White Paper on Nature and Biodiversity

September 2025

Nordea
ASSET MANAGEMENT

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Introduction

Biodiversity loss is a systemic risk and one of the biggest global challenges of our time. As nature is being depleted at rates unprecedented in human history, and as we face the irreversible loss of flora and fauna, habitats and vital crops, biodiversity is an increasingly important topic[1].

Research by the World Economic Forum (WEF) has found that USD 44 trillion of economic value generation – more than half of the world's total GDP – is moderately or highly dependent on nature and its services[2]. At the same time, WEF estimates that nature-positive transitions could generate up to USD 10.1 trillion in annual business value and create 395 million jobs by 2030[3].

As the largest asset manager in the Nordics, Nordea Asset Management (hereinafter "NAM", "we", "us" or "our") acknowledges our role in attempting to halt biodiversity loss and channelling capital flows towards nature-positive solutions. Since the last iteration of this report, we have strengthened our approach to nature and biodiversity risk assessments, target setting, and active ownership. We have been working actively with our portfolio companies to address biodiversity and nature challenges since we endorsed the UN Principles for Responsible Investment in 2007[4], and we continue to enhance our capabilities in this critical area. This includes a specific focus on measuring and identifying the impacts and risks on nature and biodiversity associated with our investments and engaging with our investee companies, policy makers, academia, clients and other stakeholders on this topic.

1) Source: IPBES. "Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-policy Platform on Biodiversity and Ecosystem Services". Zenodo, May 4, 2019. 2) Source: World Economic Forum. 3) Source: European Commission, The Economics of Ecosystems and Biodiversity. 4) Descriptions of active ownership activities in this document refer to actions taken on behalf of the funds managed by Nordea Investment Funds S.A. and Nordea Funds Ltd. Depending on specific client requests, such actions may also be taken on behalf of clients to whom Nordea Investment Management AB provides portfolio management services, subject to individually negotiated agreements.

Nature and Biodiversity

The concept of biodiversity encompasses the tremendous array of species, genetic diversity within species, and the diverse ecosystems that exist across Earth. As a fundamental component of nature, which includes all of Earth's systems and processes, biodiversity plays a vital role in shaping our environment and ensuring the stability and resilience of ecosystems.

Given the complexities and interdependence associated with ecosystems, in which each species has a unique role to play, the loss of biodiversity is one of the most pressing environmental challenges of our time, with approximately one million animal and plant species threatened with extinction[5]. Even the loss of a single species can have a cascading effect on an entire ecosystem by disrupting its balance, reducing its resilience and ultimately threatening a potential collapse of the ecosystem.

The loss of biodiversity, the degradation of nature as well as the threats posed towards ecosystems may impede the ability of nature to provide valuable resources such as food and materials in the future. Furthermore, in addition to these extractable goods provided by nature, we rely on various other ecosystem services to maintain and regulate our overall environmental conditions such as through the purification of air and water as well as the sequestration of carbon amongst others[6].

Recognizing the financial materiality of nature loss and degradation, we understand that biodiversity and nature related risks can manifest themselves as both physical risks, through the disruption of ecosystem services, and transition risks which manifest themselves through regulatory, market, and reputational impacts and changes. These risks can significantly impact the long-term value of our investments across various sectors.

Numerous initiatives have been agreed at the international level to respond to the risk of nature degradation and biodiversity loss. At the EU level, the European Commission has adopted an EU Biodiversity Strategy for 2030, as part of the European Green Deal. In addition to the initiatives that seek to address biodiversity directly, there are several existing or upcoming legislative initiatives that address individual drivers of biodiversity loss. These include the EU Deforestation Regulation[7] which aims to combat deforestation within supply chains, the Revision of the Packaging and Packaging Waste Directive[8] which aims to promote recycling, reduce the usage of PFAS and promote plastic substitution solutions as well as the Revised Urban Wastewater Treatment Directive[9] targeting an improvement in wastewater treatment and reducing polluted wastewater, amongst others.

The global agenda of the UN's Sustainable Development Goals (UN SDGs) also includes the protection of ecosystems and halting biodiversity loss[10]. SDG 15, Life on Land as well as SDG 14, Life below Water, deal directly with terrestrial and marine nature and biodiversity, but several other goals are intrinsically linked to halting the degradation of nature and stopping the loss of biodiversity. Thus, failing to act puts several of the goals at risk.

In 2022, the Kunming-Montreal Global Biodiversity Framework[11] was agreed at the COP15[12], stipulating certain goals and targets as a global response to the biodiversity crisis. Target 14 of the framework specifically addresses the important role of financial institutions in aligning financial flows with the framework's goals.

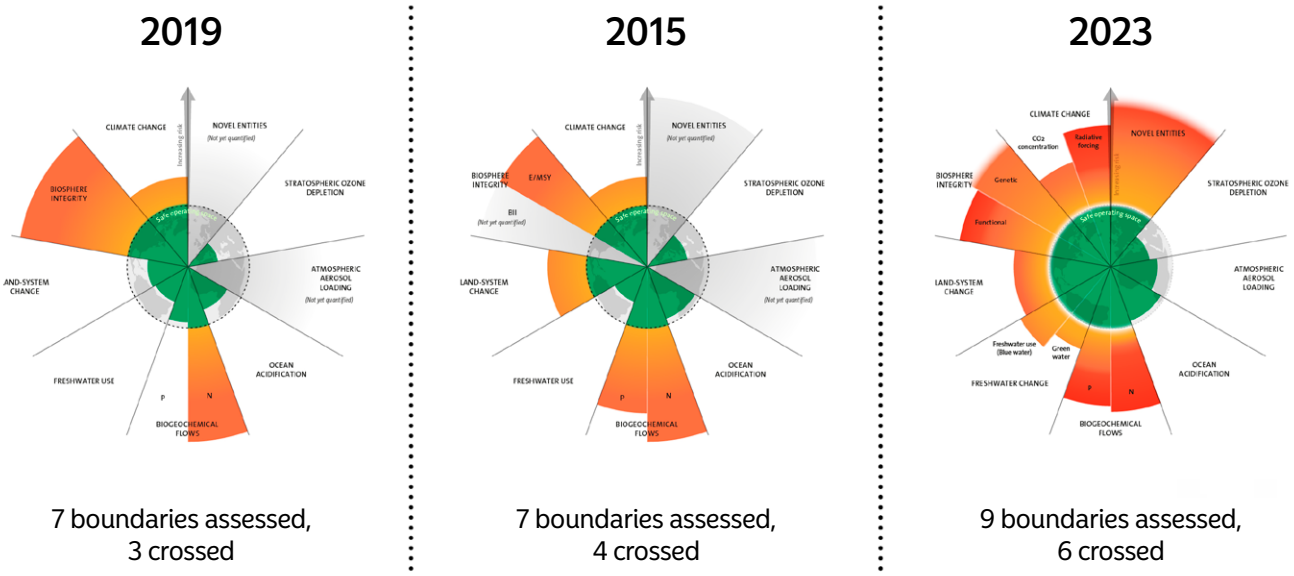
NAM is committed to helping to fulfil these targets through our investments and by engaging with investee companies.

