

Key Insights on Biodiversity

Utrecht, Dec 4, 2024



Programme

3.00 pm - Opening by Angélique Laskewitz, Executive Director VBDO

3.05 pm - Business & biodiversity: the fundamentals

Maxime Eiselin, Senior Expert Nature-based Solutions, IUCN NL

3.20 pm - Marktupdate PwC

Thijs IJsbrandij, Nature strategy, PwC

3.25 pm - BlackRock's approach to natural capital and biodiversity |

Charlotte Mansson, Head of Sustainable & Transition Solutions, Nordics & Netherlands, BlackRock

3.40 pm - Biodiversity Benchmark introduction (VBDO & PwC)

Manon Koelewijn, Project Manager Responsible Investment & Sustainability

4.00pm - Closure

Business & biodiversity: the fundamentals

*Maxime Eiselin, Senior Expert Nature-based Solutions,
IUCN NL*



BIODIVERSITY

The International Union for
Conservation of Nature

National Committee of
the Netherlands

Maxime Eiselin, 4 December 2024

Nature is our foundation



A just world that values
nature



WHAT IS BIODIVERSITY?

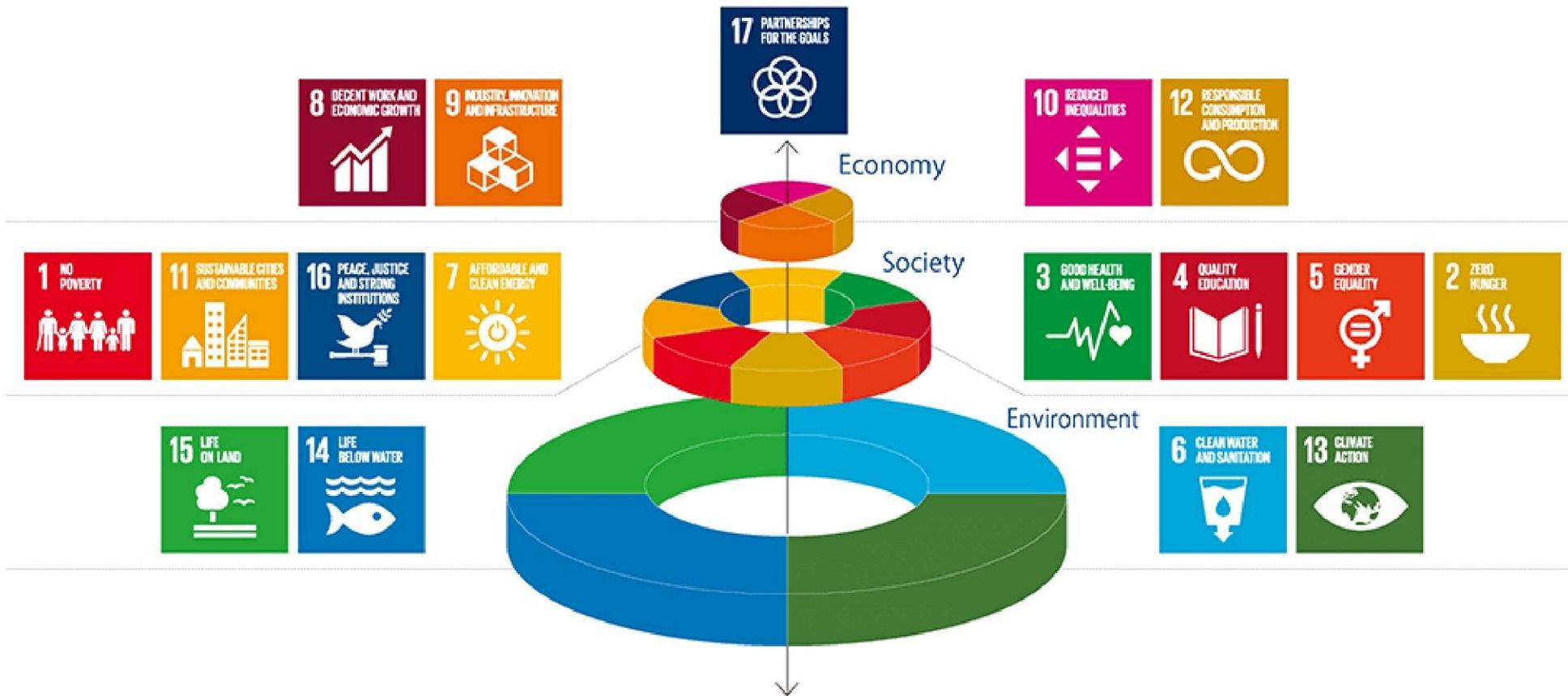


Three levels:

1. diversity between and within ecosystems and habitats
2. diversity of species
3. genetic variation within individual species



NATURE IS OUR FOUNDATION



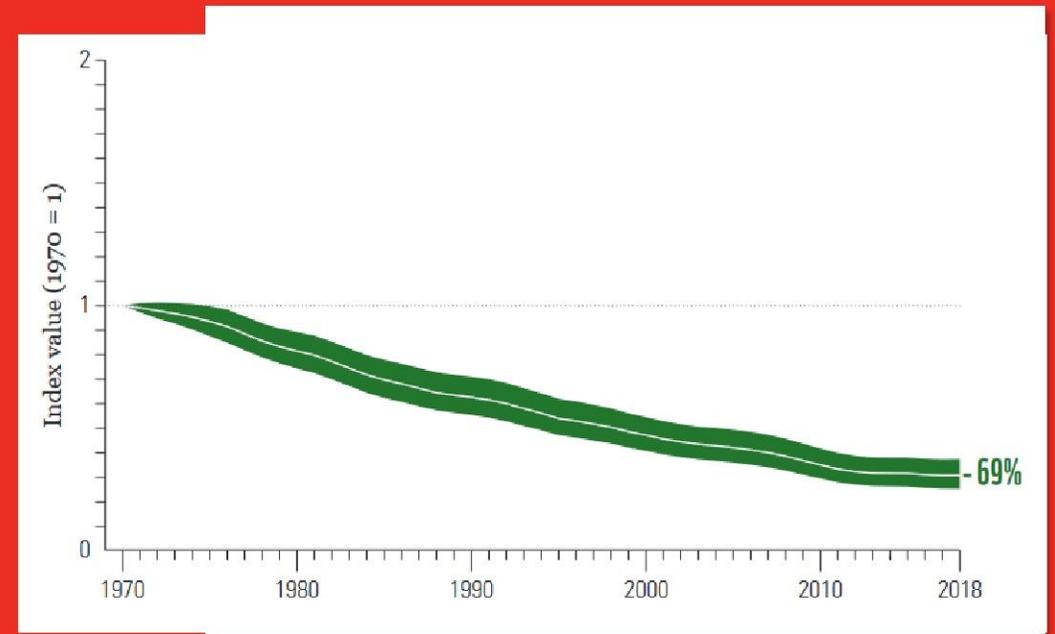
SPECIES ARE GOING EXTINCT AT ALARMING RATES



An estimated **1 million species** are threatened with extinction

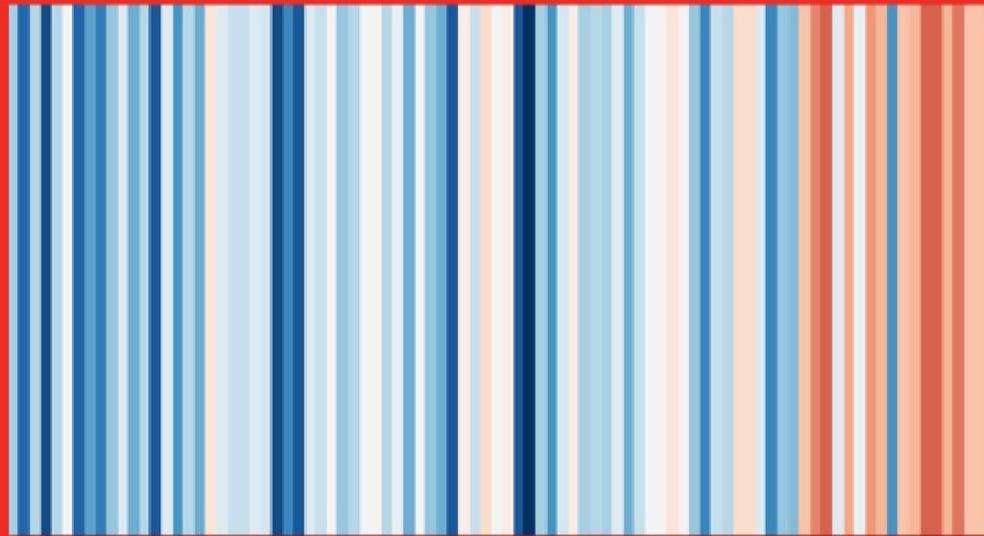
Main drivers of biodiversity loss:

1. Loss of habitat
2. Exploitation of natural resources
3. Climate change
4. Pollution
5. Invasive non-native species



BIODIVERSITY AND CLIMATE CRISES

Global climate change

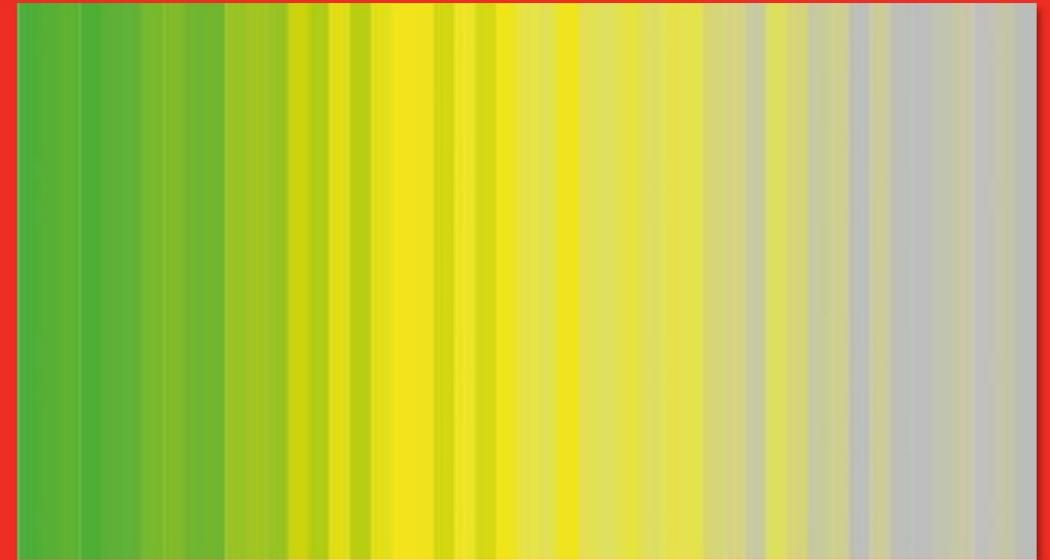


1850

2021

© Ed Hawkins

Global biodiversity loss



1970

2016

© Miles Richardson

Why is biodiversity increasingly important to the private sector?

