Nature risk disclosures 2023

The natural environment provides the foundation for many economic activities and is an important source of goods and services. Estimates suggest that over half of global GDP is moderately or highly dependent on nature[1]. However, global biodiversity is disappearing at an unprecedented rate, and most of the ecosystem services on which business and society depend are in decline[2]. As a globally diversified investor, we have an interest in understanding how the companies we own depend and impact on nature. Our strategy aims to ensure that the fund's portfolio is well positioned to handle the associated challenges and capitalise on relevant opportunities.

This pilot review is a first step towards our adoption of the disclosure framework published by the Taskforce on Nature-related Financial Disclosures' (TNFD) in September 2023. The framework sets out disclosure recommendations and guidance on how organisations should manage and report on evolving nature-related dependencies, impacts, risks and opportunities. We are sharing this initial set of TNFD-inspired disclosures in the spirit of transparency: to update our stakeholders on our progress, and to contribute to further discussion on how nature-related risks can best be approached. We will continue to develop our practices and reporting as we gain access to better data across our portfolio and learn more about the interplay between our investments and the natural environment.

General requirements

A. Materiality: As a long-term, global investor, we consider our returns over time to depend on sustainable economic, environmental and social development, as well as on well-functioning, legitimate and efficient markets. Through responsible investment, we seek to improve the long-term economic performance of our investments and to reduce the financial risks associated with the environmental and social practices of companies in our portfolio. In line with international standards, we also carry out environmental and social due diligence and use our leverage to promote responsible business conduct at the companies we invest in. Our view is that many environmental and social impacts may become financially material over time, especially given the fund's long investment horizon and broad diversification. The ethical guidelines for the fund also specify that it must not be invested in companies whose products or conduct violate fundamental ethical norms , including contributing to severe environmental damage.

[1] PwC (2023): Managing nature risks: From Understanding to Action; World Economic Forum (2020) Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy.

[2] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (2019) Summary for Policymakers of the IPBES Global Assessment Report on Biodiversity and Ecosystem Services.

B. Scope: The scope of this initial set of disclosures is the nature-related dependencies and impacts of the companies in our equity portfolio. We are starting with this asset class as it represents about 70 percent of the fund's value and therefore accounts for a significant portion of our overall impacts and dependencies on nature.

C. Location: Our equity portfolio consists of holdings in over 8,800 companies, listed in 72 different markets. These companies will often also interface with nature through activities in their operations and value chains that may take place outside of their country of listing. See the discussion on priority locations under "Strategy" below.

D. Integration: These pilot disclosures are being published alongside our responsible investment report, to draw attention to nature-related aspects of our responsible investment strategy, and to offer our stakeholders an overview of how these considerations factor into our current practices. Over time, we may consider different ways to integrate our TNFD disclosures into the fund's broader reporting.

E. Time horizon: Our mandate emphasizes how a good long-term return is considered to depend on sustainable economic, environmental and social development.. This long-term horizon is a central consideration in our investment strategies, risk management and ownership work.

F. Stakeholder engagement: Engaging with our stakeholders is integral to our work on responsible investment. See our sustainability due diligence processes for further details. We also expect our portfolio companies to engage responsibly with their stakeholders. Information on our stakeholder engagement processes can also be found under "Governance" below.

Governance

The fund's mandate

The management mandate for the fund, given to Norges Bank by the Ministry of Finance, includes requirements for responsible investment.

According to the Ministry's guidelines for observation and exclusion, the fund can exclude companies whose conduct contributes to violations of fundamental ethical norms, including severe environmental damage. The Ministry has established an independent Council on Ethics to assess and recommend exclusion or observation of portfolio companies on the basis of the guidelines.

Changes to the mandate or the guidelines are subject to parliamentary scrutiny. The Ministry publishes an annual white paper on the management of the fund which discusses the further development of the investment strategy and the fund's work on responsible investment.

Board oversight
The management of the fund is overseen by Norges Bank's Executive Board.

The Executive Board has issued principles for responsible investment management and risk management, and is responsible for overseeing these. The responsible investment principles are based on internationally recognised standards such as the UN Global Compact and the OECD Guidelines for Multinational Enterprises. Both of these reference management of nature-related risks and opportunities.