5) IPBES. "Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-policy Platform on Biodiversity and Ecosystem Services". Zenodo, May 4, 2019. 6) ENCORE: Ecosystem Services. 7) European Commission: Regulation on Deforestation-free Products. 8) European Parliamentary Research Service (2024): Revision of the Packaging and Packaging Waste Directive. 9) Council of the EU (2024): Urban wastewater: Council and Parliament reach a deal on new rules for more efficient treatment and monitoring. 10) SDG_15 aims to: "Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss". 11) Decision adopted by the conference of the parties to the convention on biological diversity. 12) The 15th Conference of the Parties (COP15) to the United Nations Convention on Biological Diversity (CBD) refers to an international meeting that brought together governments from around the world. The CBD is the international legal instrument for "the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources", and has been ratified by 196 nations.

The nine planetary boundaries

One of the concepts for assessing various components of the intactness of Earth are the planetary boundaries. The concept refers to a set of nine critical Earth system processes or boundaries that, if crossed, could lead to irreversible and abrupt environmental changes with severe consequences for human societies and ecosystems. These planetary boundaries represent critical thresholds that must be respected to maintain Earth's stability and the conditions necessary for human civilisation to thrive. Naturally, the global economy and thus our investments tie in with these boundaries, and crossing them may thus expose our investments to risk and uncertainty. As a financial institution with global operations, we have a key role to play, not only in assessing how our investments are linked to the risk of crossing boundaries, but also in harnessing opportunities by rechannelling financial flows towards companies committed to operating within them and by actively engaging with our investee companies. By understanding and respecting these boundaries, societies can work towards achieving sustainable development and ensuring a safe and resilient planet for future generations [13].

The diagram below shows how research on the planetary boundaries has developed over the years, enabling the measurement and quantification of all the boundaries set out within the framework. In 2023, the scientists working on quantifying the framework showcased that we have already moved beyond the safe operating space for six of the nine boundaries.



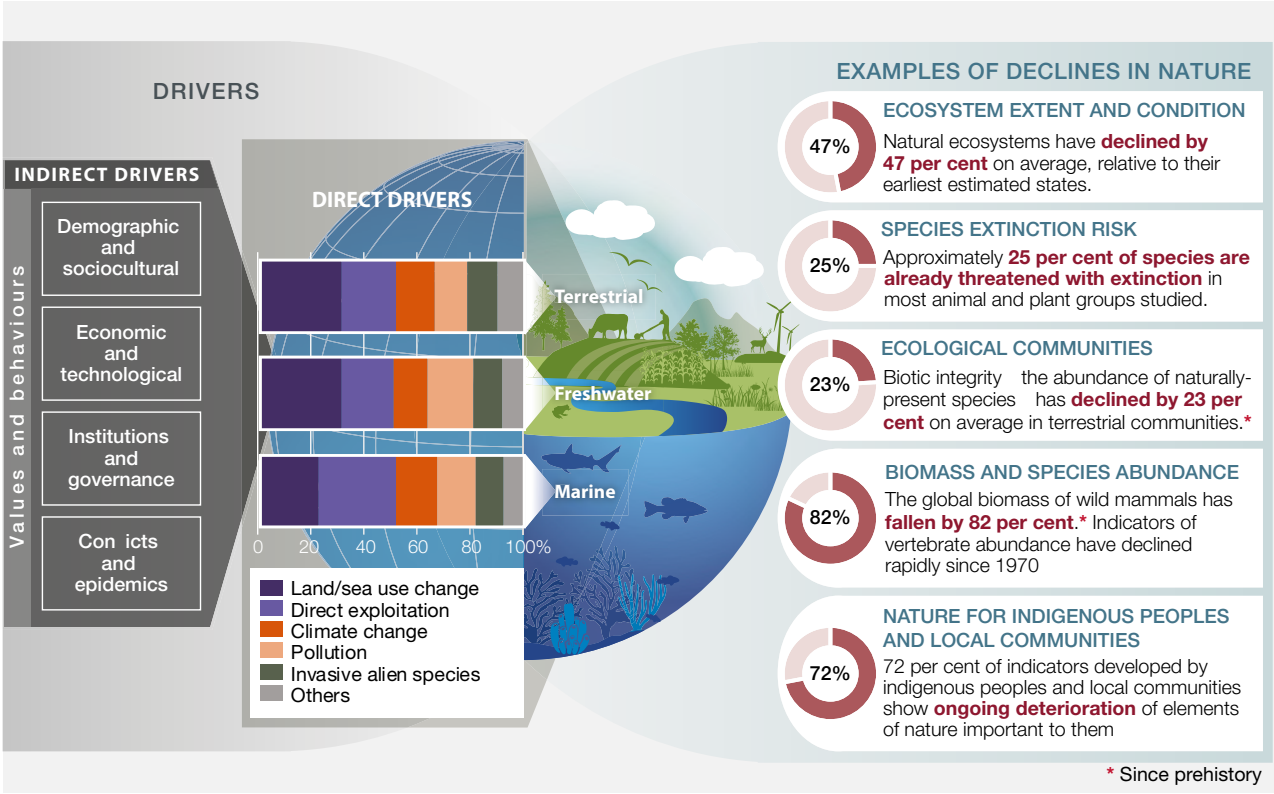
Source: Stockholm Resilience Centre: Planetary Boundaries: Azote for Stockholm Resilience Centre, based on analysis in Richardson et al 2023 – Attribution: CC BY-NC-ND 3.0.

13) Source: Stockholm Resilience Centre: Planetary Boundaries.

Drivers of biodiversity loss

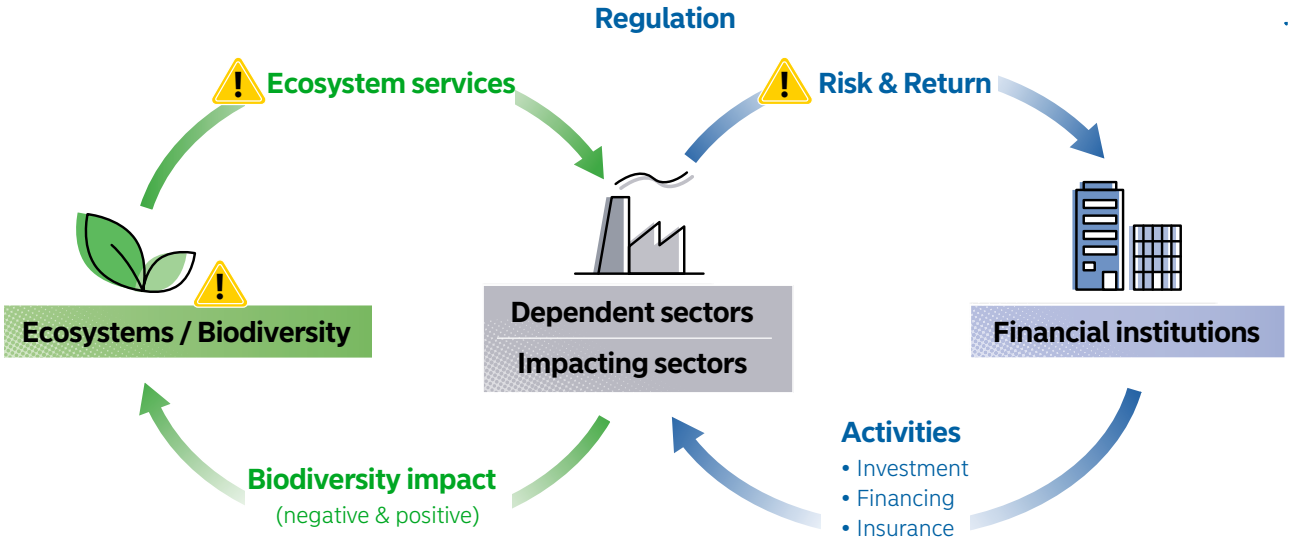
Drivers of biodiversity loss refer to the factors that directly or indirectly influence the state of and changes in biodiversity. These drivers can be natural, such as ecological processes and geological events, or a result of human activities. Understanding the drivers of biodiversity is crucial for addressing the causes of biodiversity loss and implementing effective mitigation strategies[14] .

