AstraZeneca

Taskforce on Nature-related Financial Disclosures Statement 2024

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Introduction

At AstraZeneca, we are following the science to deepen our understanding of our relationship with nature. We depend on nature from discovery to the delivery of our life-changing medicines to patients and recognise the interconnection between business growth, the needs of society and our dependency on nature.

In 2024, we committed to early adoption of the Taskforce on Nature-related Financial Disclosures (TNFD) recommendations. This is our first report using TNFD's recommended disclosures to describe our key nature-related dependencies, impacts, risks and opportunities (DIROs), and the results of our first Locate, Evaluate, Assess, and Prepare (LEAP) assessment (described on page 4-9). In our 2024 double materiality assessment, we identified Pollution as a material nature-related sustainability topic. In our initial LEAP assessment, we identified additional, relevant DIROs which are not considered material for the Group in 2024 but are included within this report. The LEAP assessment provides us with valuable information and we will bring these learnings into our internal processes to continually improve on and monitor the results and actions taken.

We publish information on our nature strategy on our website.

Governance

Our sustainability strategy is developed by the Senior Executive Team (SET) and is approved by the Board. The Sustainability Committee monitors the execution of the strategy, including nature-related matters, overseeing our approach to communicating sustainability activities with stakeholders, and providing input to the Board and other Board Committees on sustainability matters as required. The Audit Committee is responsible for the review, controls and integrity of sustainability reporting and assurance. This includes all external sustainability reporting in addition to the Annual Report.

Our Executive Vice President, Global Operations, IT & Chief Sustainability Officer, is responsible for the overall sustainability strategy and its execution. The Sustainability Reporting Steering Committee reports on progress to the Audit and Sustainability Committees and keeps SET updated on current sustainability developments. The Climate and Nature Steering Group coordinates management of nature-related risks and opportunities and supports the Company's adaptation and resilience actions. This Group reports on progress to the Sustainability Reporting Steering Committee.

The cross-functional Natural Resources Reduction Governance Group manages our central funding available to support our ambitions for Climate and Nature. This team reviews submissions from across the business and approves funding from the following:

- Natural Resources Efficiency Fund for capital projects to drive progress on our energy, water and waste ambitions.
- Climate Adaptation and Nature Fund for nature and water stewardship projects to address risks and opportunities in strategic locations across our value chain.

Human rights

We integrate human rights considerations into our processes and practices. Our Code of Ethics, Human Rights Statement and Expectations of Third Parties require us, our partners and suppliers to respect and promote international human rights, within our own operations and wider value chain.

We are guided by international human rights principles in the Universal Declaration of Human Rights, the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work, and the United Nations Guiding Principles on Business and Human Rights, which we have committed to as signatories to the United Nations Global Compact (UNGC). We are also signatories to the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises on Responsible Business Conduct, and ILO Convention 169.

Our human rights policies are designed to ensure we consider the impact of our operations on all human rights, including the communities around us. The Guiding Principles of our global reforestation initiative AZ Forest, include requirements to involve local people in the project area and ensure common goals are developed, assess potential project risks and negative impacts and develop mitigation plans.

Strategy

Our Sustainability strategy aims to address the impact of climate change and accelerate the delivery of net-zero healthcare, proactively managing our environmental impacts and investing in nature and biodiversity.

We are pursuing ambitious science-based decarbonisation targets, aiming to achieve net zero by 2045 through our Ambition Zero Carbon strategy. Additionally, through AZ Forest we are investing in high-quality nature-based solutions. This programme intends to plant 200 million trees by 2030, contributing to climate action and nature restoration with local community involvement to maximise co-benefits.

We also aim to decouple water use and waste generation from business growth by designing out dependencies on water and raw materials where we can, and driving for responsible sourcing for those we cannot, whilst enhancing efficiency, partnerships and engaging with suppliers. We aim for a 20% reduction in site water use and a 10% reduction in site waste by 2025, as well as minimising risk of local impacts from pharmaceuticals in the environment through our Active Pharmaceutical Ingredient (API) discharge programme.