The Executive Board has established an Ownership Committee with a preparatory and advisory role when it comes to the fund's responsible investment activities and decisions on observation and exclusion. In 2021, the Executive Board approved the publication of our expectations of companies on biodiversity and ecosystems. In 2022, the Executive Board approved our 2025 Climate action plan, which outlines actions to address climate risk in the management of the fund, including asking companies to eliminate deforestation from their business activities and/or value chains. The Executive Board makes the final decision on the observations and exclusions of companies, based on a recommendation from the Council on Ethics.

Role of management
The Chief Executive Officer (CEO) of Norges Bank Investment Management has the overall responsibility for implementing the requirements set by the Executive Board. The CEO issues mandates and job descriptions for members of the Leader Group and sets policies, including on responsible investment.

The Chief Governance and Compliance Officer (CGCO) and the Chief Risk Officer (CRO) both report directly to the CEO. The CGCO is responsible for the fund's expectation documents on nature-related topics, and is supported by the Active Ownership department. The nature-related topics covered by our expectation documents include climate change (first issued in 2009), water management (first issued in 2009), ocean sustainability (first issued in 2018) and biodiversity and ecosystems (first issued in 2021). The CRO is responsible for analysing, measuring, and reporting risk for the fund, including environmental risks and managing risk-based divestments, and is supported by the Risk Monitoring department.

The investment mandates issued to all the fund's internal and external investment managers require investment decisions to take account of environmental, social and governance (ESG) information.

Stakeholder engagement
Our stakeholders include the Norwegian people as our ultimate owners, our own employees, those working for our portfolio companies or in their supply chains, and those affected by our portfolio companies' operations, including local communities.

We regularly invite civil society to give feedback on our responsible investment work through consultations and seminars. In 2023, this included consultation when updating our expectations of companies on climate change and biodiversity and ecosystems. We also held our annual seminar where civil society organisations are encouraged to raise questions and provide input.

We align our expectation documents and stakeholder engagement work with internationally recognised human rights principles, such as the UN Guiding Principles on Business and Human Rights. Our human rights expectations emphasise that companies should engage transparently and responsibly on human rights, including through grievance mechanisms. Our expectations on biodiversity and ecosystems further specify that companies should collaborate with stakeholders on the ground, including non-governmental organisations (NGOs), local communities, smallholder farmers, and national and international institutions. We expect companies to respect the rights of indigenous peoples and local communities, including the right to Free, Prior and Informed Consent. We follow up these expectations through our ownership and risk management work. As an investor in more than 8,800 companies, we benefit from receiving ESG -related information about the companies that we own. We encourage all stakeholders, regardless of their proximity to our business activities, to share information that could be relevant.

For more information, see our responsible investment report and our sustainability due diligence processes.

Strategy

Dependencies, impacts, risks and opportunities
As a diversified investor with a market-weighted portfolio, our investments' dependencies, impacts, risks and opportunities broadly reflect those of the underlying economy. It is increasingly clear that significant parts of the global economy depend on nature and its ability to provide certain goods and services. However, some economic activities are driving the deterioration and loss of natural ecosystems at scale.

Nature-related risks and opportunities can arise from these dependencies and impacts, and may affect the financial performance of companies in the fund's portfolio. Physical risks can result from the degradation of nature and associated loss or disruption of ecosystem services. The broad diversification of our portfolio also means that the externalities from one portfolio company's unsustainable use of ecosystems could have financial consequences for other companies that the fund invests in. Transition risks can result where companies' business models fail to align with regulatory changes, technological developments or shifts in consumer and investor preferences relating to environmental issues. On the other hand, some companies may be well positioned to exploit nature-related opportunities by transitioning to more resource-efficient business processes or developing products and services aimed at protecting and restoring nature.

Obtaining an overview of how business processes in different sectors impact and depend on natural ecosystems is an important step towards better understanding how the companies in our portfolio are exposed to nature-related risks and opportunities. Figures 1 and 2 illustrate our equity portfolio's exposure to sectors considered to have material direct nature-related dependencies and impacts through their business processes. More detail on the analysis is provided below under "Metrics and Targets", and a description of the methodology under the "Supplementary Information".