Land change for example through deforestation linked to agricultural expansion, pollution through plastics or hazardous chemicals as well as climate change are all part of the five main, direct drivers of biodiversity[15]. It is often easier to make a clear connection from the direct drivers' impact on biodiversity and ecosystems as well as the role of economic activities within them than indirect drivers. While indirect drivers are often harder to quantify, there is undeniably a connection. Socioeconomic and demographic trends for example may influence consumption patterns and hence the environment[16] .



Source: IPBES (2019): Global Assessment Report on Biodiversity and Ecosystem Services.

14) IPBES: Models of drivers of biodiversity and ecosystem change. 15) UNEP (2023): Five drivers of the nature crisis. 16) IPBES: Models of drivers of biodiversity and ecosystem change.



Source: FfB-Foundation (Dec 2022): Act now: The why and how of biodiversity integration by financial institutions

The figure above illustrates how financial institutions are connected to ecosystems and biodiversity. Financial institutions may invest both in companies in "impacting sectors" as well as "dependent" sectors. Impacting sectors potentially have a negative impact on biodiversity which in turn may lead to adverse impacts on companies in the dependent sectors that rely on ecosystem services for their products or services. Understanding this dynamic will allow financial institutions to properly incorporate the respective biodiversity risks into their investment decisions, which can protect the value of investments for unitholders.

Reporting on double materiality means that companies have to report not only how sustainability issues might give rise to financial risks for the company (financial materiality), but also the company's own impacts on people and the environment (impact materiality). For example, Company A may report that reduced pollination from bees could have a financial impact on its future earnings through decreasing crop yields. On the other hand, Company B might report that its product could have an adverse impact on bees' ability to pollinate.

As a responsible investor, NAM considers the principal adverse impact of investment decisions (that is, the environmental and social impact of investment activities) and sustainability risk (that is, the material negative impact of ESG issues on the value of investments) so as to capture the full scope of the double materiality concept. This is to ensure that we fulfil our fiduciary duty and contribute to sustainable development, as expected by our clients and society at large.

Nature and Biodiversity – our approach

This section describes our current activities related to nature and biodiversity and our progress in fulfilling our commitments under the Finance for Biodiversity Pledge, as well as our ambitions going forward.

As highlighted previously in this paper, biodiversity loss can have far-reaching economic implications, including reduced productivity, heightened vulnerability to climate change and loss of ecosystem services in agriculture, forestry, pharmaceuticals, fisheries and aquaculture. By recognising and valuing biodiversity, we strive to contribute to the long-term stability and resilience of the systems on which our economy and, ultimately, our investments depend. Biodiversity loss can pose significant financial risks across NAM's investment portfolios. We invest across a vast number of sectors and geographies and, consequently, our portfolio is exposed to a wide range of nature and biodiversity related risks and opportunities. To protect our assets and ensure long-term sustainability, we need to adequately assess and manage these risks. The following sections describe our progress in further analysing the potential impact of bio-diversity loss and dependencies on ecosystem services in different sectors, which helps us to make informed investment decisions and mitigate risks associated with declining biodiversity, and to focus our engagement initiatives.

Our commitment to biodiversity is set at the top. Our Senior Executive Management bears overall responsibility for defining our approach to ESG/sustainability. Senior Management Representatives, including NAM's CEO, are also members of the ESG committee[17], which oversees the strategic delivery of NAM's commitments and targets, including those on nature and biodiversity. Daily responsibility for implementing our Responsible Investment Policy and our active ownership and engagement framework is held by our Responsible Investments team.

Biodiversity has been one of our ESG focus areas for many years, and aiming to mitigate the loss of biodiversity is one of our four focus areas alongside climate change, good governance and human rights. We commit to taking potential negative effects on nature and biodiversity into consideration in investment decisions and may engage with investee companies that exhibit high nature and biodiversity risks. NAM is involved in several investor initiatives related to biodiversity and nature, which aim to educate investors on biodiversity risk, as well as support them in their risk management in this area through engagement with companies and policymakers.

Nature and biodiversity related risks and impacts, as described above, are incorporated into investment decisions through the Principal Adverse Impact Indicators, which are available to all portfolio managers and through our internal ESG scores of the companies, where biodiversity is deemed a material risk based on the SASB (now under ISSB) materiality map. Currently, few companies exhibit comprehensive reporting on nature and biodiversity related impacts and dependencies, and lack extensive risk assessments. Where relevant, NAM engages with companies, both individually and collectively, to obtain disclosures of their assessment of risks and opportunities as well as the actions they take to reduce their adverse impacts.

Following the introduction of the Sustainable Finance Disclosure Regulation (SFDR) in 2021, we have enhanced our capabilities for considering biodiversity loss drivers through the implementation and assessment of Principal Adverse Impact (PAI) indicators. The PAI indicators address several different biodiversity loss drivers[18]. The SFDR requires financial market participants to disclose PAI for investments on the basis of sustainability factors, by reporting on specific indicators, such as activities that adversely affect biodiversity-sensitive areas. We use an internally developed monitoring system to consider impact. Issuers identified as outliers on the biodiversity-related indicator may be subject to further analysis to ascertain whether they are managing their biodiversity impact adequately, as well as to assess potential additional actions such as engagement or exclusion.

Through these actions, and in our role as a responsible investor, NAM aims to capture the full scope of the double materiality concept to ensure that we fulfil our fiduciary duty and contribute to sustainable development, as expected by our clients and society at large.

Commitments under Finance for Biodiversity Pledge

NAM has been a signatory of the Finance for Biodiversity Pledge (FfB) since 2021, and is committed to protecting and restoring biodiversity through our investments by[19]:

1. Collaborating and sharing knowledge
2. Engaging with companies
3. Assessing impact
4. Setting targets
5. Reporting publicly on the above before 2025

The sections on key biodiversity initiatives and thematic engagements describe how we are currently fulfilling the first two commitments of the FfB pledge.

17) Following a firm-wide ESG project carried out in 2021–2022, in 2023 we established an ESG Committee, supported by an operational forum, to secure the governance of our ESG-related methods and principles. An ESG Operational Forum facilitates discussions and secures alignment and coordination on ESG matters across the NAM internal value chain, ensuring that the relevant decisions are brought before the ESG Committee for approval. 18) Relevant PAI Indicators: GHG emissions, impact on biodiversity, emissions to water, hazardous and radioactive waste, and high-water stress. 19) Finance for Biodiversity: About the Pledge.

To enhance our assessment of the impact of our investments, and to enable us to set targets and report, during 2023, we reviewed and assessed various biodiversity data providers. In 2024, we added an additional provider, Iceberg Data Lab, to ensure fulfilment of our commitment to assessing our biodiversity impact. This has supported us in gaining a better understanding of our biodiversity footprint on entity, portfolio and sectoral level.

Furthermore, we are introducing initiation targets, which are described below, in line with the commitments made under the FfB Pledge to work towards supporting the achievement of the Kunming-Montreal Global Biodiversity Framework's 2030 targets[20].

