



Biodiversity Guidelines

Shaping a sustainable future

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Biodiversity

The United Nations (UN) Convention on Biological Diversity describes biodiversity as the diversity of all living organisms, habitats and ecosystems on land, in fresh water, in the oceans and in the air.

Biodiversity is defined as a triad:

- Diversity of ecosystems, for example forests, lakes, moors, coral reefs
- Diversity of species, i.e. the spectrum of all existing plants, animals and micro-organisms
- Genetic diversity within species

Terms such as diversity of species or biological diversity are often used interchangeably. However, the concept of biodiversity is broader than the concept of diversity of species. The latter is simply a measure of the number of species. Strictly speaking, diversity of species is only one aspect of biodiversity.

Objective of the Biodiversity Guidelines

The aim of this document is to explain our approach to biodiversity and to define our understanding, the basic framework and the tools for addressing the topic in our portfolios and activities, and to identify further steps.

These guidelines supplement our [Sustainability Code](#), the [Guidelines for Responsible Investment](#) and our [climate strategy](#) and specify how to handle biodiversity aspects for securities and real estate investments and within Union Investment itself.

Given the correlation between climate change and loss of biodiversity, we are as committed to protecting biodiversity as we are to mitigating climate change.

Our overarching approach to responsible investment takes account of relevant aspects in the design of our products. We integrate biodiversity risks into our investment process and continually review investment decisions for significant positive and negative impacts in relation to biological diversity.

Relevant biodiversity topics are regularly assessed through our environmental management system using context analysis and environmental aspect analysis and, where appropriate, needs for action are derived.

We are aware that the topic of biodiversity is associated with a high level of complexity. We are therefore still at the beginning of the integration, but we are striving to improve our performance in this area on an ongoing basis, in dialogue with the industry, with science and with non-governmental organisations (NGOs).

Biodiversity is important

Biodiversity is the basis for the provision of ecosystem services such as clean air, clean water, soil fertility, crop pollination and climate regulation. Ecosystem services are defined as the advantage, benefit or profit that human society can derive from ecosystems and which have a significant influence on the well-being and quality of life of individuals. Biodiversity is therefore a crucial basis for human well-being and economic activities. For example, plant and animal species and the associated genetic diversity contribute to resistance to disease and thus to securing our basis of alimentation.

Despite their importance to our economy and our lives, monitored populations of vertebrates (mammals, birds, amphibians, reptiles and fish) have declined since 1970 by an average of **69 %**. Populations in Latin America and the Caribbean are most affected. Global freshwater species are also disproportionately affected, with an average decline of 83 %. In addition, biodiversity is an essential part of ecological cycles. The example of bees is often cited, without whose pollination services a large number of plants would not survive and the food supply for animals and humans would therefore be significantly restricted.

The rapid loss of species we are experiencing today is estimated by experts to be between 1,000 and 10,000 times the natural extinction rate. Only 23 % of our planet's land mass can still be described as "wilderness", i.e. areas where no industrial activities take place. Wilderness areas do not grow back once they are gone. It is clear that biodiversity in large parts of the world is already below the planetary levels set by ecologists.

These losses of individual species or entire ecosystems can trigger unexpected consequences that significantly affect the balance of complex nature.

Climate change and loss of biodiversity are inextricably linked. An example of existing dependencies is the draining of peatlands, which leads to both the loss of specific species and the release of greenhouse gases. The additional greenhouse gas emissions exacerbate climate change, which in turn affects peatland ecosystem services. Plants and soils in terrestrial ecosystems ensure that an estimated 9.5 billion tonnes of CO₂ equivalents are absorbed every year – corresponding to a good third of the CO₂ emissions emitted by humans – but some measures with a one-sided focus on climate protection or climate adaptation also have negative consequences for biodiversity.