- New public policy
- New reporting & measurements standards
- More social and business awareness on biodiversity risks
- More opportunities to invest in bankable nature-based solutions

Top 10 Global Risks by Severity

Over the next 10 years



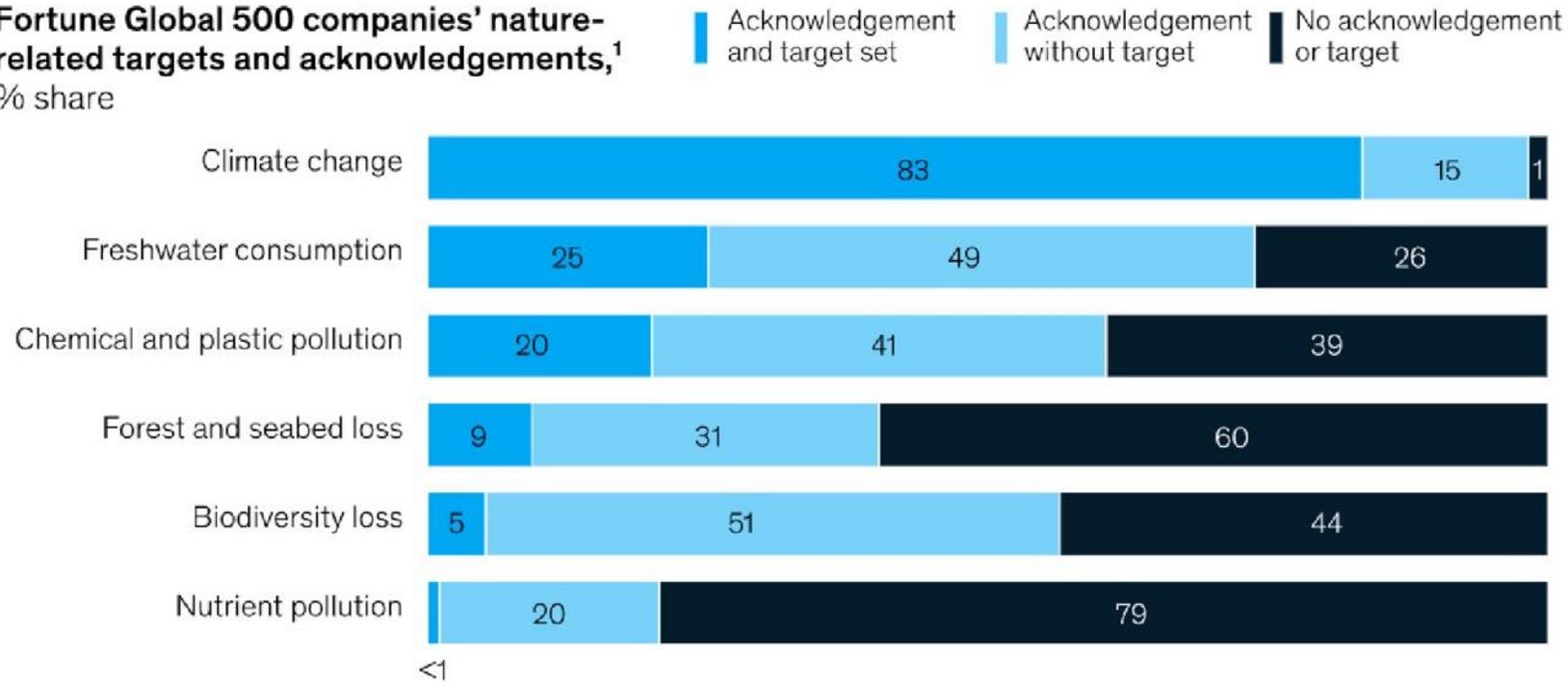
■ Economic ■ Environmental ■ Geopolitical ■ Societal ■ Technological

Source: World Economic Forum Global Risks Report 2022

WHAT CAN THE PRIVATE SECTOR DO?

Corporate targets are common for climate change but far less common for other dimensions of nature.

Fortune Global 500 companies' nature-related targets and acknowledgements,¹
% share



¹Includes 460 of the Fortune Global 500 companies.
Source: Company websites; press search

Strategies, a.o:

1. Mitigation hierarchy
2. Taking a natural capital approach
3. Operating within ecological boundaries

THANK YOU!