Investment strategy

The fund's investment mandate requires us to manage risks and capture investment opportunities by being broadly invested across sectors and markets. Our responsible investment strategy therefore aims to address nature-related risks and opportunities by improving market standards, increasing portfolio resilience, and engaging effectively with our portfolio companies.

At the market level, our goal is to support the development of improved global frameworks and standards for identifying, measuring and managing nature-related risks, and to contribute to a better common understanding of the financial relevance of nature-related impacts and dependencies.

In November 2021, we joined the TNFD as a Taskforce Member. See the "Standards" chapter in our responsible investment report for more information about our role on the Taskforce. We take part in industry networks that aim to increase the understanding of the interplay between environmental issues and responsible investment, including the ICGN's Natural Capital Committee and Ceres Investor Working Group on Climate and Land Use Change. We are long-term supporters of CDP and its work on disclosures related to climate, forests, water, plastics and ocean topics.

We support relevant research efforts on the intersection of finance and nature. We collaborate with researchers to better understand the relationship between climate change and the availability of natural resource. We also participated in the Technical Advisory Group for the 2023 edition of the UNEP Climate Finance Unit's State of Finance for Nature Report.

At the portfolio level, we use quantitative tools to increase our understanding of nature-related risks and opportunities and how these impact our investments. These insights are shared across our organisation and may inform our divestments decisions. Obtaining accurate, reliable and comprehensive nature-related data covering the whole of the fund's portfolio remains a challenge. As part of our work to increase data availability and quality, we recently joined the Forest IQ initiative, as part of its Observer group. Forest IQ is a new data platform aiming to provide financial institutions with relevant and actionable data on deforestation risk.

At the company level, our responsible investment strategy is to be an active and responsible owner of companies, supporting and encouraging them to transition towards more environmentally friendly business practices. We use our ownership rights to promote long-term value creation and reduce risk at the companies we invest in. To achieve this, we take a materiality-based approach to engaging with companies on how they integrate nature-related issues into their governance, strategy and reporting. We also vote at shareholder meetings to hold boards accountable for their decisions, including significant impacts on the environment. Our dialogues are described in the responsible investment report. Notable examples from 2023 include dialogues with the mining industry on operations in sensitive areas, with consumer goods manufacturers on the sourcing of forest-risk commodities, and with food producers on the management of environmental risks in global food systems.

Assessing the resilience of our strategy
We are working to strengthen the quality and coverage of nature-related data on the companies we invest in so that we can systematically assess dependencies, impacts, risks and opportunities across our equity portfolio. A key area of research for us in 2023 was how changes in environmental conditions and access to natural resources can affect the financial performance of our investments, particularly in areas such as food production, infrastructure, and renewable energy, and in countries whose economies depend significantly on natural capital. This research will support our investment strategies and increase the understanding of our exposure to long-term environmental risk.

Priority locations
Our equity portfolio consists of holdings in over 8,800 companies, listed in 72 different markets. Understanding how these companies interact with nature, both in their direct operations and through their value chains, requires information about their broader geographical footprint beyond their country of listing and/or incorporation. In our expectations, we ask companies to disclose information about the location of their physical assets and encourage them to be transparent about sourcing from environmentally sensitive areas. The independent Council on Ethics also undertakes analyses and monitoring of companies in the fund whose operations risk harming internationally important conservation areas or areas of particular importance for biodiversity. The Council has over the years recommended exclusion of several companies linked to the impairment of areas of high conservation value or the decimation of endangered species.

As our portfolio companies begin to utilise the TNFD toolkit and disclose relevant information on their interface with nature, we hope to gain better insights into their location-specific risks, dependencies, and impacts. Until then we will use third-party data sets and company-reported information to identify where our portfolio companies have activities in sensitive locations. The relevant findings from these analyses may inform our ownership and risk management work.

Risk & Impact Management

Identification and assessment of dependencies, impacts and risks
We use a suite of complementary tools to identify and assess financially relevant nature-related risks that affect the companies in the fund's portfolio.