The main drivers of any losses are:

- **Change in land use:** if a habitat shrinks or changes due to human activities, for example through forest clearance, construction or repurposing, or intensification of agricultural use, it loses some or all of its species population. Since 1990, around 420 million hectares of forests (an area the size of India and Pakistan) have been lost through conversion to other land uses. Agricultural expansion remains the leading cause of deforestation, forest degradation and loss of forest biodiversity.
- **Direct persecution and overexploitation:** overgrazing, overfishing and uncontrolled hunting or gathering degrade ecosystems, resulting in a loss of species.
- **Climate change:** changes in species areas as a result of climatic changes are, in principle, a natural process. What is threatening about human-induced climate change is the extreme pace of change, which is overwhelming the ability of many species to adapt.
- **Invasive species:** invasive species compete with naturally occurring species for habitat and resources. As a result, they can displace other species or entire communities of species.
- **Input of environmental toxins and pollution:** the pollution associated with human economies puts a strain on ecosystems. Residues of chemicals from production and use in agriculture and forestry can be found in natural ecosystems and those influenced by humans. Impacts on natural communities are difficult to estimate. The entry of nitrogen and phosphorus into ecosystems through human activities plays a particular role in the decline of species, as this creates ecological advantages for certain nutrient-loving plants over others.

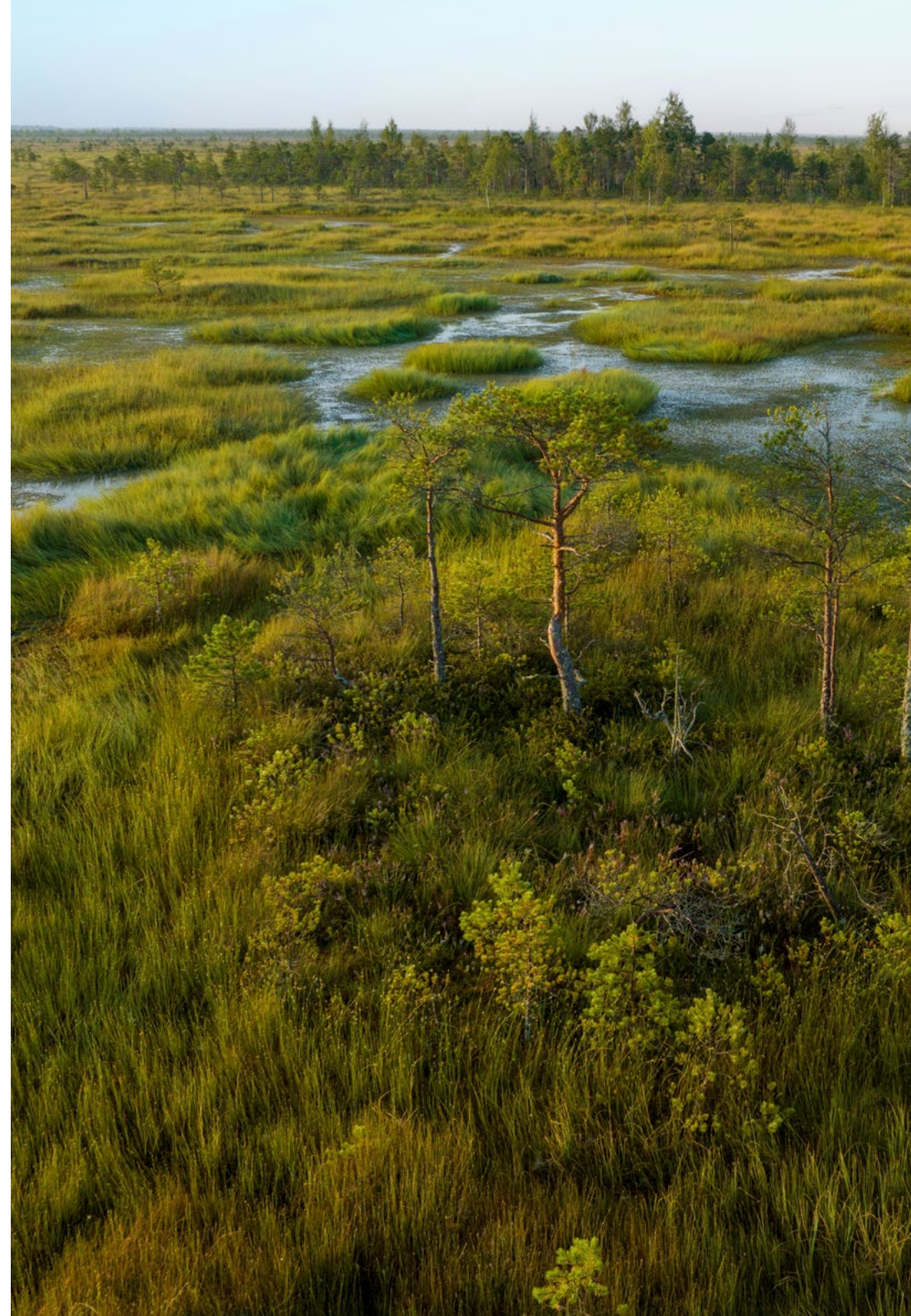
Source: Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), www.bmu.de