Initiation target

Building upon the guidance set forth by the Finance for Biodiversity Foundation, during 2024 we assessed various options for target setting on nature-related topics. Following the guidance, below we present NAM's initiation target, which focuses on governance and education aspects across the organisation, an updated impact and dependencies assessment to help determine priority areas as well as a further increase in the robustness of our approach to deforestation.

The following components of our initiation target are to be achieved by the end of 2025, and we will publicly report on the outcome thereof during 2026.

1. Governance Structure
We will implement a governance structure for our nature-related activities, outlining oversight and management responsibilities in an integrated manner with the existing governance structure for climate.

2. Education
To enhance the internal understanding of the topic, relevant members of senior management and committees in NAM as well as the NAM Board will have participated in a training on the relation between nature, biodiversity and investments. Furthermore, sessions of topical relevance will be offered to investment teams.

3. Policy Development
NAM has introduced a palm oil producer exclusion policy with specific thresholds (≥10% revenue from palm oil production, no RSPO certification target, or <50% RSPO certification)[21] . In addition, NAM is currently developing a deforestation policy screening approach with associated stewardship activities, focusing on higher-risk deforestation commodity producers.

4. Impact and Dependency Assessment
NAM will continue assessing impacts and dependencies on biodiversity: in this paper we will publish a comprehensive assessment of NAM's biodiversity impacts and dependencies using the updated ENCORE methodology while supplementing the assessment with the Corporate Biodiversity Footprint from Iceberg Data Lab.

Going Forward

At a later stage and complementing the initiation targets, FfB foresees optional monitoring targets as an interim step as well as portfolio targets focusing on priority sectors and the key direct drivers of biodiversity loss. The guidance envisions the portfolio targets, that aim to comprise various sub-targets as well as supportive stewardship actions, to be achieved by 2030.

By taking a progressive approach to target setting in line with the guidance as well as continuously elevating our capabilities and knowledge internally, we aim to continue our work on nature-related target setting as set out by our commitment to the Finance for Biodiversity pledge.

Impact, Dependency and Footprint Assessment

To enable us to improve our understanding of our biodiversity impacts and dependencies, we have mapped our holdings[22] to the 'Exploring Natural Capital Opportunities, Risks and Exposure' (ENCORE)[23] dataset. The aim is to determine:

- The proportion of our holdings that are invested in sectors with the most material exposure to impacts.
- The proportion of our holdings that are invested in sectors with the most material exposure to dependencies on ecosystem services.

Furthermore, we have supplemented this assessment using the "Corporate Biodiversity Footprint" (CBF) from the French data provider Iceberg Data Lab. While we recognize the relative nascency of nature and biodiversity data as well as the variations between methodology, output and coverage amongst others, we continuously aim to assess our exposure to impacts, risks and dependencies and will continue to follow developments within this space.

20) Convention on Biological Diversity: Global Biodiversity Framework – 2030 Targets. 21) NAM Responsible Investments Policy (April 2025). 22) Holdings: Both equity and corporate bond holdings were included in the mapping. Client mandates and Sovereign bonds were not included in the ENCORE mapping. NAM was not able to map around 0.03% of the fund holdings to GICS sectors, which resulted in these not being included in the ENCORE mapping. Around 94% of NAM's fund holdings have been mapped to ENCORE. As ENCORE only maps direct dependencies and impacts, NAM has chosen to exclude investments in the financial sector from the graphs, which represents around 26% of the mapped holdings. Including the financial sector would distort the graph due to our large exposure to the sector, while not providing any meaningful insight, as ENCORE solely maps direct impacts and dependencies. 23) ENCORE data: ENCORE Partners (Global Canopy, UNEP FI, and UNEP-WCMC) (2024). ENCORE: Exploring Natural Capital Opportunities, Risks and Exposure. [Online], [July/2024 version], Cambridge, UK: the ENCORE Partners. Available at: https://encorenature.org.

ENCORE

ENCORE is a database that highlights how businesses might be exposed to accelerating environmental change, through both impacts on nature as well as dependencies on services provided by nature[24].

Impacts are composed of, and caused by various pressures such as GHG emissions, toxic pollutants to water and soil as well as resource extraction. These pressures are linked to specific economic activities and ultimately may lead to an impact on ecosystem services and components and thus affect nature.

Dependencies, which describe how economic activities rely on nature, are classified into three categories: cultural services, which represent experiences or intangible services linked to the quality of ecosystems, provisioning services that include contributions to economic activities through the direct harvest or extraction from an ecosystem as well as regulating and maintenance services which refer to processes that abet the control and stabilization of environmental conditions such as through flood protection or water purification.

The ENCORE knowledge base was significantly updated in 2024, with improvements to its structure, industry classification, ecosystem services categorisation, and materiality assessment methodology[25].

Among these updates is the usage of ISIC economic activities which offers more granularity and a more detailed breakdown of economic sectors compared to the previous version[26]. Nevertheless and aligned with commonly used sector classifications in our industry, for this report we have utilised the GICS classification to map companies to sectors and sub-industries[27].

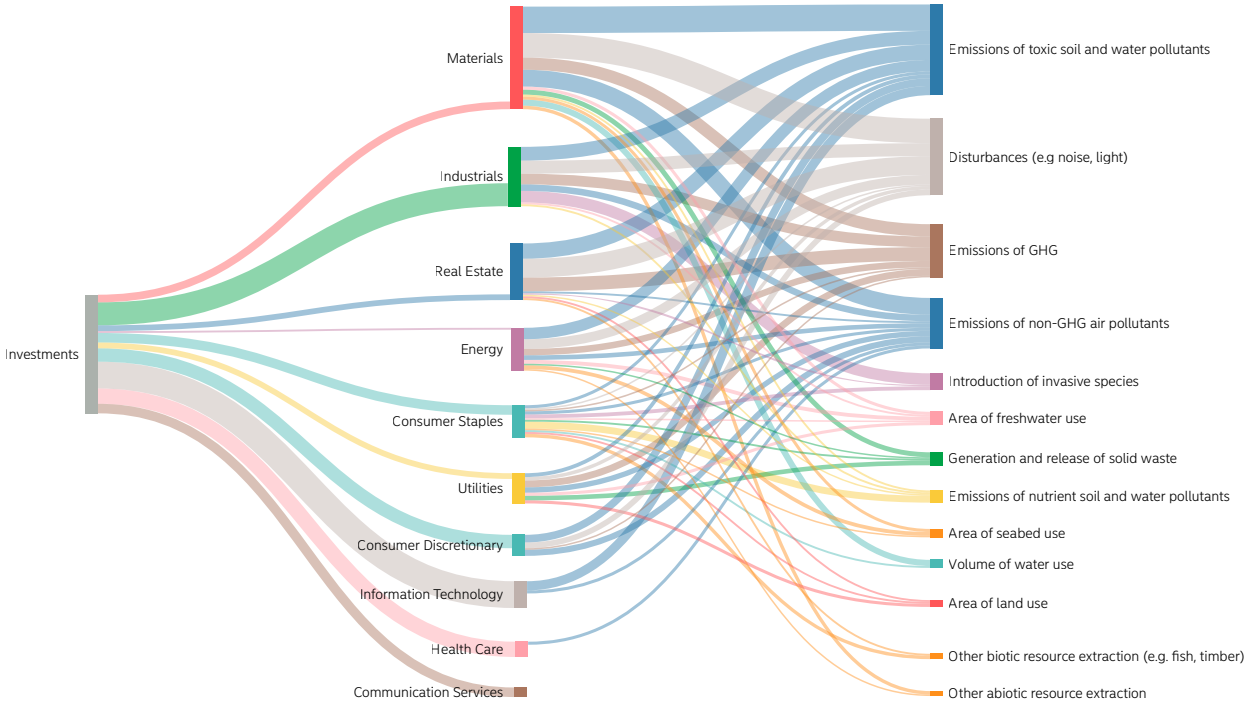
Given that companies within the same sub-industry might have different exposure to certain economic activities, we continue to use the data as an indicator of a company's potential impact and dependence, based on broader sub-industry and sector classification. In addition we recognize that both physical site locations and individual environmental management practices are highly relevant when assessing biodiversity impacts and dependencies of a given company, hence the need to supplement ENCORE with additional research and datapoints when conducting a biodiversity assessment.