We currently have four systematic processes that help us identify and follow up on companies with high ESG risks, including nature-related risks: regular pre-screening of companies entering our equity benchmark index, daily monitoring of ESG-related incidents involving portfolio companies, quarterly screening of the fund's portfolio and benchmark, and assessments of specific themes, such as deforestation risks at commodity-producing companies. See "Risk management" chapter in our responsible investment report for further details.

We also conduct annual assessments of portfolio companies' sustainability disclosures and practices related to the management of nature-related risks. These analyses are grounded in our expectation documents and use a range of data points from company disclosures to determine to what extent they are meeting our expectations, and to identify the weakest performers. See the "Dialogue chapter" in our responsible investment report for further details.

In addition to these analyses of individual portfolio companies, we have performed a preliminary assessment of the portfolio's dependencies and impacts at a sector level. The findings are discussed under "Metrics and Targets" below.

Management of dependencies, impacts and risks
Market level
Standard setting: We believe that credible and comparable information about how companies impact and depend on nature will help all market participants evaluate nature-related financial risks and integrate them into their decision making. We engage with standard setters and regulators to strengthen rules and standards for corporate sustainability reporting, and advocate for mandatory environmental and social due diligence. We actively support the development of globally scalable tools that make it easier to manage nature-related risks, such as the TNFD framework. Our expectation documents on nature-related topics are updated regularly to reflect the latest developments in science, market practices and norms. These documents serve as an important foundation for our ownership activities and risk analyses, and for communicating our views and priorities to the market.

Portfolio level
Risk-based divestments: Impacts and dependencies on nature may lead us to divest from companies which we believe are highly exposed to nature-related risks. See "Metrics and Targets" below and the "Risk-based divestments" chapter in our responsible investment report for more details.

ESG integration: The mandates for our portfolio managers require them to take ESG considerations into account in their analyses, including financially relevant nature-related risks. Portfolio managers have a good knowledge of our expectations on governance and sustainability matters and discuss these issues regularly with companies. To ensure consistent ESG integration in line with our expectations, they also collaborate closely with our stewardship and sustainability experts. See the "Investments" chapter in our responsible investment report for more details.

Company level
Ownership: This is a key tool in our management of nature-related risks. We believe that our engage-to-change approach will yield the best financial results for the fund and contribute to better market practices. We meet companies regularly to discuss their approach to nature-related risks. During 2023, we had five active thematic dialogues linked to either biodiversity and ecosystems, ocean sustainability, or water management, involving 54 portfolio companies We use our voting rights to promote the fund's long-term interests. We support well-founded shareholder proposals on nature-related issues. We may also withhold our support for board members at companies with material failures in their oversight, management and disclosure of environmental risks. We publish our voting records and information on our company engagements on ESG topics on our website.

Ethical exclusions: Companies may be excluded from the fund's investment universe under ethically motivated guidelines for observation and exclusion. These include companies that contribute to severe environmental damage, such as deforestation, degradation of critical habitats or decimation of endangered species. The companies are assessed by the independent Council on Ethics, while the decisions are taken by Norges Bank and made public. At the end of 2023, 24 companies had been excluded from the fund on the grounds of their contribution to severe environmental damage.

Metrics and Targets

Dependencies and impacts
The activities of our portfolio companies can have significant impacts and dependencies on nature, exposing them to physical and/or transition risks. We expect companies to understand these impacts and dependencies, and integrate these considerations into their governance, strategy, risk management and disclosures.

To increase our understanding of impacts and dependencies of the companies across the equity portfolio, we have applied the ENCORE tool[3]. The tool maps production processes within each sector to the ecosystem services they depend on and the natural resources that they impact. This mapping provides a useful starting point for more detailed analysis to inform our risk management and ownership activities. Details of the tool,