Global and European regulatory trends

To take these relationships into account, representatives from 188 countries adopted a new agreement on 19 December 2022 at the UN Biodiversity Conference in Montreal, Canada, which is intended to serve as a guide for global action to protect nature. The agreement, the Kunming-Montreal Global Biodiversity Framework (GBF), aims to halt and reverse the loss of biodiversity through a set of specific goals and targets. Its cornerstone is the goal of designating 30% of the world's land area and 30% of the world's oceans as protected areas by 2030.

As part of the European Green Deal and the Biodiversity Strategy for 2030, European Union (EU) lawmakers reached a political agreement in November 2023 on a law to restore nature. The regulation, which has not yet been finally adopted, provides for taking restoration measures that cover at least 20% of the EU's land and 20% of its marine areas by 2030 and all ecosystems in need of restoration by 2050. An EU regulation on deforestation-free supply chains also came into force on 30 June 2023 and is to be applied from 30 December 2024.

Furthermore, the international Taskforce on Nature-related Financial Disclosures (TNFD) has published its final recommendations on nature-related financial reporting after two years of work. The TNFD is a global, market-oriented initiative designed to create a risk management and disclosure framework that enables organisations in all sectors and across the value chain to report, assess and act on evolving nature-related risks and opportunities. The overarching goal is to redirect global financial flows from nature-negative outcomes to nature-positive outcomes. Similarly, in May 2023, the Science Based Targets initiative released the first Science Based Targets for Nature (SBTN) for organisations to address the global challenges of nature loss by balancing scientific rigour and feasibility.