Furthermore, cultural services, which represents a new category of ecosystem service was added on the dependencies side. This is an explicit addition by ENCORE to better align with the UN System of Environmental Economic Accounting and their significance is briefly laid out in the 'Dependencies' section below.

Finally, ENCORE classifies the potential materiality of pressures and dependencies in five categories (from very low to very high)[28] . To have our analysis best reflect the materiality in different sectors and sub-industries, we have decided to weight the materiality assessment[29], and to ensure the relevance and interpretability of the Sankey diagram we have only included the pressures and ecosystem services with a high and very high materiality[30].

24) https://encorenature.org/en/explore. 25) Explanatory note on the updated ENCORE knowledge base outlining business dependencies and impacts on nature. 26) Major upgrade for ENCORE launches. 27) For the purpose of the mapping, NAM has used ENCORE's mapping of ISIC to GICS mapping as well as made some manually changes to GICS sub-industries to fit the ENCORE GICS sub-industry classification. 28) ENCORE: Data & Methodology – Materiality. 29) Weighted materiality: Very high materiality = 5 and high materiality = 4. 30) The amount of sub-industries within a sector may impact the data when comparing sectors. In this report the sectors' impacts and dependencies have not been normalised, which means that we can expect sectors such as Industrials to be reflected as having a larger potential impact or dependency, compared to a sectors with fewer sub-industries such as Energy or Utilities.

Pressures (Impact Drivers)



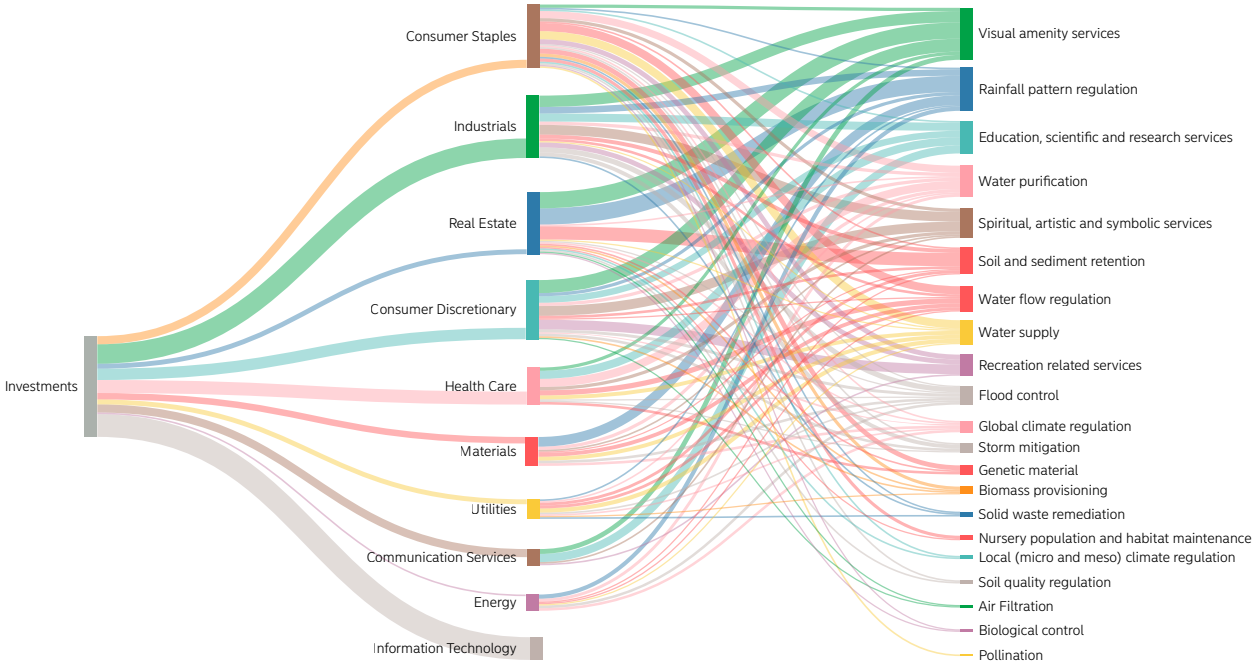
Source: NAM (holding 31.12.2024) and ENCORE (Model July 2024). Sankey diagram linking NAM exposure to GICS sectors, and the GICS sectors' link to pressures. Sectors are sorted by most exposure to weighted pressures from the top, and pressures are sorted by most weighted materiality from the top.

The diagram above indicates that around 26% of NAM's holdings are in the top three sectors with the most weighted material exposure to pressures – materials, industrials and real estate. The diagram also shows the top three most material pressures to which investee companies may be exposed to – emissions of toxic soil and water pollutants, disturbances (e.g. noise, light) and emissions of GHG.

Our assessment shows that the top three sectors are exposed both through outputs as well as inputs of their business activities. Outputs, which are related to production processes, include the emissions of toxic soil and water pollutants, disturbances (e.g. noise, light) and emissions of GHG.

24) Impact drivers are defined as a measurable quantity of a natural resource that is used as an input for production, or a measurable non-product output of business activity. Source: ENCORE: Impact Drivers.

Dependencies on ecosystem services



Source: NAM (holding 31.12.2024) and ENCORE (Model July 2024). Sankey diagram linking NAM exposure to GICS sectors, and the GICS sectors' link to pressures. Sectors are sorted by most exposure to weighted pressures from the top, and pressures are sorted by most weighted materiality from the top.

The diagram above indicates that around 31% of NAM's holdings are in the three sectors with the most material dependencies on ecosystem services – consumer staples, industrials and real estate. The diagram also shows the top three most material ecosystem services to which NAM is exposed – visual amenity services, rainfall pattern regulation, and education, scientific and research services.

As highlighted previously, during the latest update, ENCORE has added four additional ecosystem services under a new category titled cultural services, to complement provisioning services as well as regulating and maintenance services in the dependencies category[32].

Notably, all four of the cultural services sub-categories solely display "very high" materialities for their respective ISIC class and thus also feature prominently in our Sankey diagram which only focuses on the two highest materialities. Visual amenity services for example links to real estate activities but also specific services including accommodation, specific transport activities as well as tourism.

32) Cultural services include: recreation-related services, visual amenity services, education, scientific and research services and spiritual, artistic and symbolic services.

Insights

The ENCORE mapping provided useful insights, which furthers our understanding of the importance of biodiversity within our holdings.