maxime.eiselin@iucn.nl



www.iucn.nl



Market update PwC

Thijs IJsbrandij, Nature strategy, PwC

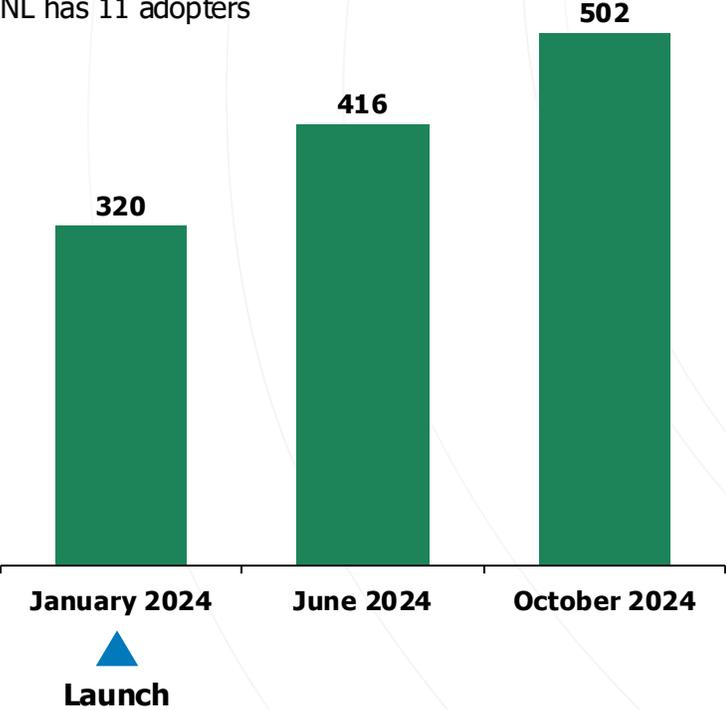


Corporate attention & scientific knowledge on nature & biodiversity is growing



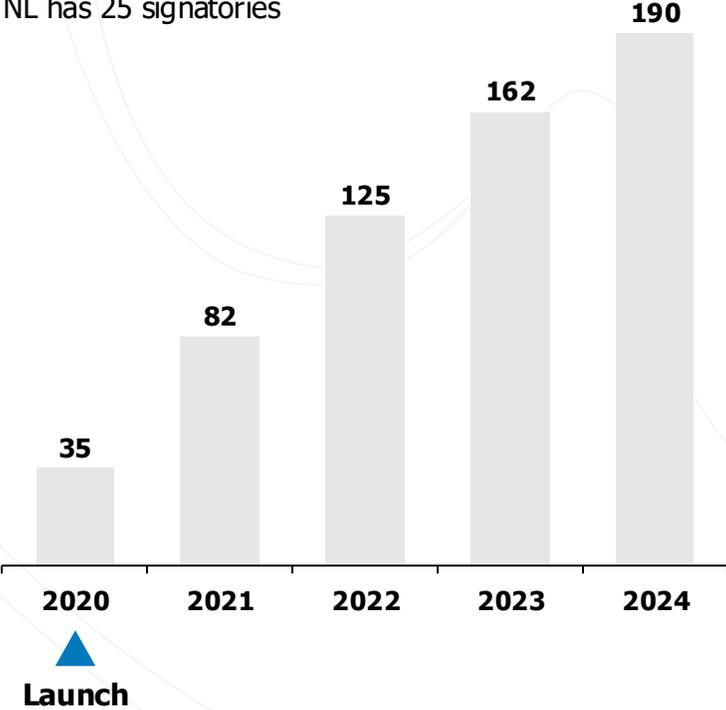
of companies adopting TNFD

Japan is #1 ranking country with 133 adopters
NL has 11 adopters

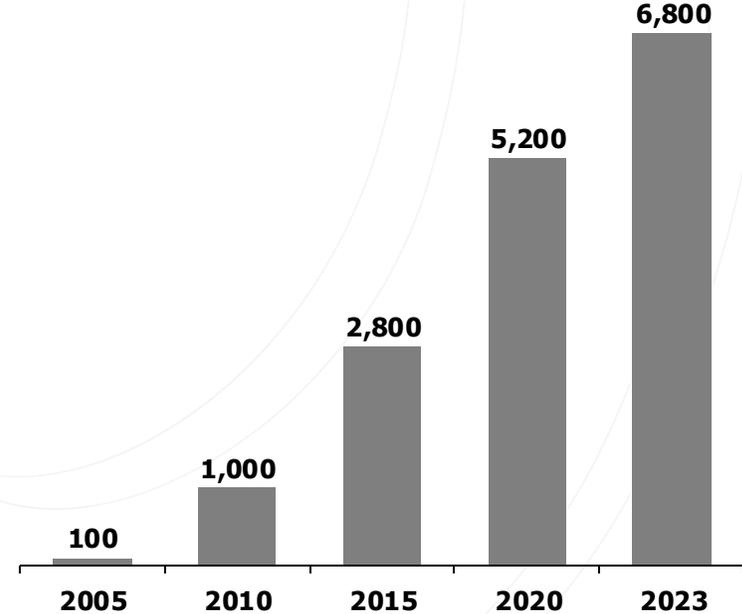


of Finance for Biodiversity signatories

France is #1 ranking country with 55 signatories
NL has 25 signatories



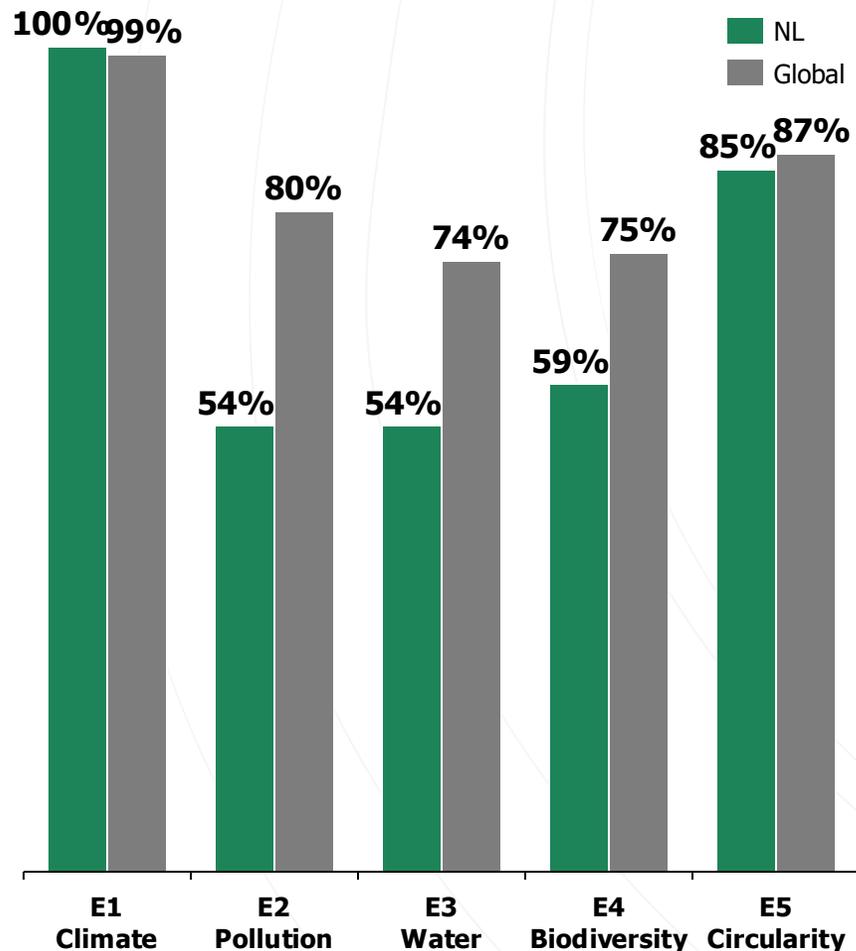
of scientific publications on ecosystem services



NL companies are hesitating to engage with the topic

NL companies hesitate to adopt 'new' E-topics – like biodiversity - as material¹

% of respondents that plans reporting per standard



Source: 1) PwC CSRD Survey – 2024

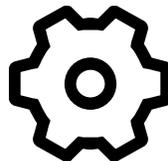
Common challenges we see in conversations with clients



Priority overload is manifesting



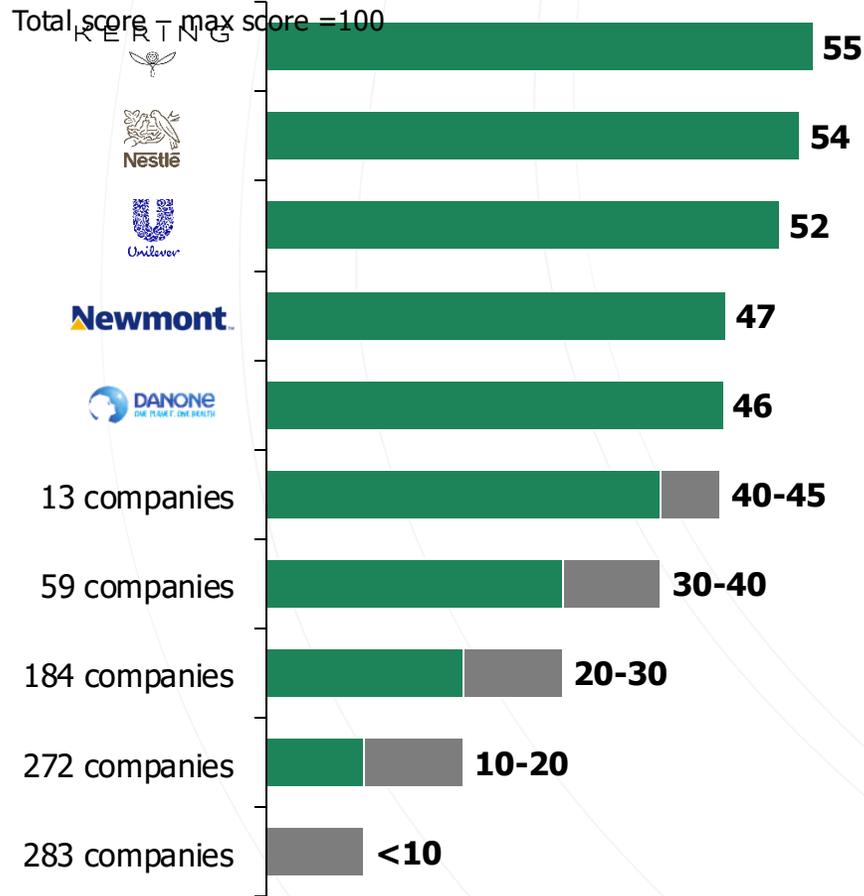
(Still) No universally accepted & adopted **measurement framework** for nature & biodiversity



Uncertainty about **what to do** about the topic after analysis creates hesitation to engage

Topic maturity remains low, but good practice examples are emerging

Nature benchmark scores from nature benchmark by World Benchmarking Alliance



Kering is the first company with land and water science-based targets¹

SBTn's process starts by producing a value chain heatmap per nature impact to prioritize impacts & locations

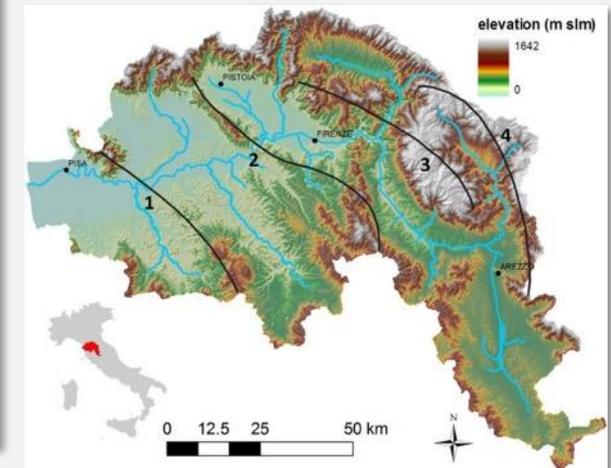
	End of life	Use phase	TIER 0 Stores, warehouses, offices	TIER 1 Assembly	TIER 2 Manufacturing	TIER 3 Raw material processing	TIER 4 Raw material production	TOTAL
AIR EMISSIONS								8% €48M
	10 T	2 249 T	3 947 T	989 T	1 744 T	1 918 T	6 347 T	17 204 T
GHGs								37% €206M
	8 814 TCO ₂ e	229 711 TCO ₂ e	477 398 TCO ₂ e	154 548 TCO ₂ e	243 006 TCO ₂ e	265 671 TCO ₂ e	1 002 842 TCO ₂ e	2 381 991 TCO ₂ e
LAND USE								31% €172M
	0 Ha	194 Ha	3 081 Ha	3 287 Ha	3 242 Ha	1 722 Ha	288 146 Ha	299 673 Ha
WASTE								6% €35M
	3 807 T	48 415 T	122 578 T	156 838 T	243 259 T	79 051 T	37 932 T	691 879 T
WATER CONSUMPTION								6% €35M
	4 dam ³	3 530 dam ³	16 374 dam ³	5 591 dam ³	6 688 dam ³	5 127 dam ³	18 617 dam ³	55 977 dam ³
WATER POLLUTION								12% €67M
	0 T	141 T	563 T	89 T	88 T	324 T	3 085 T	4 290 T
TOTAL IN MILLIONS	0,2% €1	7% €39	14% €77	5% €28	8% €43	9% €53	57% €322	100% €562M

Land targets for 2030

- 100% deforestation and conversion free leather by 2027
- Reduce land footprint with 3% in 2030
- Deploy regenerative agriculture on 695k ha in sourcing landscapes

Water target setting for 2030 in Arno river basin:

- Reduce water use with 21%



Source: 1) Science-Based Targets network

Lessons from Kering's approach

The **mitigation hierarchy** should be applied to structure an approach (i.e. avoid > reduce > restore)

Metrics need to be **contextualized** because impacts differ per location.

Example is the biodiversity metric¹:

Land use area

x

Land use intensity

x

Ecosystem importance

We need to measure a **group of metrics** to understand impact on nature.

Key metrics to consider are:

- Land use
- Water consumption
- Pollution (N & P)
- GHG emissions

SBTn's process starts by producing a value chain heatmap per nature impact to prioritize impacts & locations

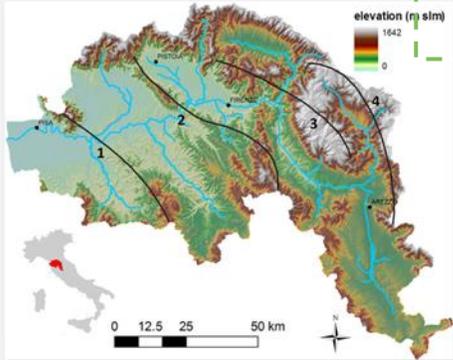
	End of life	Use phase	TIER 0 Stores, warehouses, offices	TIER 1 Assembly	TIER 2 Manufacturing	TIER 3 Raw material processing	TIER 4 Raw material production	TOTAL
AIR EMISSIONS								5% 646M
	10 T	2 249 T	3 967 T	989 T	3 744 T	1 918 T	6 347 T	17 204 T
GHGs								31% 4206M
	8 814 TCO ₂ e	229 711 TCO ₂ e	477 398 TCO ₂ e	154 348 TCO ₂ e	243 006 TCO ₂ e	265 675 TCO ₂ e	3 002 842 TCO ₂ e	3 381 993 TCO ₂ e
LAND USE								31% 4372M
	0 Ha	154 Ha	3 083 Ha	3 287 Ha	3 242 Ha	1 722 Ha	288 346 Ha	299 678 Ha
WASTE								6% 635M
	3 807 T	48 415 T	122 578 T	136 838 T	243 239 T	79 051 T	37 832 T	681 879 T
WATER CONSUMPTION								5% 635M
	4 dam ³	3 530 dam ³	16 374 dam ³	5 591 dam ³	6 488 dam ³	5 527 dam ³	18 017 dam ³	55 977 dam ³
WATER POLLUTION								12% 667M
	0 T	141 T	343 T	89 T	88 T	324 T	3 085 T	4 290 T
TOTAL IN MILLIONS	0.2%	7%	14%	5%	8%	9%	57%	100%
	€1	€39	€77	€28	€43	€53	€332	€562M

Land targets for 2030

- 100% deforestation and conversion free leather by 2027
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- Deploy regenerative agriculture on 695k ha in sourcing landscapes

Water target setting for 2030 in Arno river basin:

- Reduce water use with 21%



Approach the topic **one step (or location) at a time**

BlackRock's approach to natural capital and biodiversity

Charlotte Mansson, Head of Sustainable & Transition Solutions, Nordics & Netherlands, BlackRock





**Capital at risk:
Nature through an
investment lens**

**Charlotte Mansson
Head of Sustainable & Transition Solutions,
Netherlands and Nordics**

December 3, 2024

Why is natural capital and biodiversity loss entering the spotlight now?