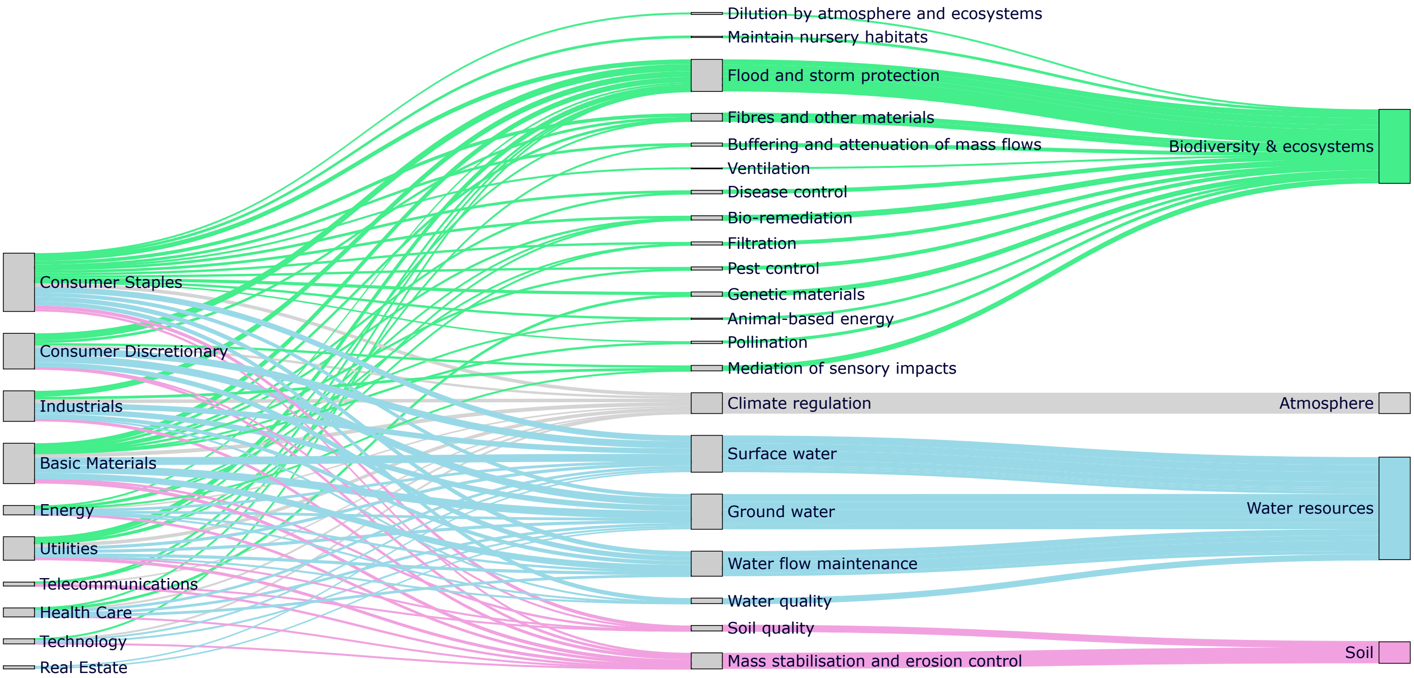
[3] Natural Capital Finance Alliance (Global Canopy, UNEP FI, and UNEP-WCMC) (2023). ENCORE: Exploring Natural Capital Opportunities, Risks and Exposure. Available at: https://encore.naturalcapital.finance

as well as the underlying data and methodology, can be found below under "Supplementary Information".

Figure 1 illustrates how sectors in our equity portfolio directly depend on products and services provided by nature. The analysis suggests that the consumer staples, consumer discretionary, basic materials and utilities sectors have a significant number of business processes linked to ecosystem services and natural capital assets. Loss or degradation of these assets could disrupt these processes, potentially leading to financial losses for companies in these sectors. Figure 1 also shows that many processes across the sectors we invest in rely on access to water resources and healthy, biodiverse ecosystems. This aligns with our ownership priorities as reflected through our expectations and engagements on water management and biodiversity and ecosystems.

While sectors such as technology, telecommunications and health care appear to have fewer processes that involve high ecosystem dependencies, this assessment does not cover companies' value chains. There may therefore be significant dependencies that are not included here.

CHART 1: Sector dependencies on ecosystem services.