We recognise that as we make progress against these ambitions, we will increasingly face trade-offs that we must manage carefully, following the science to manage our impacts and dependencies on nature as we transition to sustainable, net-zero healthcare.

Annual progress on our targets is reported in our Sustainability Data Annex 2024, from page 4.

Pollution

Pollution comprises the introduction of pollutants into the environment which may be harmful, including to human health. For AstraZeneca, key potential pollutants include APIs and per- and polyfluoroalkyl substances (PFAS). Reduction of chemical pollution, including from pharmaceuticals, is a societal challenge as recognised by the development of a United Nations science policy panel on chemicals, waste and pollution prevention.

Delivering medicines to patients leads to pharmaceuticals in the environment (PIE), which are APIs resulting mainly from patient use and absent or ineffective removal from wastewater, as well as improper disposal of medicines and waste from production.

We have ongoing programmes and processes across the value chain to minimise the impact of PIE, as part of our ambition to lower the economic and environmental burden of healthcare, while improving health outcomes and reducing our exposure to environmental risks. To understand the risks of PIE resulting from patient use and disposal, we complete Environmental Risk Assessments (ERAs) before the approval of a new medicine and, using experimental data, identify safe concentrations of our APIs. These demonstrate that PIE resulting from most of our products pose a low or insignificant environmental risk and are unlikely to cause adverse impacts. The data meets the international standards set by regulators and summaries of the results and ERAs are published on our website. The data and safe concentrations are also utilised to manage our own and contracted manufacturing emissions, ensuring risks from our supply chain are minimised.

Product Sustainability Index

Our internal Product Sustainability Index (PSI) is a key contributor to our management of pollution through using PIE as a metric for impact under water releases. The PSI indicates a product's environmental footprint across six environmental impact categories: carbon, power, water (resource, water releases), resource use, and innovation and improvement.

EcoPharmacoVigilance

Our EcoPharmacoVigilance (EPV) approach reviews emerging science and peer-reviewed literature to inform and improve our ERAs associated with our APIs. We collate and publish relevant reported measurements of our medicines in the environment to demonstrate transparently our potential impact. Our industry-leading dashboard, where users can visualise the relative risks of our APIs that are found in the environment, is available on our website. When our APIs have been detected, in almost all cases these APIs have been shown via our EPV process to pose low or insignificant environmental risk. There can be some location-specific environmental risks for particular pharmaceuticals, especially in regions where there may be inadequate sewage treatment and high populations of people discharging waste into rivers with low-dilution conditions.

Improper disposal

Our ERAs account for disposal through worst-case assumptions about disposal of unused medicines. However, to tackle the improper disposal of unused pharmaceuticals we also encourage our patients to return unwanted medicines for safe disposal.

IHI PREMIER

As part of our commitment to drive thought leadership and innovation to manage PIE, we are the industry lead of the IHI PREMIER consortium, a public-private partnership between the European Commission and The European Federation of Pharmaceutical Industries and Associations (EFPIA). PREMIER is helping develop tools to identify potential environmental risks of APIs and make these tools and data more accessible to all stakeholders. Through our sector-wide collaborations, such as the PREMIER project, we are exploring the challenge of developing new medicinal products which are both safe and effective in patients and have less environmental impact after use. Taking environmental considerations into account in the R&D process is feasible. However, the properties which make medicines safe and effective for patients are not always fully compatible with properties which present the lowest risk in the environment. Therefore, whilst we are progressing with considerations which lower the pollution impact of new medicines, a prerequisite is the explicit recognition that patient health should not be compromised.