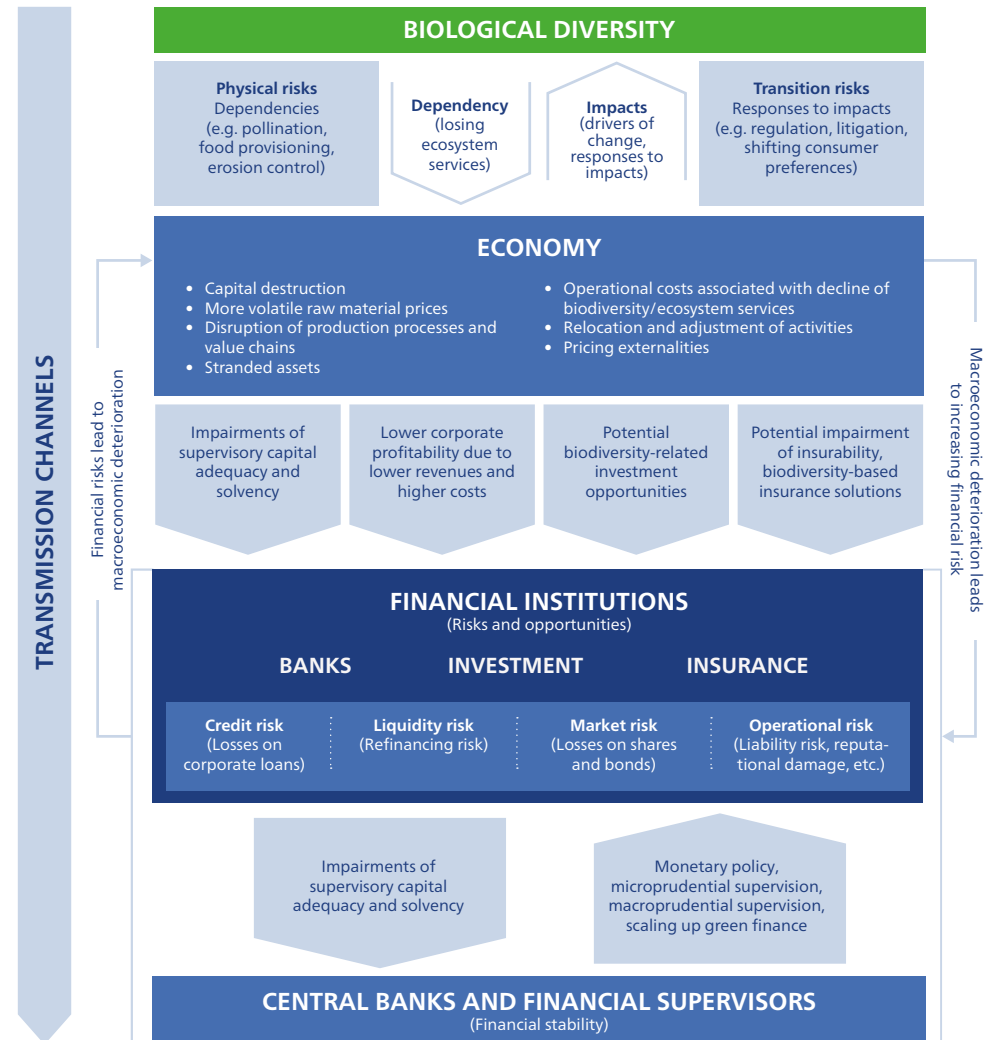


The importance of biodiversity for us as investor

The preservation of biological diversity is of overarching interest. Only with intact ecosystems can the health of our planet, which forms the basis of our existence, be maintained. Between 50 and 60 percent of global economic output depends on functioning ecosystems and the associated services of nature. Biodiversity also strengthens the ability to adapt, for example to climate change.

A company's ability to create value is destroyed by the collapse of ecosystem services. For portfolio managers, this manifests itself as physical and transition risks. Operational disruptions, capital destruction and collateral erosion due to the temporary and physical impacts of biodiversity degradation are transformed into financial risk, which takes the form of credit risks (increase in loan defaults), liquidity risks (increase in refinancing rates), market risks (erosion of bond and share prices) and operational risks (increased liability and reputational damage). Because ecosystem services are interconnected and serve as inputs to broad markets, their collapse poses both a large-scale idiosyncratic and systemic risk to the financial system (see chart on the right).

As a long-term financial investor, we are exposed to possible portfolio risks if natural resources are mined. As a manager of a portfolio that is diversified across various sectors and markets, we at Union Investment also have investments in companies from sectors that heavily rely on intact biodiversity. Increasing interference with nature through unsustainable use of natural ecosystems can harm the long-term performance of such companies and limit our investment scope.



Adapted from: NGFS. 2021. Biodiversity and financial stability: building the case for action. NGFS Occasional Paper.

The natural risks for financial institutions can be divided into four categories:

Systemic risks

Natural systemic risks are characterised by drastic tipping points that can indirectly lead to failures and cascading interactions between physical and transition risks. Such a loss in the chain of effects prevents the system from recovering.

Physical risks

Companies rely on ecosystem services as input for operational processes. The decline in these ecosystem services can impact operations and cause additional costs.

Transition risks

Changes in the legal and regulatory environment and consumer preferences may increase costs and liability for companies that rely heavily on and impact nature.

Reputational risks

These can arise from critical opinions of stakeholders or negative reporting regarding business practices related to biodiversity.

Biological diversity as a comprehensive investment opportunity

Companies with strong sustainable product lines that preserve biodiversity are likely to be the winners of structural change. Financial institutions can also generate new revenue from biodiversity through green financial products and biodiversity offset mechanisms. Alternatively they can invest in smarter ways to reduce damage by investing in natural infrastructure (e.g. reefs, wetlands) or in nature-based solutions and carbon markets.