1. Research has helped clarify the **economic drivers and impacts of natural capital loss**
2. **Climate change is exacerbating** the negative economic impacts of natural capital loss: reduced crop yields, depleted fish stocks, global pandemics
3. Economists are **quantifying the cost of inaction** and **identifying funding gaps**

By the numbers

>50% of Global GDP¹

Value of economic activity that is moderately or highly dependent on nature

\$972 billion per year²

Capital needed to reverse biodiversity loss by 2030

\$2.7 trillion annually³

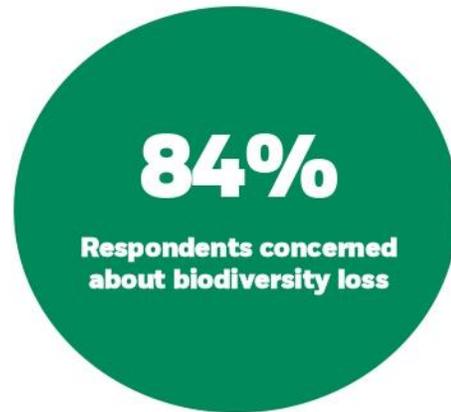
Cost to the global economy caused by decline in ecosystem services by 2030 (equals to 2.3% of projected global economic output)

Note: All figures in USD. Sources: 1. Managing nature risks: From understanding to action, PwC, 2023; 2. Deutz, A., Heal, G. M., Niu, R., Swanson, E., Townshend, T., Zhu, L., Delmar, A., Meghji, A., Sethi, S. A., and Tobinde la Puente, J. - Financing Nature: Closing the global biodiversity financing gap. The Paulson Institute, The Nature Conservancy, and the Cornell Atkinson Center for Sustainability, 2020. 3. World Bank 2021, The Economic Case for Nature.

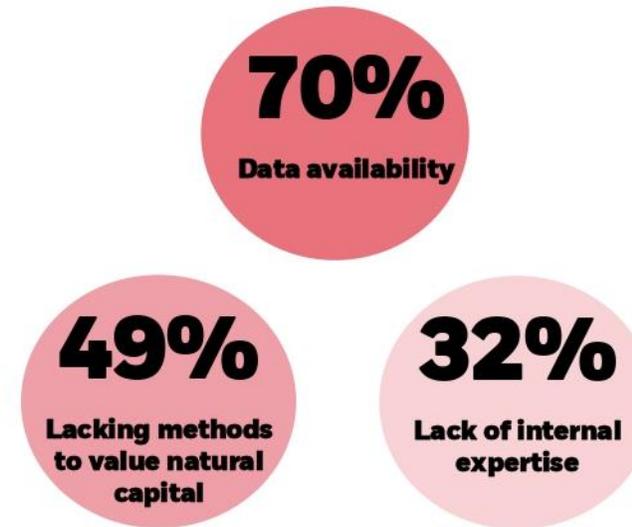
Growing investor interest in biodiversity

Surveys show that investors are increasingly interested in biodiversity topics, but have noted significant barriers to taking concrete steps

INVESTOR ATTITUDES



MAIN BARRIERS TO BIODIVERSITY INVESTMENTS



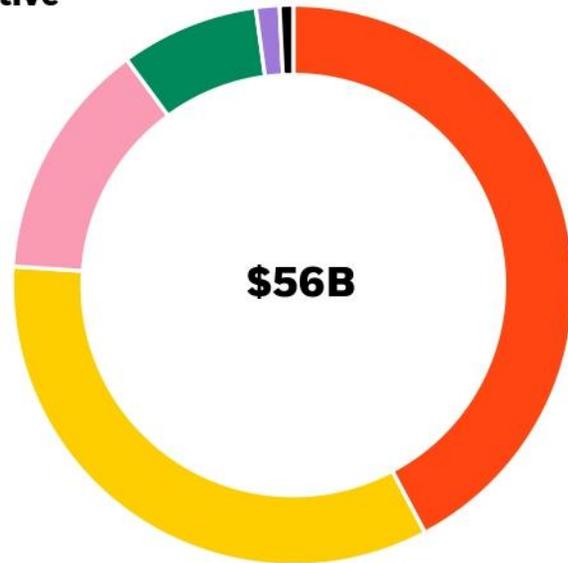
A survey in 2021 explored challenges in considering biodiversity in investing, surveying 327 respondents from 35 countries - including 53% asset owners and 47% asset managers.

Source: Credit Suisse and Responsible Investor, *Unearthing investor action on biodiversity, 2021*.

Natural capital investments concentrated to date in active thematic funds

Natural capital-themed investments total \$70B AUM¹ as of May 2023 across active, passive, and alternative funds.² A large majority of investments to date are in active products marketed with sub-themes like water, agriculture, and circular economy. Only 3% of AUM is currently invested in funds labeled as natural capital or biodiversity.

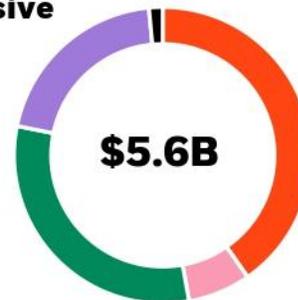
Active



Alternative



Passive



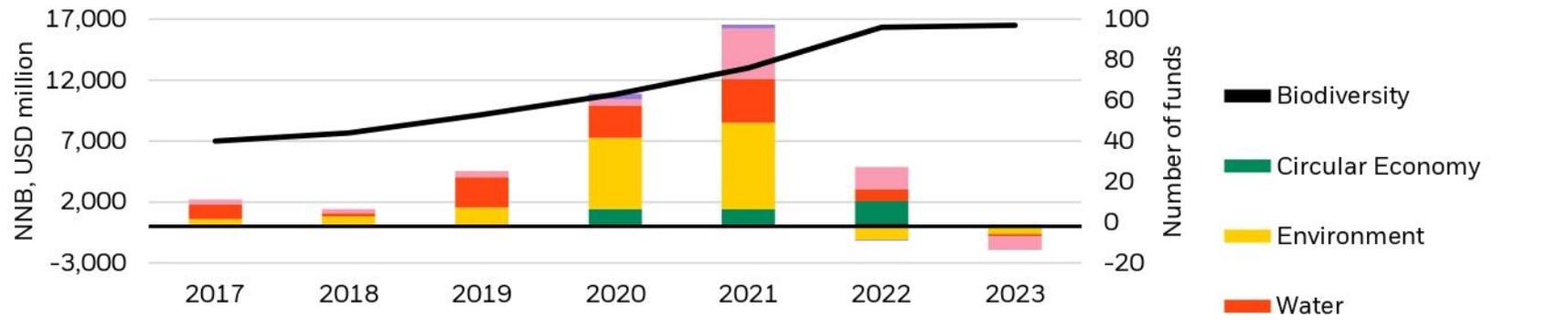
- Water
- Environment
- Agriculture, Food, Timber
- Circular Economy
- Natural Capital
- Biodiversity

Notes: 1. All \$ values reflect USD. 2. The investment universe evaluated here is EMEA Cross-border & UK mutual funds and ETFs, and global private market products. Source: BlackRock 2023, with data from Broadridge FundFile for non-US MFs as of May 2023. GBI for ETFs as of July 2023. Preqin for Private Markets as of August 2023. Excludes MMFs. Private Market excludes liquidated or delisted funds. "Water" includes water and ocean themes. "Environment" includes environment, ecology, earth, nature, and planet themes.

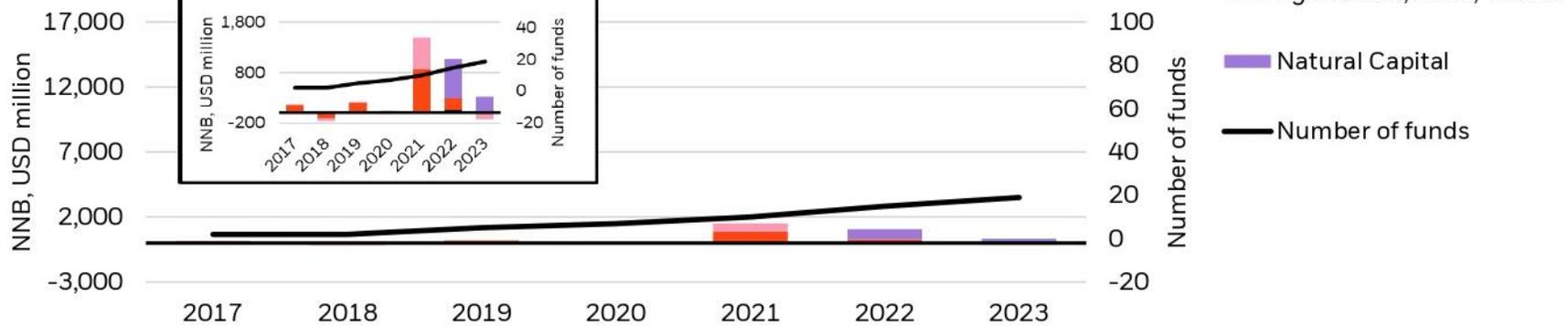
Natural capital flows grew quickly pre-2022, have followed market slow down over past two years

Natural capital themes have seen steady growth in fund launches through 2022, though inflows have slowed significantly over the past two years. Investor interest has been concentrated in popular natural capital themes like circular economy, clean energy, ecology, and water.

