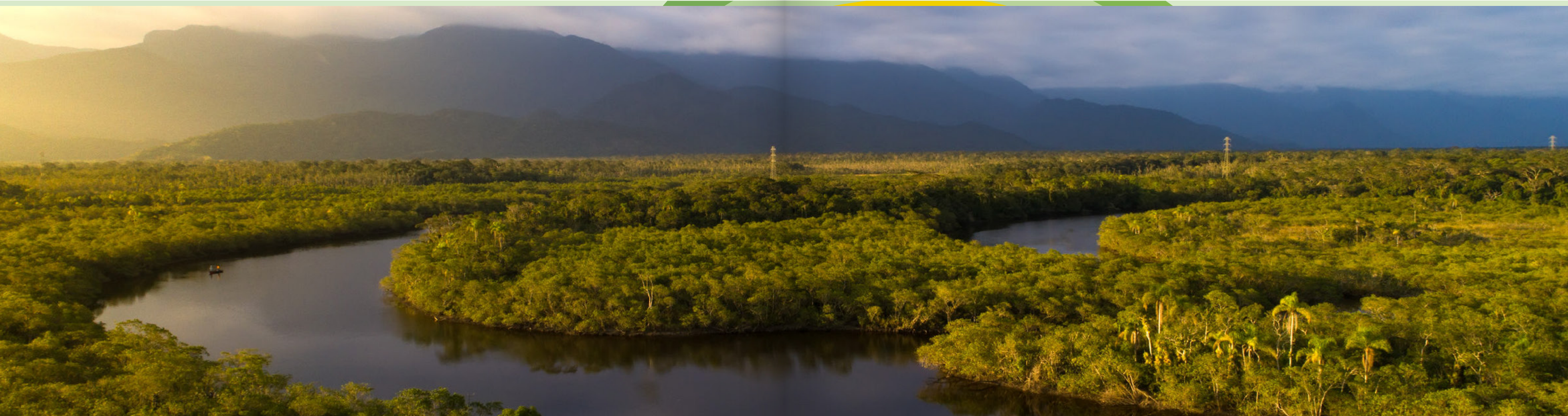
GOOD PRACTICE

ERAMET'S ACT FOR POSITIVE MINING⁶¹

Eramet formulated the Act for Positive Mining roadmap, which is aimed at the 2035 commitment towards a net positive impact on biodiversity. The Act focuses on three pillars: taking care of people, being a trusted partner for nature, and transforming our value chain. It has set three long-term commitments for 2035, including 10 objectives and 26 target metrics for 2024–2026. Each objective formulated at group level is implement-

ed on each site to ensure all teams are committed to the CSR roadmap. The performance of each metric is assessed annually in comparison with an internal intermediate target, according to its achievement rate, on a six-level scale (from 0 to 150%). The action plan is based on international best practices and is aligned with the demands of the Kunming–Montreal Global Biodiversity Framework.

Recommendations



VBDO is pleased to find increasing efforts and attention being brought to biodiversity. Significant steps can still be taken to improve the way business interacts with biodiversity. Based on the results of the first Business & Biodiversity Benchmark 2025, we recommend the following:

To companies

Sustainability teams must break down internal siloes and collaborate across departments (e.g. legal, risk, procurement and operations) to embed biodiversity in their core business processes and in their board reward systems. This should be mirrored externally by engaging suppliers and partners to develop biodiversity goals and share implementation strategies. A connected, cross-functional approach would ensure biodiversity becomes a shared responsibility and unlock greater impact across the value chain. This should also result in setting clear and measurable targets aligned with the Kunming–Montreal Global Biodiversity Framework so that actions contribute to global biodiversity goals. To drive meaningful change, companies should disclose whether progress is in line with the set targets and develop standardised metrics and baselines compatible with TNFD and SBTN methodologies.

Companies are further encouraged to map risks, impacts, opportunities and dependencies across both internal operations and the broader value chain. They should consult with biodiversity experts to connect the dots between their biodiversity work and initiatives. This includes leveraging sector impact and risk analyses and expanding policies. This work should be complemented by a forward-looking perspective on sector trends, considering, for example, how emerging technologies might influence biodiversity risks and opportunities. By linking knowledge with strategic foresight, teams can embed biodiversity into their decision-making processes and drive coordinated action across departments.

Meaningful stakeholder engagement will build crucial knowledge about biodiversity and find opportunities for mitigation. Companies are encouraged to consult with affected communities and holders of Indigenous and local knowledge on biodiversity. This collaborative approach supports the creation of a well-designed biodiversity transition plan with effective and contextually appropriate actions.

To investors

Investors should encourage their investee companies to embed biodiversity into their investment and ESG policies. They should be transparent about their own biodiversity strategies and their expectations for portfolio companies and collaborating partners. Investors should engage in ongoing dialogue to encourage science-based target setting, robust progress reporting, and disclosure of biodiversity impacts and dependencies.