To reverse biodiversity decline by 2030, the world will need to spend between \$722 billion and \$967 billion each year over the next decade. This means the biodiversity funding gap averages \$711 billion per year. For comparison: this approximately corresponds to the annual gross domestic product of Switzerland. That's less than the world spends on cigarettes or soft drinks in a year. Current investments in nature-based solutions amount to between \$124 billion and \$143 billion a year, with the majority so far coming from public sources.



Our approach to protecting biodiversity

Our business activities can impact biodiversity through our decisions and actions at corporate level but also with regard to securities and real estate investments.

Biodiversity in the securities segment

In line with our comprehensive approach to integrating environmental, social and governance factors into the investment process, we analyse in detail companies that do not adhere to the following conventions or frameworks:

- Global Biodiversity Frameworks (GBF)
- UN Convention on Biological Diversity
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- UNESCO World Heritage Sites
- UN Global Compact related to the Rio Declaration on Environment and Development

Depending on the severity of the controversy, the company may be excluded from our investment universe.

Our expectations

When selecting securities and money market tools from companies as well as when purchasing investment shares, we take into account the Principal Adverse Impact (PAI), in particular through the principle of ESG integration, the application of company-wide exclusion criteria and engagement. The following PAI indicators relate to biodiversity: activities that have a negative impact on biodiversity-sensitive areas, emissions to water, ratio of hazardous waste and violations of the UNGC Principles and the OECD Guidelines for Multinational Enterprises (which also include environmental standards).

Union Investment expects the following from companies whose business models potentially have a negative impact on or are highly dependent on biodiversity aspects – particularly in the oil and gas, consumer goods, metals and mining, utilities, agriculture and real estate sectors:



Awareness and strategy

- Build up expertise and implement action plans to address material risks to and reduce impacts on biodiversity
- Set ambitious and clear goals and targets, for example a commitment to a positive ecological balance and to refraining from deforestation (particularly companies in the basic materials industry and agriculture)



Risk management

- Implement procedures and metrics to identify, assess and reduce risks and dependencies related to biodiversity in our own operations and throughout the supply chain



Governance

- Management oversight
- Adopt a biodiversity policy that covers material business areas
- Annual reporting on progress in implementing the company's commitments
- Disclosure to the CDP Forests and Water programmes
- Adopt the TNFD and SBTN

In accordance with our climate strategy, our first choice is to carry out engagement and stewardship activities with companies to reduce their negative impact on biological diversity. However, in cases where collaborating with companies we invest in does not bring about sufficient progress, we exclude them on a selective basis that is continuously reviewed.

In 2022 and 2023, we assessed the key biodiversity impacts and dependencies using the ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) tool in order to determine the sectors that should be prioritised in this context.

Based on this analysis, Union Investment's ESG team has initiated entrepreneurial engagement in the consumer staples and durable goods sectors (see [Engage!: Riskanter Raubbau](#) (available only in German)). The focus is on agricultural raw materials and the deforestation of tropical forests in connection with the food industry and the food and staple food trade. Our engagement is focused on palm oil, soya, beef and timber products as these are widely traded by companies. For this reason, between May and August 2022 we entered into dialogue with a total of 56 international companies and asked for information about action that these companies are taking to prevent the deforestation of tropical forests in their supply chains.

In June 2023, we completed the ENCORE analysis with a detailed examination of our portfolio. This study provided information about the extent to which our operations influence and depend on biological diversity.

This software application enables sector-level evaluations of how changes in the natural environment affect the economy. On the one hand, ENCORE shows to what extent individual sectors – and the associated companies – and their goods and services are dependent on biodiversity and ecosystem services. On the other hand, the impacts that the sectors have on biodiversity itself are taken into account.

The analyses demonstrate the extent to which companies differ in taking the topic of biodiversity into account.

In order to prioritise our engagement activities, we concentrate on those sectors with major impacts and dependencies in which we are most heavily involved through our investments. This happens either through thematic engagements (e.g. deforestation, sustainable proteins, plastics, circular economy) or on a case-by-case basis. When we believe it is appropriate, we also use our voting rights to strengthen our engagement.