Potential restriction of PFAS in Europe

The European Chemical Agency is currently evaluating a proposal to ban PFAS, often referred to as 'forever chemicals' in the European Union. The proposal potentially impacts a family of more than 10,000 chemicals across many industries. However, not all PFAS present the same risks to the environment or health. PFAS are widely used in the biopharmaceutical industry, and it may not be possible to substitute all of them. Legislators have signalled a willingness to protect APIs in medicines and take a sector-based approach to the legislation. Importantly, the medical grade HFO-1234ze(E), AstraZeneca's NGP with near-zero GWP, is backed by comprehensive evidence that shows it is rapidly broken down in the environment, is non-bioaccumulative and non-toxic, and therefore does not possess the properties that are the stimulus for the legislation. Unsaturated molecules such as HFO-1234ze(E) do not fall under the definition of a PFAS by other environmental regulatory agencies, such as the US Environmental Protection Agency. We are working with authorities and relevant stakeholders to ensure the differential characteristics of HFO-1234ze(E) are recognised in the regulations and they fully account for patient needs and public health while protecting the environment.

Supply chain

Category	Description
Dependency: High impact raw materials	Our products rely on natural raw materials such as timber and palm oil. Timber is used for labelling, packaging, and shipping medicines, whilst palm oil derivatives serve as excipients.
Risk: Limited traceability of raw materials **Transition risks: Policy, Reputational**	Supply chain complexity and limited traceability of raw materials to source of origin hinder our ability to detect exposure to physical and regulatory risks. For example, palm oil and timber, which are linked to deforestation, are subject to the proposed EU Deforestation Regulation. Non-compliance could lead to fines or shipment disruptions.
Dependency and Impact: Horseshoe crab blood for endotoxin testing	To ensure the patient safety of injectable medicines there are global regulatory requirements to test raw materials, water systems, and products for the presence of endotoxins, which are a significant risk to patient safety. Until recently, the blood of horseshoe crabs has been the only ingredient suitable to make the reagents needed to perform these tests. Horseshoe crabs are found in limited areas and face pressures including fishing, pollution, habitat loss, storms and increased industrial use, leading to their decline. They are vital for the coastal food web, especially for migratory shorebirds like the Near-threatened Rufa Red Knot.
Risk: Restrictions in the use of horseshoe crabs **Physical and Transition risk: Chronic, Policy Market**	There is increasing pressure to list the US horseshoe crab under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) as a result of the species declining populations from physical risks. This could impact legislation in multiple regions and lead to disruptions in the supply chain.

Actions

Supply chain management

Through Our Approach to Sustainable Use and Sourcing of Raw Materials, we are partnering with suppliers and leveraging technologies to address traceability gaps and tackle deforestation risks and biodiversity pressures in our supply chain. Since 2022, we ensure that at least 95% of our paper-based packaging are from certified sustainable sources. We continue to work with suppliers and collect data to uphold this standard, achieving 96% in 2024.

By the end of 2025, we aim to have sustainability plans for 12 key materials of natural origin, including those under the EU Deforestation Regulation.