Active



Passive



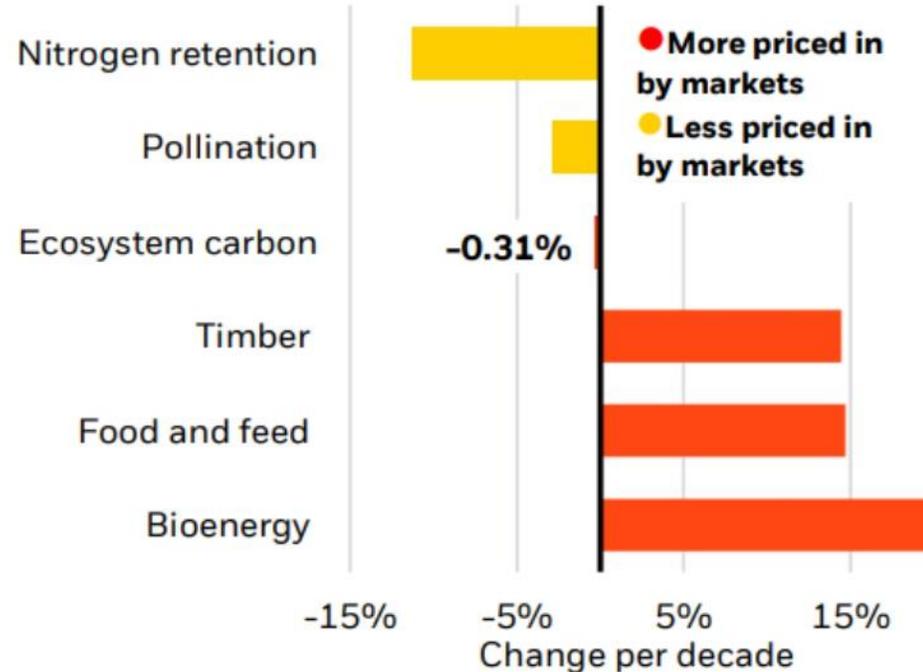
Notes: All values reflect USD. The investment universe evaluated here is EMEA Cross-border & UK mutual funds and ETFs, and global private market products. Source: BlackRock 2023, with data from Broadridge FundFile for non-US MFs as of May 2023. GBI for ETFs as of July 2023. Passive inset figure shows detail on passive funds (smaller y axis range). Water* includes water and ocean themes. "Environment" includes environment, ecology, earth, nature, and planet themes.

Our natural capital investment thesis

- 1 The economy depends on natural resources.** But only a portion of natural capital's value is priced in markets today.
- 2 Markets do not capture all of natural capital's value,** especially where the resource is shared rather than owned: wild bees and other pollinators are not priced, but have an implicit global value of US\$195-387 billion.¹
- 3 Many natural resources, especially those not fully priced, are coming under increasing strain** (figure).
- 4 These rising physical risks** cause costs to rise. In response, **policy, technology and preferences** are shifting as well. We see potential for these drivers to reprice assets linked to natural capital over the coming years – a trend we are already starting to see.²
- 5 This is why it is key for investors to understand the nature-related risks and opportunities** in their portfolios.

Ecosystem services grow when better priced

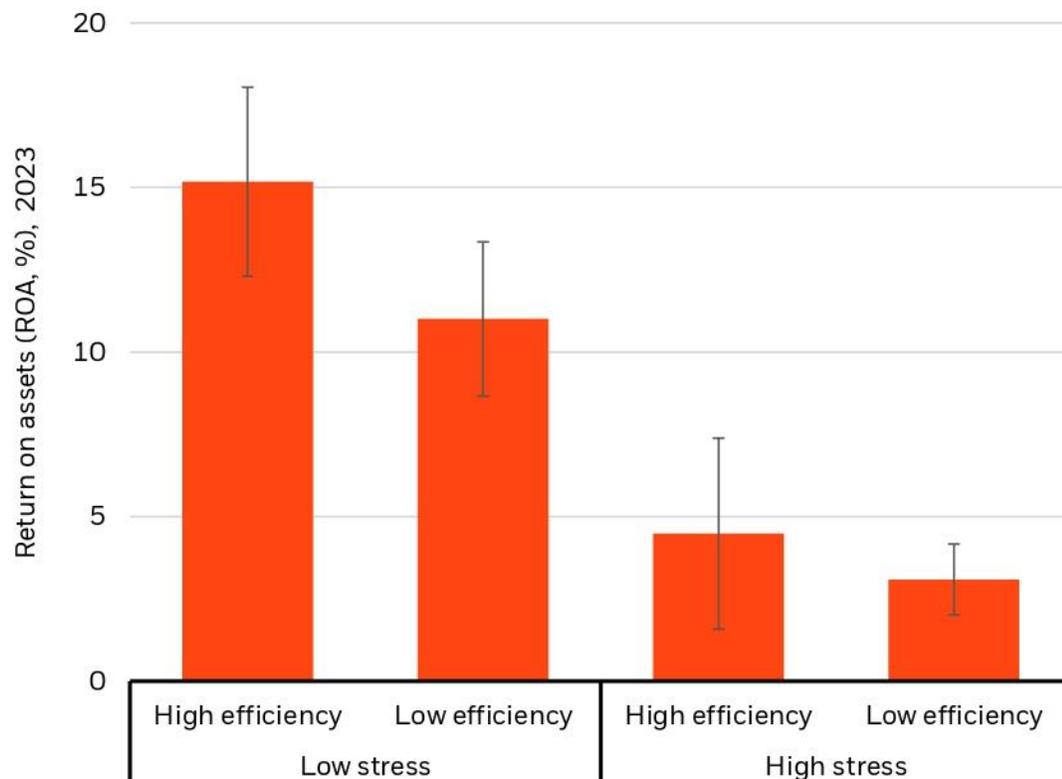
Change in global ecosystem service volumes, 1900-2015



Ecosystem services that markets are better able to value (orange bars) have typically been expanding since 1900, while those that markets are less effective at pricing (yellow bars) have typically been shrinking.

Sources: 1. Porto et al. 2020, *Pollination ecosystem services: A comprehensive review of economic values, research funding and policy actions*. 2. See slide 7. Figure sources: BlackRock Investment Institute, Henrique M. Pereira et al. (2024), July 2024. Notes: The chart shows the average rate of change per decade, over 1900-2015, in the global amount of ecosystem services provided, averaged across model estimates provided in Pereira et al. (2024). We show ecosystem services as being "more priced in by markets" if over half of the total studies compiled in Brander et al. (2023) use market prices as one of the ways to assess the ecosystem service's value to society. We assume the studies labelled with "market pricing" and "hedonic pricing" tags qualify as using market prices. For illustrative purposes only. Figures are shown based on 3rd party estimates and assumptions, there is no guarantee they will be achieved.

Markets are pricing some natural capital physical risks



By the numbers

\$90–225 billion annual loss of global GDP¹

Under a 2030 “business as usual” scenario of pollination, carbon storage, fish, and timber loss

\$22 billion in costs²

Due to 2022 western U.S. drought

\$70 billion in annual historical costs³

Due to removing and controlling invasive species in infrastructure, agriculture, forestry, and urban areas

All figures in USD. Sources: 1. World Bank 2021, *The Economic Case for Nature*; 2. NOAA, *2023. 2022 U.S. billion-dollar weather and climate disasters in historical context*. Note: costs include physical damages to buildings and material assets, business interruption, agricultural assets and restoration. 3. Bradshaw et al. 2016. *Massive yet grossly underestimated global costs of invasive insects*. Figure: Source: BlackRock Investment Institute, with data from MSCI and World Resource Institute, July 2024. Notes: The chart shows the return on assets (ROA) in percentage for MSCI ACWI companies. We measure water stress as the regional ratio of total water withdrawals to total water availability, and efficiency is measured by water withdrawal intensity. Companies with less than median average water withdrawal intensity for their GICS sector are considered “high efficiency.” Regions experiencing water stress are identified using the “baseline water stress” metric provided by the World Resource Institute Aqueduct 3.0 tool (methods available [here](#)). Each company’s water stress value is based on the water stress severity across facility locations. Past performance is not indicative of future results.

New policy could start to price natural capital exposures, with EU taking the lead

Nature-related financial disclosures

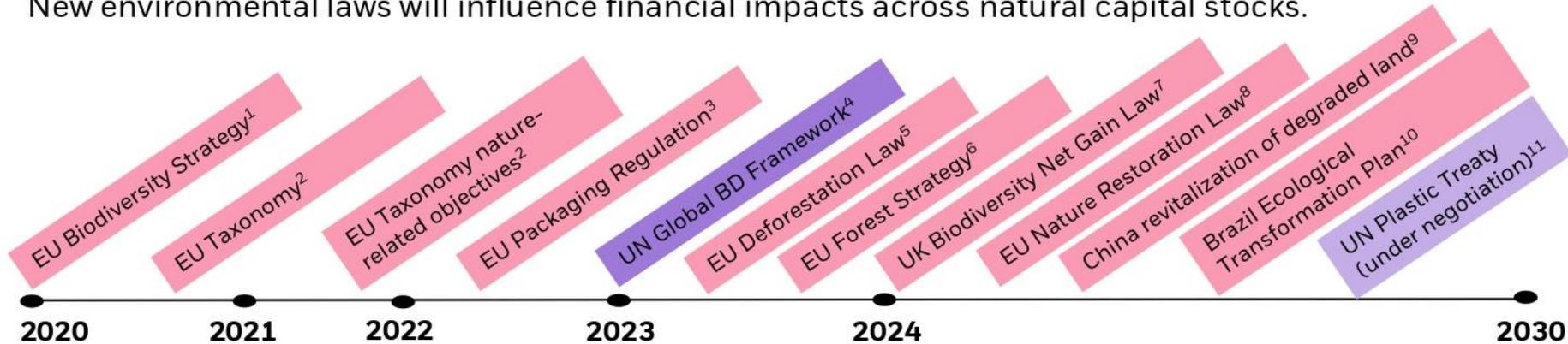
Nature-related corporate financial disclosure frameworks will enable greater investor scrutiny across many natural capital stocks.

Voluntary	Mandatory
Task Force on Nature-Related Financial Disclosures (TNFD)	EU Taxonomy (water, biodiversity, pollution, circular economy objectives)
International Sustainability Standards Board (ISSB)	EU Corporate Sustainability Reporting Directive (CSRD)

Source: BlackRock Investment Institute 2023. For illustrative purposes only.