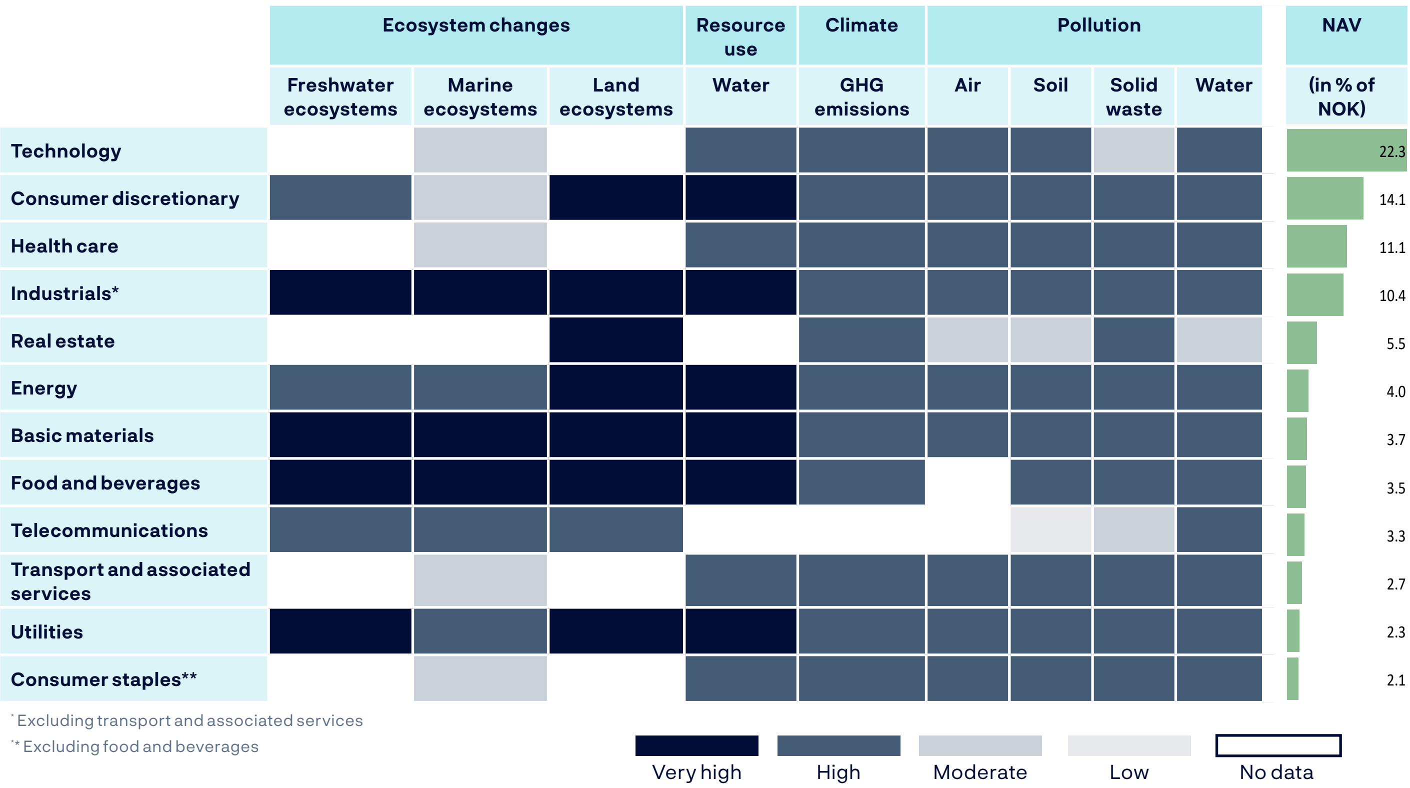


Source: ENCORE and internal calculations. Note: Chart only includes processes that depend moderately, highly or very highly on ecosystem services. The thickness of the lines represents the number of processes.

The heatmap in Figure 2 provides an overview of the equity portfolio's exposure to sectors that are considered to have direct impacts on nature through their production processes. The heatmap indicates that the majority of sectors in our portfolio include business processes with high or very high direct impacts on the natural environment. Industrials, energy, food and beverages, and utilities sectors appear to have high or very high impacts through water use and ecosystem conversion in particular. The majority of the sectors in our portfolio appear to have high impacts through greenhouse gas emissions and various forms of environmental pollution.

Note that the shading of the heatmap is based on the process with the highest materiality ratings in each combination of sector and nature loss driver. As a hypothetical example, even if just one of five business processes in the consumer staples sector is rated by ENCORE as having a very high impact on land ecosystems, the overall shading for the sector will still indicate a very high impact on land ecosystems. This approach helps identify the most significant impacts for further analysis. However, in aggregate it may overstate the magnitude of our portfolio companies' overall impacts on nature. A more detailed discussion of selected sectors can be found below under "Supplementary information".