With regard to our voting policy, we commit to the following:

- We will support shareholder proposals calling on company management to assess, report on and reduce key impacts and dependencies on nature in high-impact sectors.
- We will **vote for shareholder proposals** urging companies **not** to operate in or use materials sourced from protected areas, areas of high biodiversity or areas considered environmentally sensitive.

Biodiversity in real estate

As described above, the loss of biodiversity has a significant impact on economic activities. However, the impacts vary depending on the sector: while agriculture, for example, is heavily dependent on biodiversity, agriculture can also have a negative impact on biodiversity. In the real estate industry, dependencies are comparatively low, but the potential impacts are large. This specifically means that the construction and operation of real estate is only partially dependent on biodiversity, for example with regard to the availability of land or the production of building materials. The impact of the real estate industry on biodiversity, however, is enormous due to surface sealing, noise, dust and chemicals in the construction process, the production of building materials, construction waste, the design of real estate and outdoor facilities and the energy required for construction and operation with a corresponding climate impact. In order to reduce possible negative impacts, regulatory requirements are becoming more stringent and the pressure to act within the real estate industry is increasing.



The tenants of our commercial properties also depend on biodiversity to varying degrees depending on their field of business. This also has an impact on our existing properties.

Union Investment, as a portfolio holder and real estate asset manager for commercial properties, has identified possible impacts on biodiversity in the following areas in particular:

- Acquisition of real estate
- Real estate operations
- Tenant improvements
- Real estate design
- Outdoor facilities
- Service providers
- Tenants

With our “Manage to Green Strategy”, we have been working towards achieving climate neutrality in our portfolio¹ by 2050 for years. Biodiversity aspects are explicitly addressed in this. Environmental due diligence is carried out with every acquisition. Both the soil and the building are checked for the presence of environmentally relevant or harmful substances. When acquiring real estate for our mutual funds, we also check the “Do No Significant Harm” criteria of the Taxonomy, including the “soil fertility and below ground biodiversity” criterion. Using our “Sustainable Investment Check”, we determine and evaluate the individual biodiversity measures of the buildings both when acquiring them and on an ongoing annual basis.

Effective measures are already being implemented in many of our properties. These include, for example, biodiversity-compliant greening of roofs, planting native plants, the creation of biotopes and the building of various nesting aids. The increased presence of animals in towns and cities increases both the responsibility and scope of action for urban actors to protect biodiversity. Political framework conditions and measures taken by property owners must work together effectively.