Increasing policy pressure

New environmental laws will influence financial impacts across natural capital stocks.



Source: 1. European Commission (EC) Biodiversity Strategy for 2030, 2023; 2. EC, Sustainable Finance: Commission takes further steps to boost investment for a sustainable future, 2023; 3. European Green Deal: Putting an end to wasteful packaging, boosting reuse and recycling, 2022; 4. See slide 33. 5. EC, Deforestation-free products, 2023; 6. EU Forest Strategy for 2030, 2023; 7. UK DEFRA Understanding biodiversity net gain, 2024; 8. European Council, Council reaches agreement on the nature restoration law, 2023; 9. The State Council, The People's Republic of China, 2024; 10. Brazil Forestry Ministry, 2024; 11. UNEP 2022 Historic day in the campaign to beat plastic pollution: Nations commit to develop a legally binding agreement.

Natural capital integration and asset allocation

<p>Monitor & Manage</p> <p>Measure the portfolio for nature-related dependencies & impact</p>	<p>Exclude</p> <p>Screen assets with very high nature-related risk</p>	<p>Construct</p> <p>Integrate nature-related risk in portfolio construction</p>	<p>Engage</p> <p>Ensure additionality: hold assets with the intention to transition them with engagement</p>	<p>Focus</p> <p>Propel nature-positive outcomes by investing in assets that reduce dependencies and impacts</p>
<p>Understanding the nature-related risks of the current portfolio is an essential first step</p> <p>Can help determine where effort should be focussed</p>	<p>A selective approach will avoid severely limiting the investment universe</p>	<p>Ensure nature-related considerations are integrated alongside other investment goals, and understand any trade-offs</p>	<p>Ensure the investment stewardship approach of any delegated parties align with your strategy</p>	<p>Focus on assets and technologies that reduce current dependencies and impacts on nature (e.g. biotech)</p>

Source: BlackRock 2023. For discussion purposes only.

Questions?

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Biodiversity Benchmark

*Manon Koelewijn-Timmerman, Project Manager
Responsible Investment & Sustainability*



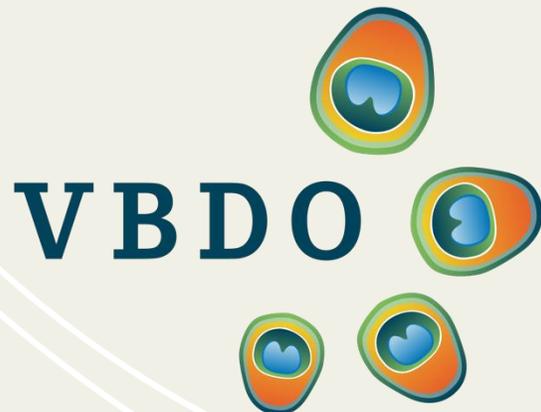
In collaboration with:



Biodiversity & Business Benchmark

Benchmark context and pilot results

December 4, 2024



Vereniging van Beleggers
voor Duurzame Ontwikkeling



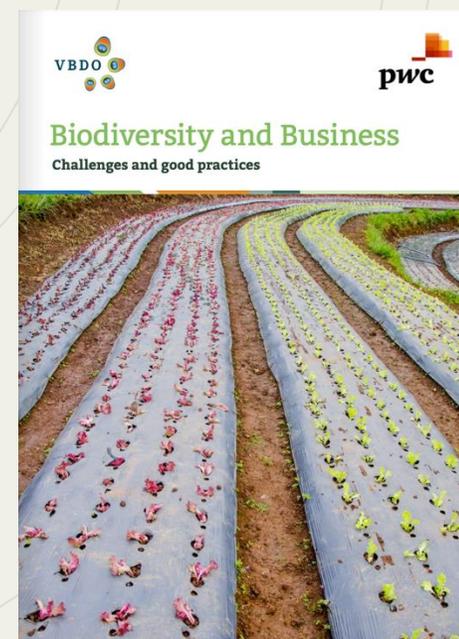
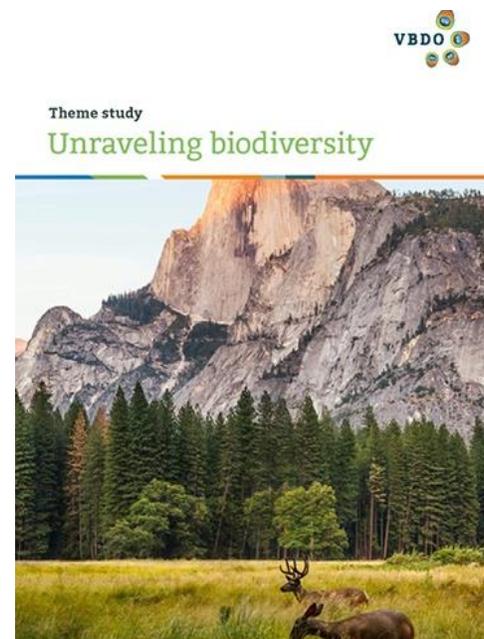
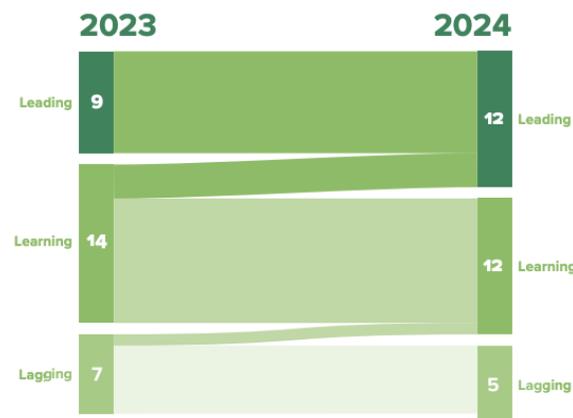
**Manon Koelewijn-
Timmerman**

Project Manager Sustainability
& Responsible Investment

Prior work on biodiversity

- **Key topic in AGM engagements** with Dutch listed companies
(2003-2005, 2010-2013, 2022-present)
- **Theme study** among Dutch financial institutions
(2021 in collaboration with IUCN NL)
- **Theme study** among Dutch financial institutions
(2023 in collaboration with WWF & AXA)
- **Biodiversity and Business: challenges and good practices report**
(2023 in collaboration with PwC)

Graph 7: Movement between maturity categories from 2023 to 2024 – Biodiversity



VBDO benchmarks



Dutch News article: 'Pension funds pay more attention to investing in biodiversity'

Purpose of the Biodiversity & Business benchmark

- Increase both practices and transparency of Dutch and European listed companies on biodiversity
- Allows to compare developments and encourages companies to improve their practices
- Aligning with relevant existing biodiversity standards and regulations

Scope

This year: 14 companies in pilot

Next year: 30 companies

Across:

- Extractives (mining, metals and oil & gas)
- Food & Beverage
- Pharmaceuticals

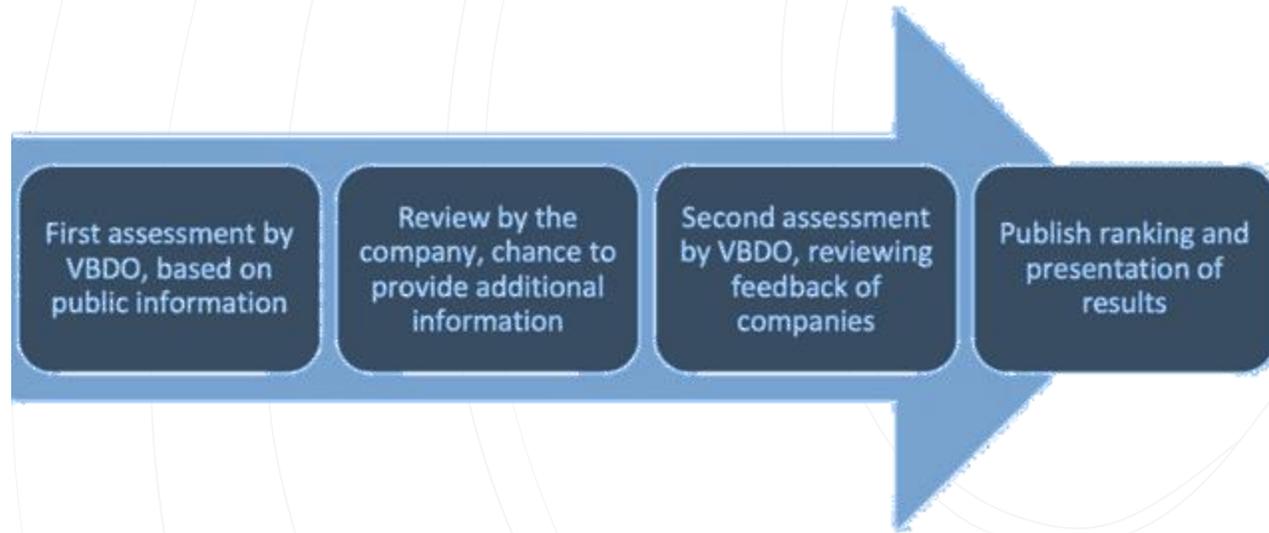


Scope

Extractives (mining, metal, oil&gas)	Food & Beverage	Pharmaceuticals
AMG Critical Materials N.V.	AB inBEV SA	Argenx SE
Aperam SA	Carrefour SA	Bayer AG
ArcelorMittal SA	Colruyt Group	Eurofins Scientific SE
Eni SpA	Corbion N.V.	Grifols SA
Eramet SA	Danone SA	Novo Nordisk A/S
Glencore International AG	Heineken N.V.	Novozymes A/S
Repsol SA	JDE Peet's N.V.	Recordati SpA
Rio Tinto Group	Koninklijke Ahold Delhaize N.V.	Sanofi SA
Royal Dutch Shell plc	Royal Unibrew A/S	Sartorius AG
TotalEnergies SE	Unilever plc	UCB SA



Process



Pilot:

- No feedback, therefore anonymised and general results are presented



Benchmark structure

1. Strategy & business model
2. Policy
3. Actions and implementations
4. Targets & metrics

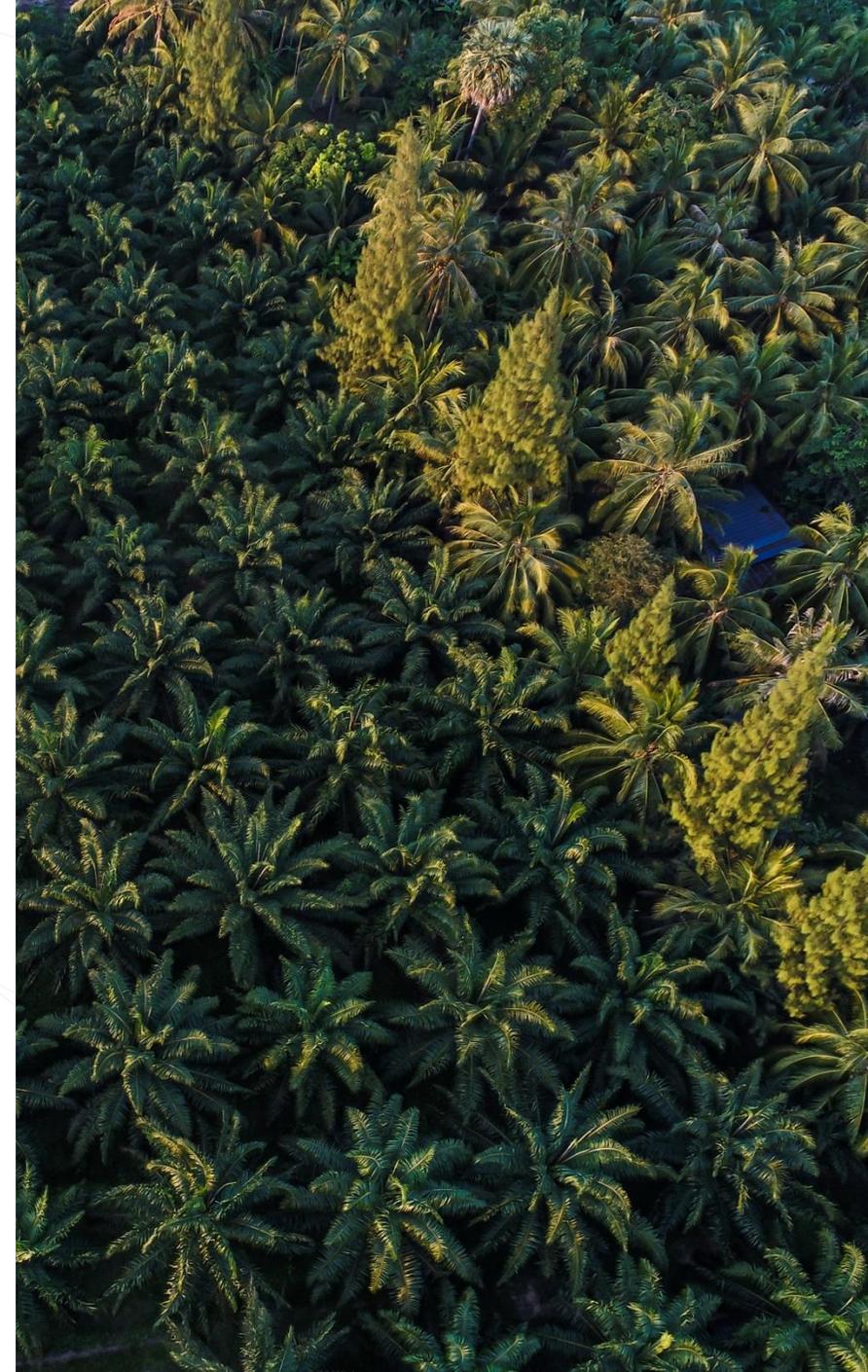


Category: Strategy and business model

- Companies can score 28 out of 194 points in this category
- On average companies score 15%
- Double materiality analysis is not yet standard. CSRD will soon expect companies to do so.

Green	Food & Beverage
Orange	Extractives
Blue	Pharmaceuticals

Total points scored	% of total available points
10	36%
7	25%
7	25%
5	18%
5	18%
5	18%
5	18%
5	18%
3	11%
3	11%
2	7%
1	4%
1	4%
1	4%

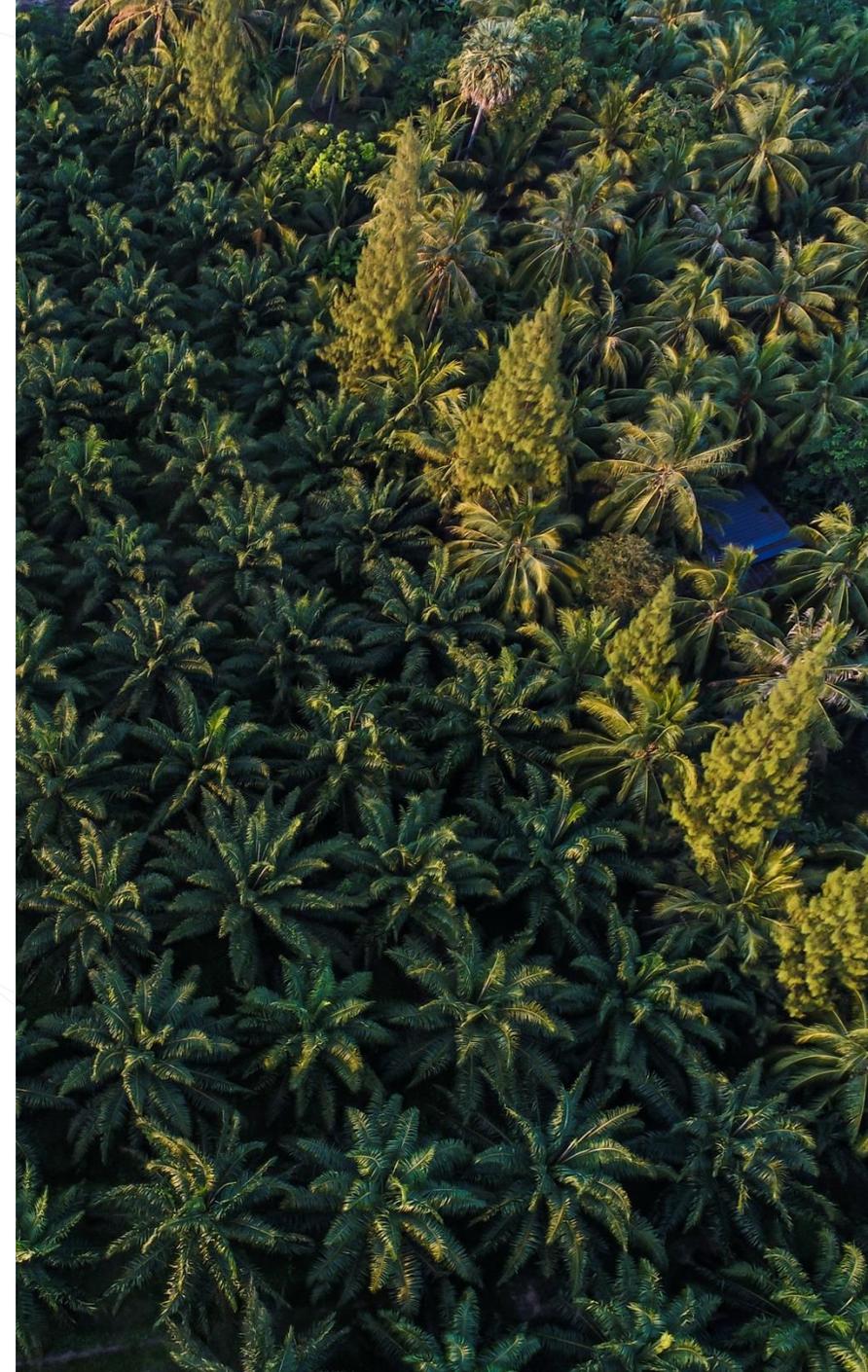


Category: policy

- Companies can score 76 out of 194 points in this category
- On average companies score 16% of the total points
- Many of the documents are not official policies (not signed-off by CEO or management)

Green	Food & Beverage
Orange	Extractives
Blue	Pharmaceuticals

Total points scored	% of total available points
23	30%
18	24%
16	21%
16	21%
14	18%
14	18%
12	16%
11	14%
10	13%
9	12%
7	9%
7	9%
5	7%
3	4%