We are using this mapping to help guide our focus within our nature and biodiversity related work both by understanding the occurrence of specific impacts and dependencies, such as water supply, within sectors as well as the respective materiality to gain a better understanding of its salience. Given that a disruption of ecosystem services[33] at the global or local level could have a significant adverse impact on a company's ability to continue its activities, it remains crucial for us to understand which services companies rely on, if they are exposed to risks and how these are mitigated.

In addition, the analysis has enabled us to discern trends on specific themes and topics. Both in the impacts and the dependencies section, our mapping showed that the topic of "water" plays a crucial role – through usage, pollution or the contributions ecosystems make to stabilize and restore its purity and quality.

We will continue to analyse the ENCORE mapping to better isolate the sub-industries within different sectors with the most material impact drivers and dependencies, to be even better positioned to derive actionable insights for our engagements activities, company research and investment decision making process.

Finally, by using the updated ENCORE methodology, we note the prominence of ecosystem services which comprise the category of cultural services. While in many cases, and also based on the description provided by ENCORE in their update, some of the services provided to specific economic activities are intangible, it provides additional insights into how economic activities may rely on various benefits provided by nature.

Iceberg Data Lab

Introduction

During 2024, we onboarded Iceberg Data Lab (IDL) as a specialized biodiversity data provider. IDL provides the "Corporate Biodiversity Footprint" which aims to quantify how companies affect biodiversity through four main pressures: land use, climate change, water pollution and air pollution[34]. In contrast to the assessment which we have conducted with the ENCORE tool, the CBF output provides us with additional insights as it is company specific and covers the entire value chain of the company.

The CBF quantifies biodiversity loss through the 'Mean Species Abundance' approach, effectively measuring the intactness of an ecosystem as a ratio between 1 (pristine rainforest) and 0 (parking lot). This is then translated into a footprint and expressed as "km^2.MSA", to highlight the loss over a given surface area. The metric can be then be interpreted as the amount of km^2 of land that are completely artificialized – for example "3 km^2. MSA can literally indicate an area of 3 square kilometers where the MSA has been reduced from 1 to 0".[35]

As highlighted, the CBF takes the entire value chain of a company into account. The model employed maps the in- and outputs of various goods and services on which a company's activities depend and then assesses how company practices may reduce the pressure of a given input, for example through the procurement of sustainable certified commodities. The activities of a company are then assessed and IDL calculates the environmental pressures of the company before translating these to impact units through pressure-impact damage functions that are based on the GLOBIO Model. Ultimately, we receive an output consisting of both absolute impact metrics but also intensity ratios (e.g. CBF/sales) to normalise for size biases.

Scope and Coverage of the Assessment

While IDL offers coverage of listed equity, fixed income and sovereign instruments, this assessment focuses solely on listed equities and fixed income. Furthermore, only Nordea branded funds were included and the holdings data, in line with our ENCORE assessment, is based on the 31st of December 2024.

Roughly 78% of our in-scope AuM[36] was covered by a CBF value. In addition, IDL provides a "Data Quality Indicator" (DQL) which ranges from 1 (company reported information) to 5 (modelling based on sectoral averages)[37] that assess the quality of entity data.

The mean value across our dataset was 2.75, while around one-third of our in-scope AuM was between DQL 1–2. We deem this to be a reasonable level of quality given the varying degree of disclosure levels of sustainability metrics apart from GHG emissions such as land use or other emission metrics. We will continue to engage and encourage companies to increase disclosure related to location-based material biodiversity and nature related information to increase the quality and thereby our understanding of risks and opportunities.

33) Ecosystem services are defined as benefits that nature provides to enable or facilitate business production processes. ENCORE: Data & Methodology - Services. 34) Iceberg: CBF Client methodological guide. 35) Ibid., p.8 36) In-scope AuM: Nordea branded funds, excluding BICS Government adjacent sectors (municipal bonds, sovereign etc.). 37) Iceberg Data Lab: Core Methodology. 1: reported metrics, 2: modelled & based on reported output, 3: modelled & based on sales by activity, 4: modelled & based on main sector's sales and 5: based on average sectorial metrics.

Distribution of Pressures and Scopes

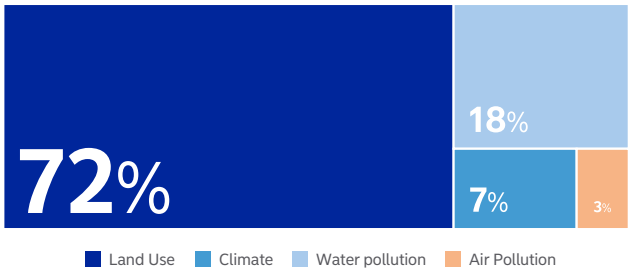
As noted, the assessment on the basis of the CBF value allows us to explore the entire value chain of a company. This gives us multiple insights into the absolute impact of the companies we are invested in (neglecting their weight, market cap, revenues etc.).

Overall, the main pressure on an absolute level is land use, where specifically scope 3 land use dominates. A deeper assessment of the top 10 contributors within this category showcases that these companies predominately have their activities in "Food" as well as "Retail & Wholesale", both of which rely on commodity inputs to provide their products and services. This is followed by water pollution representing roughly 18%, climate change with 7% and air pollution with around 3%.

Main pressures can also be further assessed to identify sectoral trends and contributors within a specific pressure. For example, the top 10 absolute contributors to the pressure of water pollution within our assessed portfolio are active in (agro) chemicals and/or pharmaceuticals. Both of these activities are associated with higher risks of emissions of pollutants, which also aligns with the activity-based materiality assessment of chemical and fertiliser production provided by ENCORE, which assigns a “very high” materiality rating to these activities under the pressure of ‘emissions of toxic pollutants to water and soil’.

We expect to further integrate ENCORE as a high-level “materiality map” with company specific information such as the CBF to better assess the performance of individual companies and guide our engagement activities.

Absolute Share of CBF exposure



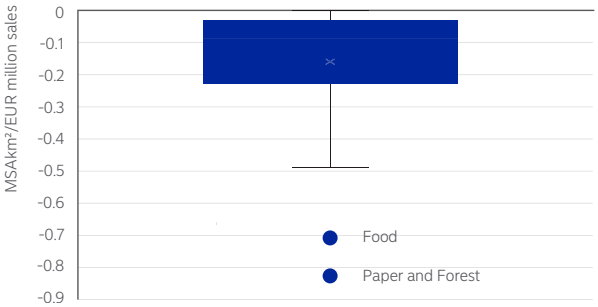
Source: Nordea AM analysis using Iceberg Data Lab: Corporate Biodiversity Footprint.

Contributors and Outliers

While assessing the absolute footprint of a company may be useful, it is also distorted by the size of a company. For this purpose, IDL provides a suite of financial ratios to normalise this size bias and also allows for comparisons between and within sectors.

To gain a better understanding and complement the impacts and dependencies assessment which we conducted using the ENCORE tool, we assessed the average intensity (CBF/sales) of our holdings within a given activity classification. Through this assessment, we aim to better understand which activities, sectors and related holdings in our portfolio are, on average, especially "intensive".

Average Sectoral Intensity



Source: Nordea AM analysis using Iceberg Data Lab: Corporate Biodiversity Footprint.

This highlights two outlier sectors, where the sales generated lead to larger impact on biodiversity as measured by the km^2.MSA: paper and forests as well as food. When taken together and assessing the absolute biodiversity footprint of the companies we are invested in, these two sectors represent around 25% of the absolute footprint.