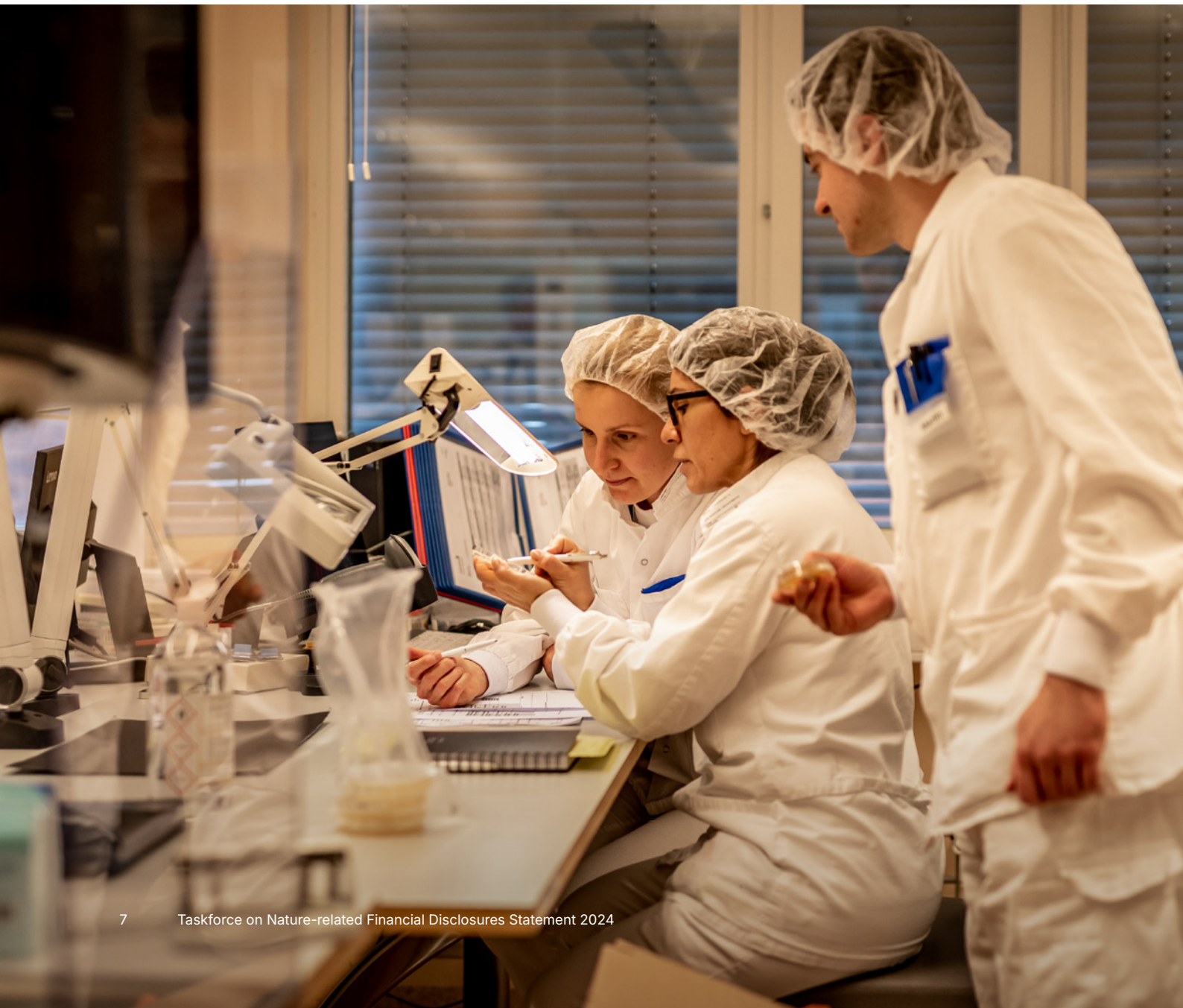
As a member of the Pharmaceutical Supply Chain Initiative (PSCI), we adhere to their principles for ethics, human rights, labour, health and safety, environment, and management systems. In 2024, we partnered with PSCI to create responsible sourcing frameworks for lactose and palm oil.

Horseshoe crabs

We are implementing a strategy following the Science-based Targets Network Action Framework, avoiding and reducing the use of horseshoe crab blood where possible. We are transitioning to more efficient water testing methods, such as implementing microfluid cartridges. Additionally, we have identified synthetic alternatives and have a programme to transition to such alternatives, where regulations permit. We continue to collaborate within our sector and local organisations to accelerate the transition to approved synthetic alternatives for testing, and to support the recovery of this species. In 2024, we entered a partnership to restore seven acres of habitat, monitoring egg abundance to assess effectiveness, and to support Rufa Red Knot monitoring.

Read more:

- Our Approach to Sustainable Use and Sourcing of Raw Materials
- Nature action case study – Horseshoe crabs