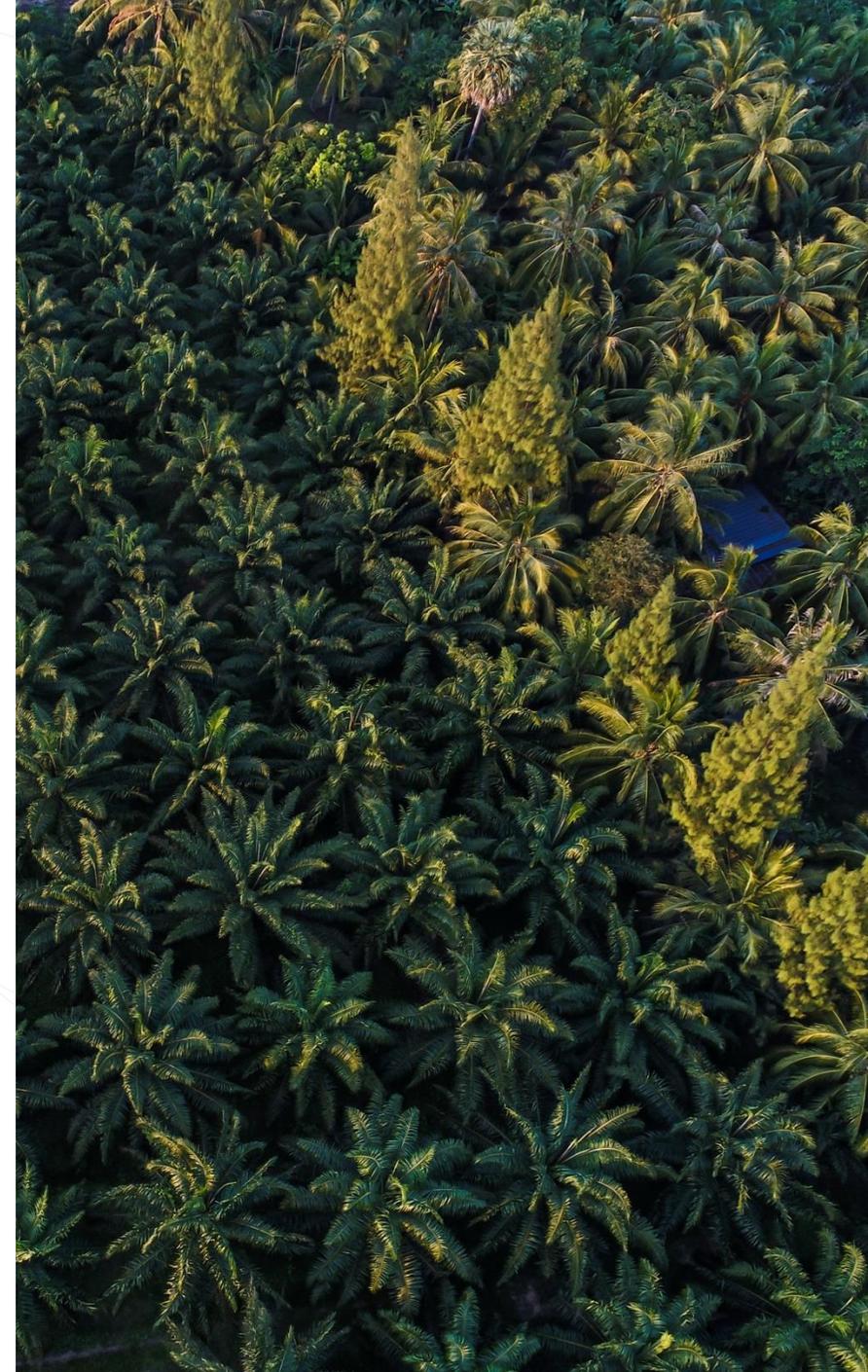


Category: actions and implementations

- Companies can score 40 out of 194 points in this category
- On average companies score 26% of the total points
- Looking for structural and systematic approach

Total points scored	% of total available points
19	48%
14	35%
13	33%
13	33%
12	30%
11	28%
10	25%
9	23%
8	20%
8	20%
7	18%
7	18%
7	18%
7	18%

Green	Food & Beverage
Orange	Extractives
Blue	Pharmaceuticals

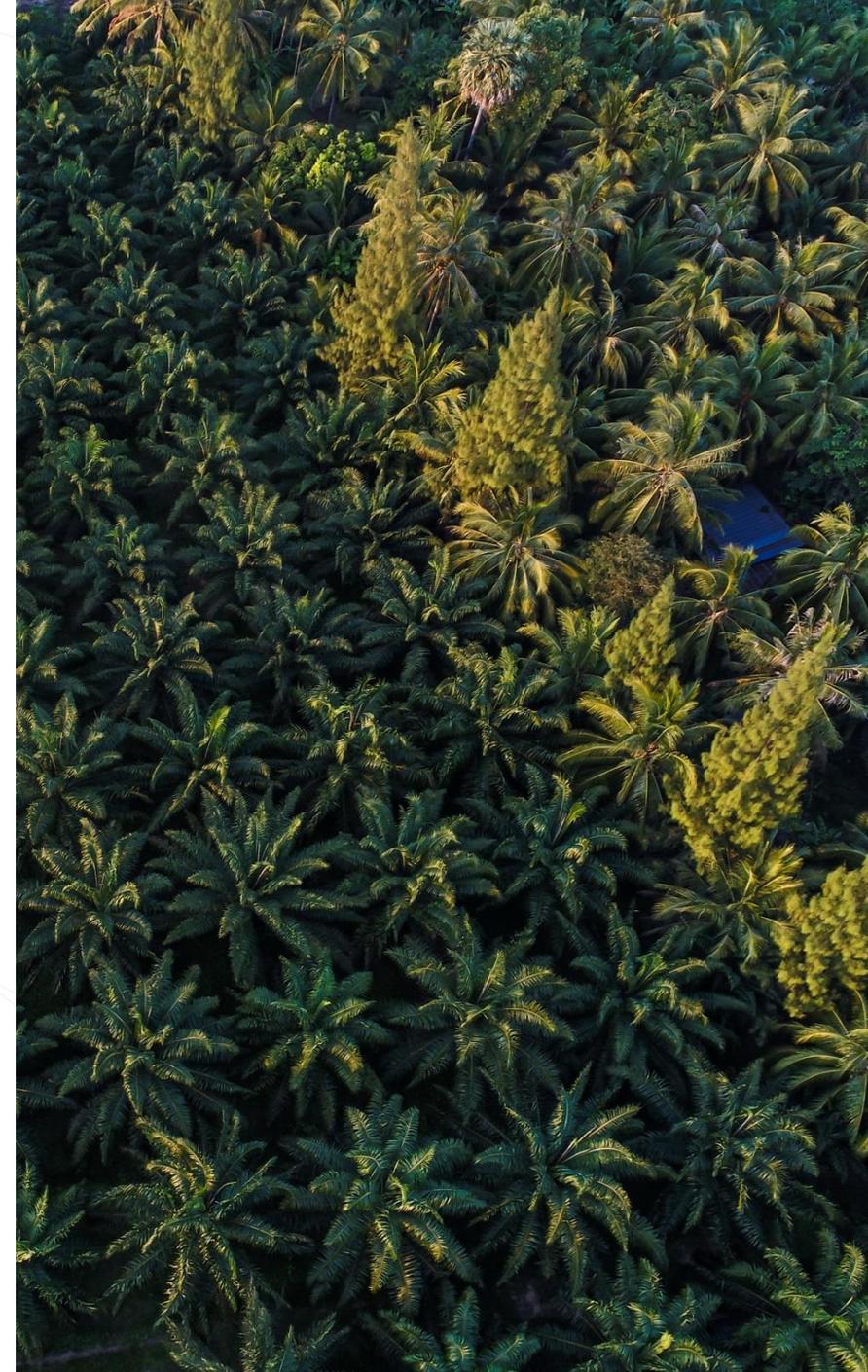


Category: targets and metrics

- Companies can score 50 out of 194 points in this category
- On average companies score 27% of the total points
- Highest scoring category

Green	Food & Beverage
Orange	Extractives
Blue	Pharmaceuticals

Total points scored	% of total available points
24	48%
23	46%
20	40%
17	34%
17	34%
16	32%
16	32%
14	28%
8	16%
8	16%
7	14%
7	14%
7	14%
5	10%



Important findings



Maturity in addressing climate change



Beginning of identification of location-specific impacts on BSA



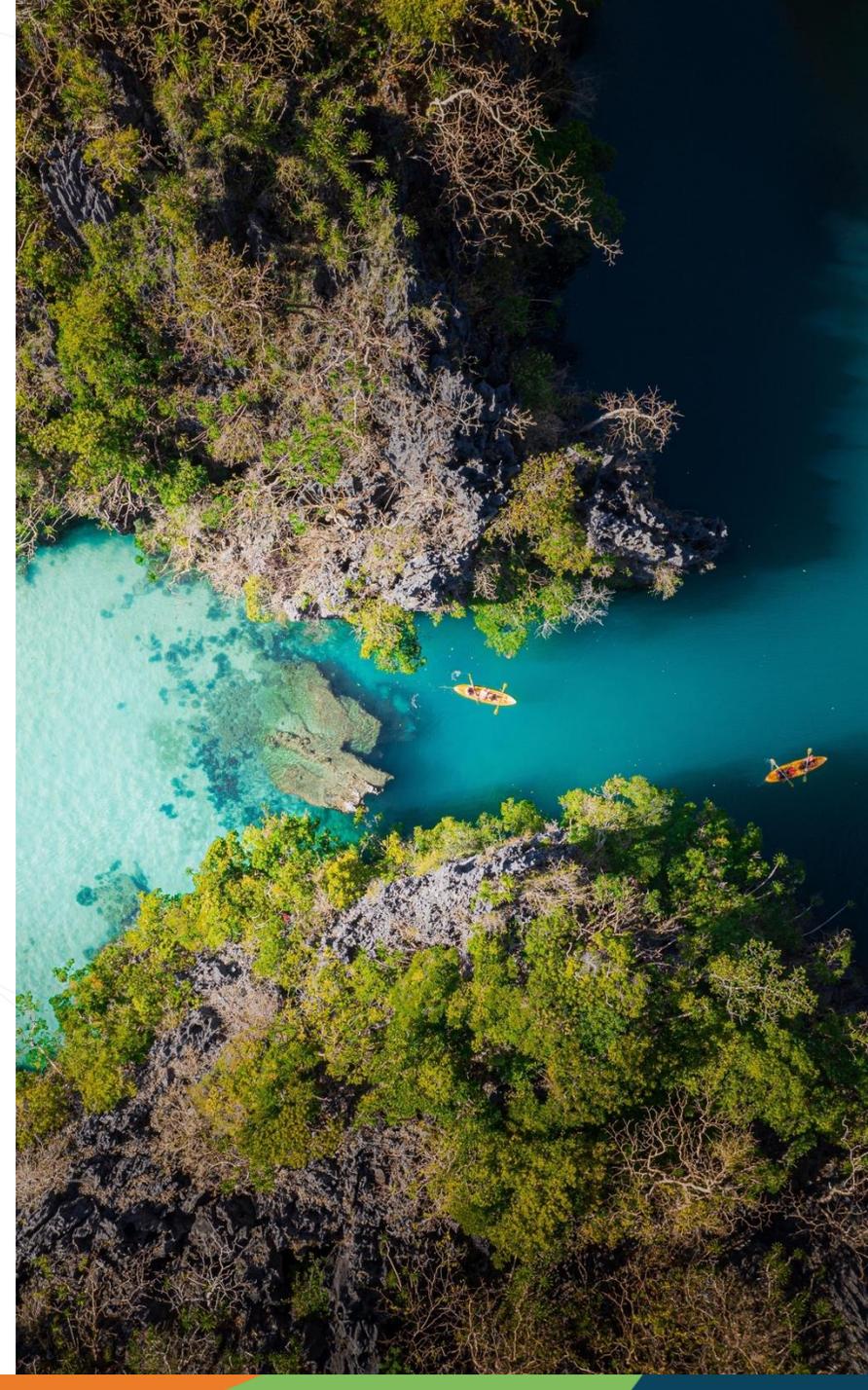
Start of considering social consequences of biodiversity and ecosystem-related impacts



Food & beverage score the highest, pharmaceuticals have most room for improvement

Future activities

- Publication of a two-pager on benchmark outcomes
- Roll-out of the yearly benchmark
 - Starting the first assessments in spring
 - Publication Q4 of 2025



Questions?





Thank you for your attention

For further questions or remarks on the Biodiversity & Business Benchmark please contact:
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