33) Ecosystem services are defined as benefits that nature provides to enable or facilitate business production processes. ENCORE: Data & Methodology - Services. 34) Iceberg: CBF Client methodological guide. 35) Ibid., p.8 36) In-scope AuM: Nordea branded funds, excluding BICS Government adjacent sectors (municipal bonds, sovereign etc.). 37) Iceberg Data Lab: Core Methodology. 1: reported metrics, 2: modelled & based on reported output, 3: modelled & based on sales by activity, 4: modelled & based on main sector’s sales and 5: based on average sectorial metrics.

Conclusion

When using the biodiversity footprint approach as provided by Iceberg Data Lab we gain additional insights which help us measure, identify and disclose biodiversity impacts. By taking the entire value chain into account and providing company level data, we gain the benefit of being able to compare companies, sectors and portfolios and increase our understanding of which drivers of biodiversity loss are most prominent.

In addition, while the ENCORE approach allows for a higher-level assessment of the potential impacts and pressures as well as ecosystem services across sectors, there is clearly a need to further distinguish between the performance of companies within these sectors, a gap which the CBF aims to fill as presented in this section.

As highlighted above, when using a full chain approach, land use becomes the most prominent driver of loss across the portfolio, but the disaggregation between drivers also allows us to identify key contributors towards other impacts, as highlighted in the example of water pollution.

Limitations of our assessment

Assessing a portfolio, either on a broad entity level scale as we laid out above or for individual investment products to compare them to a benchmark using the CBF is a solid first step in gaining a better understanding of contributors to the biodiversity impact of investees and understanding which companies and sectors deserve more attention. Nevertheless, we recognize that the CBF does not provide nor has as its goal to provide disaggregated site-specific data or information which could further complement an assessment of risks posed to a company, or highlight activities in an area that pose a particular risk on sensitive ecosystems.

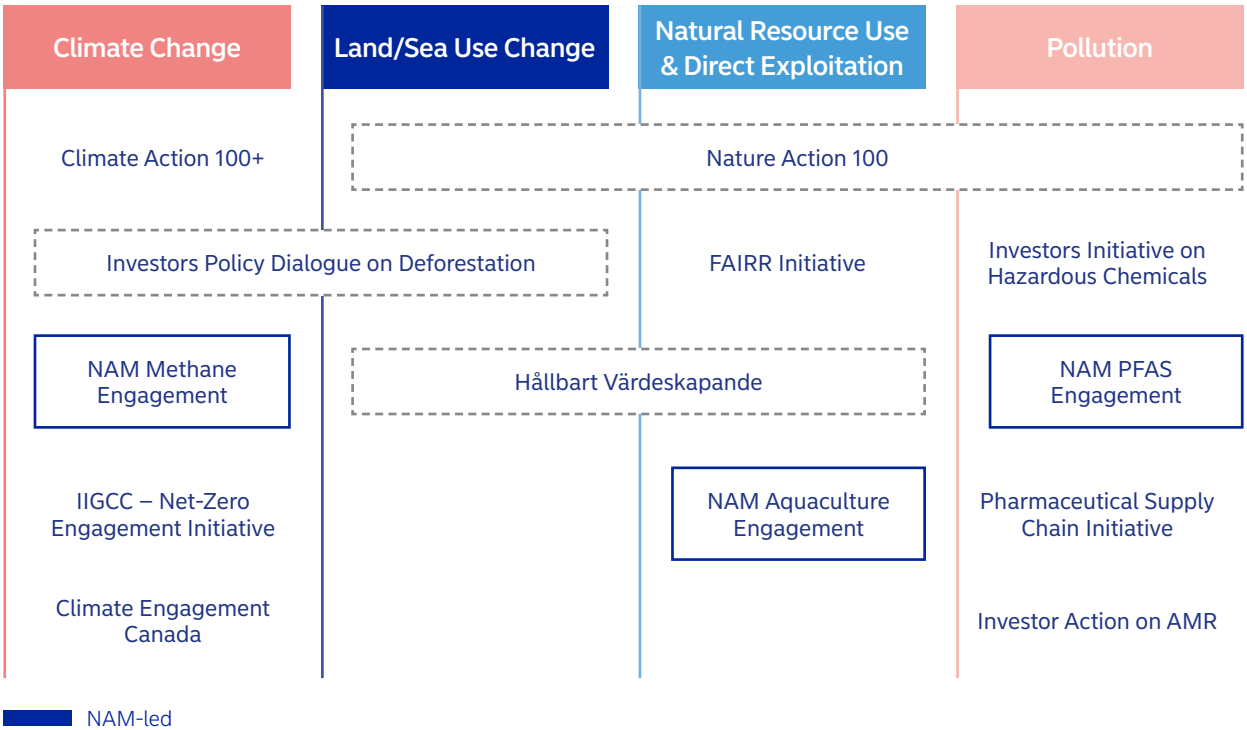
33) Ecosystem services are defined as benefits that nature provides to enable or facilitate business production processes. ENCORE: Data & Methodology - Services. 34) Iceberg: CBF Client methodological guide. 35) Ibid., p.8 36) In-scope AuM: Nordea branded funds, excluding BICS Government adjacent sectors (municipal bonds, sovereign etc.). 37) Iceberg Data Lab: Core Methodology. 1: reported metrics, 2: modelled & based on reported output, 3: modelled & based on sales by activity, 4: modelled & based on main sector's sales and 5: based on average sectorial metrics.

Active Ownership related to nature and biodiversity

As an active owner, NAM prioritises engagement as the primary mechanism to address nature and biodiversity related risks and opportunities. While academic research on the importance of biodiversity and companies' impact on biodiversity loss drivers, as well as dependencies on ecosystem services, continues to evolve, we aim to draw on actionable guidance and frameworks from external organisations to support our engagements with companies.

Through active dialogue with our investee companies, we aim to ensure that investee companies are aware of our expectations as shareholders, and further our understanding and identification of leaders and laggards.

Companies' impact and dependencies on biodiversity may differ significantly depending on the scope and location of their activities but can be broadly linked to four[38] of the main direct drivers of biodiversity loss as defined by IPBES and highlighted in a previous section. Examples include companies with exposure to commodities that are linked to deforestation for land-use change, the production of hazardous chemicals and emissions to soil and water for the driver of pollution as well as the exploitation of natural resources for example in the pulp and paper industry or fisheries. NAM is involved in numerous thematic engagements targeting these drivers, as shown in the table below.[39]



Source: NAM.

38) While invasive alien species is recognized, for example in TNFDs 2023 recommendation document, they highlight that there are not yet widely accepted metrics for these indicators. 39) For more detailed information regarding individual engagements, please see Nordea Asset Management: Responsible Investments Report 2024.

NAM's expectations of investee companies

One of the main challenges that NAM and the financial industry continuously faces in terms of assessing impact on biodiversity is the data landscape, specifically related to individual investments. While more specialized datasets and providers are coming to the market, the variety between the ultimate output as well as the maturity of disclosures persists.

In light of this, NAM encourages companies to assess their location based direct and indirect dependencies and impact on biodiversity and to begin incorporating and acting on these assessments in their businesses. NAM expects strong governance of these risks as well as mitigation commitments from the companies. We expect companies to have a strategy and to set short-, medium- and long-term targets in relation to their mitigation efforts.