CHART 2: Heatmap of impacts, sectors sorted by net asset value (NAV)



Source: https://github.com/NBIM/sys_sustainability_data/blob/develop/tnfd/Encore_mapping.ipynb

The dependency and impact analyses presented above are limited to direct effects only and do not account for potential interdependencies between different ecosystem services and natural capital assets. Additional research on value chain linkages to sectors with material direct exposure, and on the interplay between natural capital and business operations, could lead to different or more nuanced conclusions. While the ENCORE analysis is a useful first step, more detailed analysis of sectors and individual companies is needed to support our ownership activities and risk management processes.

Other metrics

Market level

Standard-setting engagements: In 2023, we responded to four public consultations from regulators and standard setters where nature-related reporting was a topic. We emphasised the relevance of nature-related risks as a financially material investment issue, and the importance of interoperability between the emerging frameworks and standards in this field.

Portfolio level

Risk-based divestments: From 2012 to 2023 we divested from 75 companies where the primary motivation was linked to heightened risks related to impacts on biodiversity and valuable ecosystems, ocean sustainability, or insufficient water management. In addition, we divested from 190 companies where the primary motivation was climate-related risk, of which 60 were related to deforestation risks. Of the 86 divestments made in 2023, 5 were related to insufficient water management and 3 were related to impacts on biodiversity and ecosystems.

We track and publish the impact of risk-based divestments on the equity benchmark in our responsible investment report.

Company level

Engagements: In 2023, we engaged with a total of 229 companies on nature-related issues, representing 16 percent of the market value of the equity portfolio. Biodiversity was discussed in 73 meetings, water management in 61, ocean sustainability in 27, deforestation in 46 and the circular economy in 213. See the "Dialogue" chapter in our responsible investment report for more details.

Voting: In 2023, we voted against the re-election of board members at three companies that did not report or manage nature-related risks adequately. In all three instances we attempted to engage with the company to raise our concerns prior to voting, but did not receive a response or see meaningful change in disclosures.

Ethical exclusions: In 2023, Norges Bank excluded one company under the environmental criterion, bringing the total number of companies excluded under this criterion to 24. Since 2006, ethical exclusions due to severe environmental damage have increased the cumulative return on the benchmark index for equities by around 1.1 percentage point.

Targets

The management objective of the fund is to achieve the highest possible return subject to acceptable risk. The mandate from the Ministry of Finance does not set specific environment-related targets for how the fund is to be invested, but underlines the importance of responsible investment, noting that a good long-term return is considered to depend on sustainable economic, environmental and social development.

We also have a stated goal for our portfolio companies to align their activities with global net zero emissions in line with the Paris Agreement. As part of this, we expect companies to take action in the short term to eliminate deforestation and natural ecosystem conversion from their business activities and/or value chains – see our expectations on biodiversity and ecosystems for further details. Our expectations also call on companies to take into account the targets of the Kunming-Montreal Global Biodiversity Framework. We emphasise our expectations in our ongoing dialogue with companies.

We will further develop our approach to financially relevant nature-related risks, as our understanding of the nature-related impacts and dependencies of the companies in our portfolio grows and we will update our stakeholders regularly on our progress.

Supplementary information

Methodology for assessing portfolio dependencies and impacts
Based on available data and research, the ENCORE tool maps how the economy impacts and depends on natural resources. The database links the production processes in a sector and sub-sector to natural resources and rates the materiality based on existing literature and data.

A production process' dependency is rated according to how important the ecosystem service is to it, and how it would be impacted if the service was disrupted. It considers two factors; the loss of functionality, and consequent financial loss. For instance, an ecosystem service that receives a "very high" rating will be considered to cause severe functional and financial loss and is likely to be irreplaceable. In our dependency analysis, we have included the production processes which are "moderately", "highly" and "very highly" dependent on different ecosystem services.