Additionally, investors should highlight the connection between biodiversity loss and financial risks and opportunities so that potential exposure does not go unnoticed. A thorough methodology review will accurately reflect biodiversity risks and opportunities in investment decisions, enabling more informed and responsible capital allocation.

To lawmakers and regulators

Lawmakers and regulators play a critical role in driving biodiversity action by setting clear, ambitious and stable frameworks. We recommend adopting robust legislation, such as the EU Deforestation Regulation (EUDR), and incorporating strong biodiversity requirements within

the Corporate Sustainability Reporting Directive (CSRD). Beyond regulation, authorities should provide practical resources, guidance or platforms to help companies implement effective biodiversity strategies. Clear, long-term policy signals will give companies the confidence and stability for integrating biodiversity into their operations and value chains, aligning investment decisions, and planning for a biodiversity-positive transition.

To civil society

Civil society plays a vital role in supporting and accelerating corporate biodiversity action. We recommend sharing best practices and examples of effective biodiversity strategies and implementation, to help companies learn from proven approaches. Bringing together businesses, communities and government to engage in open, constructive and fact-based dialogue about biodiversity challenges encourages adaptation and continuous improvement. Given that biodiversity metrics are still evolving, civil society must continue researching and developing robust, science-based methodologies to draw accurate, comparable and relevant data for informed decision-making.

Appendix 1 - Benchmark methodology

This benchmark was compiled after desk research and consultation with stakeholders including knowledge partners, government bodies, NGOs and companies, who provided us with relevant feedback for adjusting and developing the benchmark. Consultations took place with 12 stakeholders in 2023 and 2024 and included the following organisations:

- Naturalis Biodiversity Center
- PBL Netherlands Environmental Assessment Agency
- Rainforest Foundation Norway
- Dutch Ministry of Agriculture, Fisheries, Food Security and Nature.

The scope of the benchmark was determined by selecting the three sectors. This was done using the ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) tool to explore which sectors have a high exposure to biodiversity risks. We also considered their dependencies on biodiversity. This resulted in choosing the food and beverage, the extractives (including oil and gas) and the pharmaceuticals sectors. The scope of companies within these sectors was based on the condition that they are publicly listed in Europe. Moreover, we tried to make sure that each company has a peer in the scope, for which we considered market capitalisation and having a similar business.

To assess companies on the Business & Biodiversity Benchmark criteria, we reviewed their annual reports, together with relevant and publicly available documents (e.g. sustainability policies and CDP disclosures). We applied a four-eye principle to ensure all information was adequately covered and to determine the company's score. This score and the data were then returned to the company for feedback. Twenty-three per cent of the companies submitted feedback on the assessments. Where applicable, the feedback was incorporated in the final results.

The overall score reflects the company's performance across the four categories, which were weighted equally (25%). However, the number of attainable points varies by category. Scoring a point in lower-point categories such as strategy and business model or actions and implementation has a greater impact than in higher-point categories such as policy or targets and metrics.

Appendix 2: European legislation and biodiversity frameworks

This section outlines the key frameworks used to underpin the benchmark methodology.

Corporate Sustainability Reporting Directive (CSRD)

Under the CSRD, the European Sustainability Reporting Standard (ESRS) E4 Biodiversity and Ecosystems⁶² requires companies that have identified biodiversity as material to disclose how they assess, manage and mitigate their biodiversity impacts and dependencies. ESRS E4 explicitly highlights the primary drivers of biodiversity loss: climate change, pollution, land and sea use change, direct exploitation and invasive alien species. Companies reporting under ESRS E4 are expected to define measurable targets, disclose transition plans and assess the financial and operational risks associated with biodiversity. As such, ESRS E4 gives significant guidance for embedding biodiversity considerations into corporate strategies, operations and value chains.

It also enables companies to demonstrate transparency and accountability to stakeholders, including investors, regulators and civil society. While companies are starting to report on their environmental impacts, many are still not reporting on biodiversity. Even fewer companies report in full on their dependencies on biodiversity, such as clean water, fertile soils and resilient ecosystems. These critical dependencies often remain underexplored, despite their importance for long-term operational and financial resilience. Moreover, even for companies that have identified biodiversity as a material topic, there is still little insight into the risks, impacts and dependencies for the value chain. VBDO continues to stress that mapping and measuring biodiversity dependencies and impacts is a critical first step towards developing robust and effective strategies. Only after companies map and

measure their dependencies and impacts on biodiversity, also in the value chain, can effective biodiversity strategies be developed and implemented.⁶³

Kunming–Montreal Global Biodiversity Framework (GBF)

The private sector's role in tackling biodiversity challenges has been integrated in international agreements and regulations. The Kunming–Montreal Global Biodiversity Framework (GBF) dedicated, for example, Target 15 to businesses and urges them to assess, disclose and reduce biodiversity risks and negative impacts. The GBF has set ambitious targets to halt and reverse biodiversity loss “to put nature on a path to recovery for the benefit of people and planet by conserving and sustainably using biodiversity and by ensuring the fair and equitable sharing of benefits from the use of genetic resources”.⁶⁴ The GBF also encourages companies and financial institutions to disclose their risks, dependencies and impacts on biodiversity and report on compliance with access and benefit-sharing regulations and measures.⁶⁵

Taskforce on Nature-related Financial Disclosures (TNFD)

The TNFD is a global initiative which was launched in 2021, with final recommendations coming into effect in 2023. It helps companies and financial institutions identify, assess, manage and disclose nature-related risks and opportunities. Through four pillars (Governance, Strategy, Risk & Impact Management, Targets & Metrics), the framework encourages using the LEAP approach to assess exposure and risk across nature realms (land, ocean, freshwater, atmosphere, biodiversity).