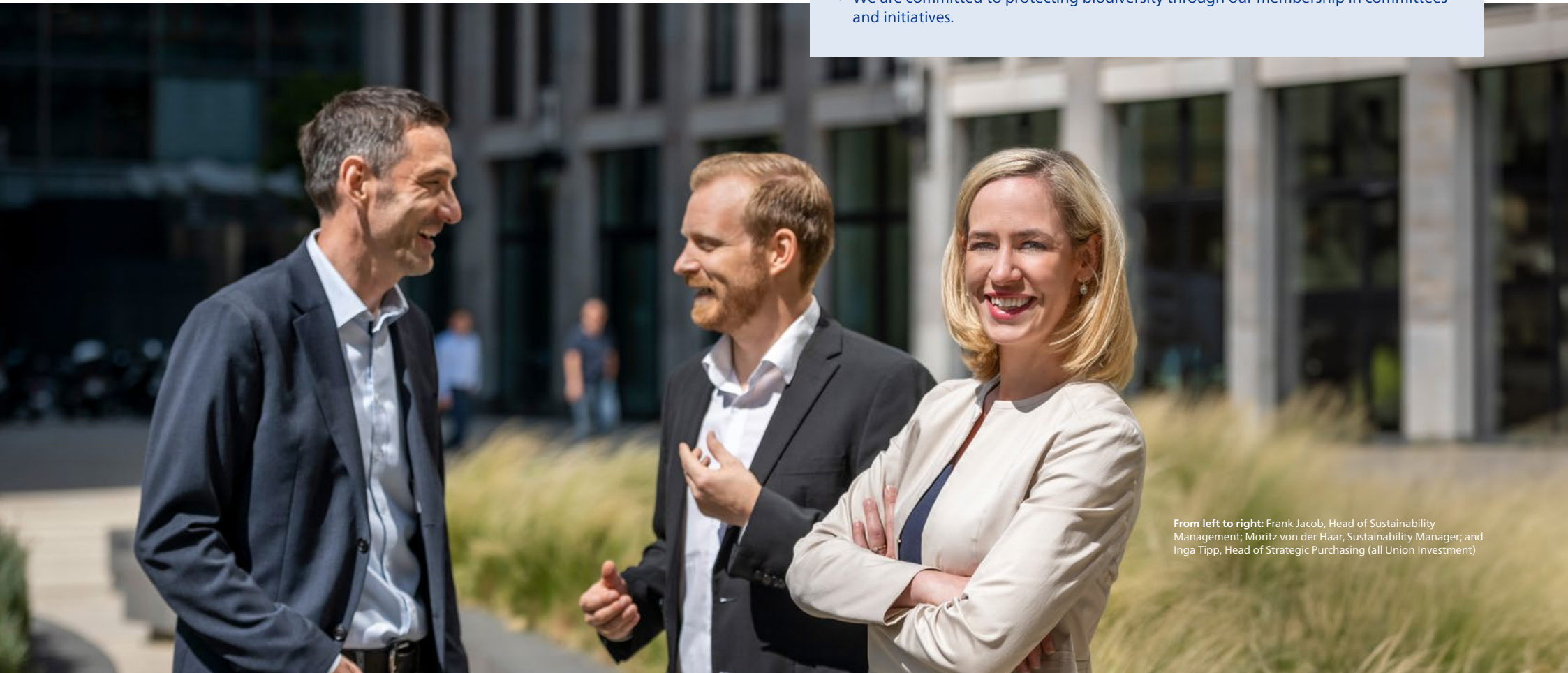
1) The sustainability strategies and tools described in this document apply to the funds actively managed by Union Investment (excluding ZBI, Quoniam Asset Management GmbH and VisualVest GmbH). We cannot influence service mandates for third parties.

Biodiversity at company level

What appears to be relevant for securities and real estate investments also applies to our own business operations and, as far as possible, takes place through procurement and building management processes. As a financial service provider that only operates in rented office space, we can only have a limited direct influence on biodiversity at company level. Where possible and expedient, we make an active contribution to protecting biodiversity through procurement and building management processes.

Specific measures are:

- Certified environmental management system in accordance with the international standard DIN EN ISO 14001, implicit consideration of the environmental aspect of biodiversity within the framework of the EMS
- We increase employees' awareness of biodiversity via the intranet and training courses.
- We are committed to protecting biodiversity through our membership in committees and initiatives.



From left to right: Frank Jacob, Head of Sustainability Management; Moritz von der Haar, Sustainability Manager; and Inga Tipp, Head of Strategic Purchasing (all Union Investment)

Participation in initiatives to preserve biodiversity

In September 2023, Union Investment officially joined the Nature Action 100 investor initiative. Similar to the Climate Action 100+ Initiative, Nature Action 100 is committed to ensuring that companies pursue more ambitious goals and take action to halt the loss of nature and biodiversity. The initiative focuses on companies in key sectors such as biotechnology and pharmaceuticals, chemicals, consumer goods retailing, food and beverages, forestry and packaging, as well as metals and mining.



Next steps

Union Investment will continue to actively monitor developments related to biodiversity and implement further projects to minimise the impact on biodiversity.

Our short-term plans include, but are not limited to:

- Implementation of the recommendations of the Taskforce on Nature Related Disclosures (TNFD) and reporting
- Integrating more comprehensive issuer-level biodiversity data to improve our investment analyses and decision-making processes
- Increasing our engagement in sectors that have a high impact on or depend on biodiversity, such as oil and gas, metals and mining, utilities and real estate
- Consideration of biodiversity criteria as part of our supplier discussions with sustainability-relevant suppliers and as part of supplier evaluation



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