Product manufacturing

Category	Description
Dependency: Water resources	Our business depends on high-quality freshwater for developing and manufacturing medicines. We need consistent access to water for cooling, steam generation, equipment cleaning, chemical synthesis and producing biological medicines. Managing surface and groundwater is therefore key for our manufacturing sites and relevant suppliers.
Impact: Water use	Impacts from our water use can occur where our manufacturing and supplier sites are located if withdrawal volumes are poorly managed. Though our industry's water use is relatively low compared to other sectors, in some areas we account for a notable share of total withdrawals, requiring careful management.
Impact: Waste and emissions to water	The materials needed for our medicines can harm the environment if not properly managed. Some hazardous materials cannot be substituted, leading to waste that is hard to reuse, recycle, or repurpose and requires special treatment. Some of the materials contain per- and polyfluoroalkyl substances (PFAS), often critical to ensure product quality and the safety of our employees. The aqueous discharges from certain manufacturing processes may contain high levels of Chemical Oxygen Demand (COD) and Biological Oxygen Demand (BOD). These discharges may also contain APIs, which could potentially impact local ecosystems.
Risk: Operations and manufacturing in sensitive areas **Physical and Transition risks: Chronic, Reputational**	The location of our sites and key suppliers may present reputational and physical risks because of land and water use. Sites situated in areas with high water risks, or within or near areas protected by legislation or key biodiversity areas, need careful monitoring to minimise the impact on local ecosystems.
Risk: New legislation to address pollution restricts use of key materials **Transition risk: Policy**	If new legislation or developments to regulation prevent future use of key materials, this could increase manufacturing costs, necessitate the development of new production facilities or processes, slow down the development of new medicines, remove existing products from the market, and in the worst case prevent new products in our pipeline from receiving approval.

Actions

We are focused on reducing the impacts of our product manufacturing. Our lifecycle assessment (LCA) programme assesses environmental impacts throughout our value chain, aiding continuous improvement and risk management. LCA data is shared within the company through our Product Sustainability Index (PSI) programme. The PSI measures a product's environmental footprint in six categories: carbon, power, water resources and releases, resource use, innovation and improvement. The aim of the PSI is to enhance environmental sustainability and drive innovation across all impact areas. We strive to assess all products against the PSI to track and improve their sustainability performance.

Water use

We monitor business continuity risks from access to clean freshwater through our Climate and Water risk assessment programme. We aim to improve water resilience based on the local context in the river basins that we depend on.

Starting in 2024, we are investing in nature restoration and water stewardship projects relevant to our value chain through our Climate Adaptation and Nature fund, initially focusing more of our efforts in the locations where we better understand risks and opportunities due to proximity to our operations.

Site emissions to water

We implement a 'Safe API Discharge' programme for both our and our suppliers' production sites in addition to complying with local emissions regulations. The programme involves calculating discharges and comparing them to target concentrations from our Environmental Risk Assessments (ERA). We use this data to manage emissions and risks. We strive for 100% compliance of our site discharges and ≥90% compliance of supplier site discharges.

Site waste management

We adopt a circular economy approach and use lean manufacturing practices to enhance efficiency and reduce waste, incorporating best practices from partners such as My Green Lab. For instance, we clean and recycle solvents used in processing to avoid incineration, reducing the reliance on virgin materials. Handling and treatment of hazardous waste streams comply with local legislation.

Management of sensitive manufacturing areas

The LEAP Assessment identified sites near ecologically important areas, including protected and key biodiversity areas. Using this data, we aim to progress our understanding of our biodiversity impacts at these sites. We require Biodiversity Action Plans (BAPs) for our manufacturing sites over five hectares in size and within 5km of an area of ecological importance. This includes assessing potential local biodiversity impacts; identifying mitigating actions and opportunities to conserve and restore biodiversity.

Legislative monitoring

We monitor proposed legislative changes and respond proactively to mitigate risks to our business. When legislation threatens medicine supply, we engage with regulators to create transition plans that minimise disruptions to patient care.

Read more:

- Targets and metrics relating to water and waste in our Sustainability Data Annex
- Our approach to Biodiversity
- Our approach to Water Stewardship
- Our approach to Pharmaceuticals in the Environment
- Our EPV Dashboard

Risk and impact management

We strive to embed sound risk management in our strategy, planning, budgeting, and performance management processes. The Board defines the Group's risk appetite. This enables the Group, in both quantitative and qualitative terms, to judge the level of risk it is prepared to take in achieving its objectives.

Within each SET function, leadership teams discuss the risks the business faces. Quarterly, each SET function assesses changes to these risks, new and emerging risks and mitigation plans. These are assimilated into a Group Risk Report for the Board, Audit Committee and SET. Global Compliance, Finance and Global Internal Audit support the SET by advising on policy and standard setting, monitoring, and auditing, communication and training, as well as reporting on the adequacy of line management processes as they apply to risk management.