The impact rating considers how a production process could potentially impact a natural capital asset. It considers the frequency of the impact, resilience of the natural capital to the impact, and the severity of the potential impact. A process that is given a "very high" rating will be expected to continuously impact the natural capital asset and cause major, irreparable, and long-lasting damage within a year's time. In our heatmap we show the maximum materiality rating within each sector. We have not included the impact drivers "other resource use" and "disturbances" in our heatmap.

A substantial share of the production processes is not rated. This can be due to lack of data availability or that the production process does not have a link to the natural capital asset. As the reasons for missing values are ambiguous, we treat all non-available information as missing, for the purposes of our illustrative analysis.

ENCORE is currently using the GICS sector classification for sector and sub-industry and self-defined production processes. We have mapped the ENCORE sectors to ICB industries to ensure consistency with our

TCFD reporting. We have based our mapping between the GICS and ICB classifications on TNFD recommendations and our own assessments. We did not include the financial sector in our analyses, as ENCORE does not include indirect dependencies and impacts.

The analysis provides a starting point for an industry-level assessment of the portfolio but has certain limitations that are important to be aware of when considering its outputs. The data is only based on potential dependencies and impacts, not actual ones. The ratings do not differentiate between a production process which is taking place in a sensitive location, from one in a non-sensitive location. Lastly, ENCORE currently only considers direct impact and dependencies, effectively excluding production processes within a sectors' value chain. For more information on the limitations of ENCORE, see the organisation's descriptions of limitations and materiality. Given those limitations, our analysis can inform the direction of our research and high-level assessments, however, more granular analysis is needed to facilitate direct application in risk management, investment management or active ownership activities.

Deep-dive on selected sectors

The largest sector in our portfolio, technology, is classified as having moderate impact on marine ecosystems. Technology is also characterized by substantial water usage, and generally contributing to a high degree to both climate change and environmental pollution. According to ENCORE, the impact on marine ecosystems is mainly driven by distribution of technology by ships, which can lead to increased erosion along coastlines and shorelines. Pollution is driven by a large share of different technology subsectors, whereas water use is mainly driven by semiconductors and subsectors that are dependent on server farms. Water use by semiconductors is linked directly to the production process, which requires large volumes of water. Semiconductors constitutes around five percent of the equity portfolio's net asset value.

The industrials, energy, food and beverages, and utilities sectors are characterized by high or very high impacts on ecosystems and very high water use. Together, these sectors constitute 20 percent of our equity portfolio's net asset value. The share of production processes with very high or high impact within each sector is shown in Table 1. Only a smaller fraction of the production processes within industrials are associated with high or very high impacts related to ecosystem changes. The same applies to food and beverages and utilities for marine ecosystem changes. On the other hand, more than 50 percent of production processes within each of the four sectors are associated with high or very high water use.

TABLE 1: Share of production processes within each sector with high or very high impact on ecosystem and water use.

	Ecosystem changes			Resouce use
	Freshwater ecosystem	Marine ecosystem	Terrestrial ecosystem	Water use
Industrials	16%	16%	16%	74%
Energy	56%	33%	67%	78%
Food and beverages	33%	17%	58%	58%
Utilities	38%	13%	44%	69%

Source: ENCORE and our internal calculations. Note: The total number of production processes includes production processes that have not been assessed. The financial materiality of individual processes has not been assessed.

Several of the sectors in our portfolio have high impacts associated with greenhouse gas emissions and environmental pollution. The sectors are included in Table 2 and account for about 37 percent of the value of our equity portfolio. For many of these sectors, a large share of the production processes has a high or very high materiality rating for both GHG emissions and other environmental pollution.

TABLE 2: Share of production processes within each sector with high or very high impact.

	Climate	Pollution			
	GHG emissions	Non-GHG air pollutants	Soil pollutants	Solid Waste	Water pollutants
Basic materials	83%	50%	57%	50%	57%
Consumer discretionary	28%	25%	56%	28%	58%
Consumer staples	57%	14%	43%	43%	43%
Energy	78%	56%	44%	56%	44%
Industrials	68%	26%	74%	37%	74%
Utilities	63%	19%	38%	19%	44%

Source: ENCORE and our internal calculations. Note: The total number of production processes includes production processes that have not been assessed. The financial materiality of individual processes has not been assessed.