Lastly, NAM expects companies to improve transparency and start reporting on their nature and biodiversity related impacts, dependencies, risks and opportunities, preferably through reporting initiatives (e.g. TNFD[40], CDP[41] or GRI Biodiversity Standard[42]). For some companies, reporting on biodiversity will also become a regulatory requirement (e.g. CSRD[43]). While many of these reporting standards are still under development, we nevertheless recommend that already now companies start assessing their impacts, dependencies and related risks and update their organisation's knowledge on the topic. These expectations are emphasized within our Corporate Governance Principles.[44]

Corporate Level Exclusions

NAM continues to work towards mitigating the risk of biodiversity loss. We do so through the engagement initiatives described in the previous section. However, we may exclude companies in which, already now, we can ascertain excessive risks to nature and biodiversity, which are often associated with activities significantly connected to and influencing the drivers of loss.

NAM may exclude selected companies because of their involvement in activities associated with biodiversity loss drivers including climate change or mismanagement of their risks related to activities that affect nature and biodiversity[45].

- NAM excludes companies with substantial and sustained exposure to coal mining, with a 5% revenue threshold on thermal coal and a 30% revenue threshold on total coal (including metallurgical coal) . Furthermore, companies with more than 50 MT annual production of thermal coal without a coal phase out commitment are excluded[46].

- NAM excludes electric utilities without a commitment to phase-out coal by 2040 (35% revenue threshold for advanced economies, 50% for others)[47] . Companies with coal power expansion plans if existing coal power revenue exceeds 10% or coal capacity e xceed 5GW[48]. Companies with coal expansion plans of > 1 GW.

- NAM excludes companies with substantial and sustained exposure to oil sand with a 5% revenue threshold. The extraction of oil from oil sand is the highest cost and most carbon-intense hydrocarbon.

- NAM excludes companies with exposure to oil and gas extraction through arctic drilling.

- NAM does not invest in palm oil producers that do not have an RSPO certification target for their holdings estates. Furthermore, companies which have an RSPO target, but do not meet a minimum of 50% RSPO certification are also restricted.

In addition to the threshold and activity-based investment restrictions, NAM has excluded several companies because of their exposure to deforestation in tropical forests such as the Amazon or in Indonesia.

Investment strategies focusing on specific areas such as climate, environment etc, may encompass additional exclusions as part of the investment objective. These exclusions are product-specific.

40) Taskforce on Nature-related Financial Disclosures. 41) CDP (2022): Bridging the SDG Data Gap for Biodiversity and Nature. 42) GRI: Topic Standard for Biodiversity. 43) European Commission: Corporate sustainability reporting. 44) Nordea Asset Management: Corporate Governance Principles 2025. 45) See NAM's RI Policy (April 2025) & NAM's exclusion list. 46) A coal phase out commitment encompasses a public commitment to ending production of thermal coal or coalfired electricity generation by 2040 latest. 47) Advanced economies are defined by IEA as the OECD regional grouping plus Bulgaria, Croatia, Cyprus, Malta and Romania. 48) Expansion plans includes projects that are announced, pre-permitted, permitted or under construction and which will result in new coal-fired power capacity of at least 100 MW prorated.

Outlook

The importance of understanding nature and biodiversity risks and opportunities will continue to grow within the coming years. The continued decline in nature and biodiversity creates various risks to companies and the financial sector such as physical risks, transition risk and systemic risk.

As a globally active investor, it's of utmost importance to further increase our understanding of the impacts and dependencies related to our portfolio companies and the potential financial implications of nature degradation or a disruption to ecosystem services on which investee companies may rely.

Therefore, one of our overarching expectations is, and will continue to be, for investee companies to conduct location based impact and dependencies assessments and publicly disclose the results thereof. Furthermore, we believe regulatory and legal risks could be two of the mechanisms through which nature transition risks can manifest themselves. As a result, on regional and national level, we continue to follow regulatory developments which aim to stem drivers of loss such as pollution, including through PFAS regulation both in the United States as well as the ongoing discussions within the European Union and how companies prepare and respond to these changes and their mitigation efforts to reduce their negative impacts.

In addition, despite the delay of the EU Deforestation Regulation, we expect companies to maintain their commitments to combatting deforestation throughout their value chains and have been encouraged that some larger brands and retailers have re-emphasized the importance of the regulation. In light of this, one of our key objectives is to further enhance our assessment and the addressal of deforestation risk within our portfolios, in line with the goal laid out in our initiation target.

The dependencies assessment conducted on our investment portfolio, highlighted water as one of the most material aspects to consider. Taking this into account, we will continue to increase our knowledge and focus on various water-related topics including its availability, physical water risk as well as water pollution. One area we are currently increasing our attention towards is the water usage in data centres and within the big tech ecosystem.

We will also continue to focus our efforts and attention on addressing the drivers of nature loss and dependencies of our portfolio companies, through engagement, collaboration in various initiatives as well as continued attention to methodologies and datasets that enable us to better understand, assess and disclose the risks, impacts and dependencies associated with our investments.

Key RI Nature and Biodiversity Initiatives

Investor iniatives

Finance for Biodiversity Pledge

In 2021, we sharpened our focus on biodiversity by joining the Finance for Biodiversity Pledge – a commitment from financial institution signatories to protect and restore biodiversity through their finance activities and investments. Being part of this initiative has enabled us to work together with other investors and financial industry participants to set standards linked to biodiversity. In 2023, we actively participated in several working groups of the Finance for Biodiversity Pledge.

Hållbart Värdeskapande (Sustainable Value creation)

Hållbart värdeskapande, is a collaborative initiative between Sweden's largest investors which was initiated already in 2009. The overall aim has been to acknowledge the importance of enhancing listed companies sustainability agenda and practices.

Investor Initiative on Hazardous Chemicals (IIHC)

In 2022, we joined the Investors Initiative on Hazardous Chemicals (IIHC). This is an investor-led initiative that encourages chemicals companies to improve transparency and halt the production of "forever chemicals". The aim of the IIHC is to reduce adverse impacts from hazardous chemicals and the financial risks with which they are associated. Chemical pollution ranks as the third greatest cause of biodiversity loss, more so than climate change[49]. Ecologists now warn that failing to account for the negative impacts of chemical pollution will significantly undermine measures to protect biodiversity and reverse the current loss.

Investor Policy Dialogue on Deforestation (IPDD)

A driver and sometimes a direct cause of biodiversity loss is deforestation. NAM is a founding and Management Committee member of the Investors Policy Dialogue on Deforestation (IPDD), which was established in 2020 as a collaborative engagement aimed at initiating and coordinating public policy dialogue on halting deforestation in selected countries. The IPDD seeks to ensure long-term financial sustainability of investments in the countries in which members are invested by promoting sustainable land use and forest management and respect for human rights.

Nature Action 100

In 2023, NAM joined more than 200 institutional investors, representing USD 26.6 trillion in assets under management, in Nature Action 100 (NA100) – an initiative focusing on companies that are systematically important to reversing nature and biodiversity loss. The initiative has entered its engagement phase, starting with dispatching letters to 100 targeted companies that have been identified as critical for biodiversity protection and restoration. There are six actions that investors will call on companies to take concerning the areas of Ambition, Assessment, Targets, Implementation, Governance and Engagement, which are addressed in the letters. Related to the six actions are a set of indicators that will be used to assess the nature-related ambitions and actions of the initiative's 100 companies. NAM is participating in several NA100 corporate engagements.

49) ChemSec (2023): This is the secret cause of biodiversity loss.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