Identify, assess and prioritise nature-related DIROs

The identification and assessment of nature risks form part of our existing risk management processes and covers our value chain and direct operations, which is integrated into group risk mapping. Nature risk assessments are used to inform the enterprise of specific risks and opportunities posed by nature and/or the transition to a nature positive economy. We conduct annual risk assessments of our supply chain and direct operations as part of our risk management framework. Each business area is responsible for managing identified nature risks related to its area.

LEAP assessment

In 2024 we conducted a LEAP assessment in line with TNFD's recommendations. The assessment was based on current visibility of our interfaces with nature and covered a selection of existing priority commodities used within our raw materials, including our understanding of traceability, key suppliers, our direct operations focusing on priority sites and our downstream value chain. Locations in scope were assessed using geospatial data to provide a location-specific analysis. The assessment was conducted by a cross-functional team of subject matter experts, informed by our existing knowledge of environmental topics across our value chain, and tools such as the SBTN High Impact Commodity List and ENCORE, a tool which supports understanding of different sectors' exposure to natural capital-related risks.

The assessment posed multiple challenges, and ensuring access to data and traceability will be a long-term challenge, which we will work to address through partnerships and technological solutions. We are disclosing our key findings to date across our value chain and will endeavour to continue using the LEAP methodology to further assess and deepen our understanding of our interfaces with nature so that we can prioritise well-informed action.

Management of nature-related DIROs

In common with other risks, where nature risks have been identified, they have been assessed using the company's risk assessment scale and mitigations and controls, such as those described in this report, and implemented as required. For more details on our risk management, see page 64 in the 2024 Annual Report.

Integration into risk management processes

Identified risks at corporate level are cascaded throughout the organisation. Business unit management have responsibility for risks in their area. Risks identified at local level are managed locally and escalated to functional and/or enterprise level if significant, in line with our established risk management framework. One of the benefits of our approach is that risk can be identified at any level within the company. Moreover, by assessing risks consistently across the company, we can identify the most important risks to the company and deploy appropriate mitigations.

Metrics and targets

We monitor our nature-related performance through metrics for climate change, pollution and resource use, see pages 4-8 in our Sustainability Data Annex. As we continue to learn from TNFD's recommendations, additional metrics including TNFD's core global and core sector metrics will be considered.

Performance against our nature-related targets directs our strategy for managing our nature-related DIROs. Targets for our environmental sustainability areas of focus, including Ambition Zero Carbon, Product sustainability and Natural resources cover climate change, pollution and resource use, described on pages 4, 6 and 7 in our Sustainability Data Annex.

Glossary

API: Active Pharmaceutical Ingredient

BAP: Biodiversity Action Plan. AstraZeneca sites over five hectares in size and within 5km of an area of ecological importance are required to maintain a BAP

DIROs: Dependencies, impacts, risks and opportunities

EFPIA: The European Commission and the European Federation of Pharmaceutical Industries and Associations

ENCORE: a tool which supports understanding of different sectors' exposure to natural capital-related risks

ERA: Environmental Risk Assessment, completed before the approval of new medicines

Excipients: an inactive substance that serves as the vehicle or medium for a drug or other active substance

IHI PREMIER: Innovative Health Initiative Prioritisation and risk evaluation of medicines in the environment consortium, a public-private partnership between the European Commission and the European Federation of Pharmaceutical Industries and Associations (EFPIA).

LEAP: Locate, Evaluate, Assess and Prepare. Methodology recommended by TNFD for identifying key interfaces with nature.

PIE: Pharmaceuticals in the Environment

PREMIER: Prioritisation and risk evaluation of medicines in the environment

Science-based targets Network (SBTN) High Impact Commodity List (HICL): a non-exhaustive list of the most common environmental impacts associated with the production of major commodities

TNFD: Task-force on Nature-related Financial Disclosures, voluntary disclosure framework