Table 4 | LEAP approach⁶⁶

Locate	Evaluate	Assess	Prepare
Map where the business interacts with nature (e.g. production sites, supply chain locations)	Assess the dependencies and impacts on nature (e.g. water use, pollution, land use change)	‘Translate’ those dependencies and impacts into risks and opportunities (physical, transition, systemic)	Integrate the findings into strategy, governance and disclosure (aligned with the TNFD’s four pillars) and respond to nature-related risks and opportunities.

Appendix 3: Drivers of biodiversity loss

The benchmark is structured on the five drivers of biodiversity loss, as outlined by the IPBES.

Land and sea use change

Changes in land and sea use are the largest driver of biodiversity loss globally.⁶⁷ Deforestation, agricultural expansion, urbanisation and coastal development reduce and fragment habitats, destabilising ecosystems and threatening species survival.

Overexploitation

Overexploitation occurs when natural resources are extracted faster than ecosystems can replenish them. Examples include overlogging, overgrazing, overfishing, excessive freshwater withdrawal, and hunting or poaching endangered species. Overexploitation not only threatens species directly but also undermines long-term business resilience by eroding the natural capital on which industries depend.

Climate change

Climate change compounds biodiversity pressures by accelerating species decline and ecosystem degradation. Warming temperatures, ocean acidification, glacial retreat, rising sea levels, wildfires, desertification and droughts disrupt natural habitats and lead to irreversible

shifts. Biodiversity degradation releases carbon stored in ecosystems, further exacerbating global warming, while intact ecosystems play a vital role in climate mitigation and adaptation.

Pollution

Pollution affects biodiversity in multiple ways. This includes air and water pollution from heavy metals, plastics, fertilisers, hazardous chemicals, pesticides and oil spills. Although many companies have environmental protocols in place, these typically address only part of the pollution risks, leaving important gaps. Pollution not only degrades habitats but also poses long-term health risks for humans and wildlife alike.

Invasive alien species

Invasive alien species are non-native organisms which are intentionally or unintentionally introduced into ecosystems and destabilise ecological balance. They outcompete, prey on or bring diseases to native species, altering entire ecosystems. Examples include species introduced through ballast water in ships, or spores and seeds transported via vehicles and trade.



- ¹ www.reuters.com/sustainability/climate-energy/climate-change-pollution-threaten-europes-resources-eu-warns-2025-09-29/
- ² <https://livingplanet.panda.org/>
- ³ www.rijksoverheid.nl/documenten/rapporten/2025/05/27/ipbes-transformative-change-assessment-samenvatting-voor-beleidsmakers
- ⁴ www.cbd.int/gbf
- ⁵ <https://iucncongress2025.org/assembly/motions/motion/132>
- ⁶ www.ipbes.net/glossary/biodiversity
- ⁷ https://files.ipbes.net/ipbes-web-prod-public-files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf
- ⁸ www.cbd.int/gbf/vision
- ⁹ www.sciencedirect.com/science/article/pii/S1478409223000535
- ¹⁰ <https://www.weforum.org/publications/nature-risk-rising-why-the-crisis-engulfing-nature-matters-for-business-and-the-economy/>
- ¹¹ www.pwc.nl/en/topics/blogs/financial-institutions-cannot-escape-biodiversity.html
- ¹² www.pwc.nl/en/topics/blogs/financial-institutions-cannot-escape-biodiversity.html
- ¹³ www.ecb.europa.eu/press/economic-bulletin/articles/2024/html/ecb.ebart202406_02~ae87ac450e.en.html
- ¹⁴ <https://tnfd.global/knowledge-bank/top-10-biodiversity-impact-ranking-of-company-industries/>
- ¹⁵ www.eea.europa.eu/en/europe-environment-2025/main-report
- ¹⁶ www.globalreporting.org/media/jrbntbyv/griwhitepaper-publications.pdf
- ¹⁷ <https://vbdo.nl/wp-content/uploads/2025/06/2506-VBDO-AGM-Engagement-Report-2025-def.pdf>
- ¹⁸ <https://sciencebasedtargetsnetwork.org/wp-content/uploads/2020/09/SBTN-initial-guidance-for-business.pdf>
- ¹⁹ www.weforum.org/publications/nature-risk-rising-why-the-crisis-engulfing-nature-matters-for-business-and-the-economy/
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