Environmental, Social and Governance

We want to contribute to a world with enhanced quality of life for everyone. That is why we have firmly anchored sustainable and responsible conduct into our corporate purpose, our strategy, our targets and our operational business.

The **impacts of our business activities** on the areas of environmental, social and governance are important aspects of our general opportunity and risk management (see page 173). We contribute to sustainability and to the **United Nations' Sustainable Development Goals** (SDGs) in many ways (see page 49). For instance, our innovations, products and technologies help to use natural resources more efficiently, meet the demand for food, enable climate-smart mobility, reduce emissions and waste, or increase the capabilities of renewable energy. At the same time, we cause CO_2 emissions, use water and source raw materials from suppliers, which may involve a potential risk of violating environmental, labor or social standards. This is why we are constantly working to broaden our positive contributions to key sustainability topics (see page 49) along our value chain and reduce the negative impacts.

We are committed to doing business in a **responsible, safe and resource-efficient** way. Our actions are guided by our corporate values and our global Code of Conduct. With our comprehensive management and monitoring systems, we want to ensure that we act in line with the applicable laws and uphold our responsibility to the environment and society. We require our business partners to comply with prevailing laws, regulations and internationally recognized principles. To discuss critical issues and, if needed, develop solutions together, we seek dialog with our stakeholders. We are also involved in numerous sustainability initiatives to drive forward sustainability both in general and specifically in relation to our value chains.

Overview of the chapters on environmental, social and governance

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Environmental

Environmental protection is one of the most important global challenges of our time. We see it as part of our corporate obligation to preserve the natural foundations of life for future generations. Our core business – production, processing and transportation of chemicals – therefore demands a responsible approach. Our aim is to minimize the impact we have on the environment along the entire value chain. This also includes protecting the climate and using increasingly scarce resources as efficiently as possible.

In this section:

Our Management and Control Systems

GRI 2, 3, 303, 403

In order to minimize negative impacts and protect the environment, a holistic approach and continuous monitoring are essential. That is why we have established comprehensive management and control systems. Our Responsible Care Management System comprises the global directives, standards and procedures for environmental protection, health and safety.

Responsible Care Management System

BASF is actively involved in the International Council of Chemical Associations' global Responsible Care® initiative. Our Responsible Care Management System covers the environmental protection, health and safety aspects that we have identified as material (for more information on health and safety, see page 143 onward). Environmental protection is particularly relevant for the procurement and transportation of our raw materials, the production at our plants, activities at our sites and warehouses, as well as distribution of our products. The Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center defines Group-wide management and control systems and monitors compliance with internal requirements as well as legal regulations, while the sites and Group companies implement these requirements locally. Our global network enables information and insights to be shared across the BASF Group on an ongoing basis.

Our policies and requirements are continuously updated. This is why we also maintain dialog with government institutions, associations and international organizations. We set ourselves ambitious goals for environmental protection (see page 41). We regularly review our performance and progress with audits. In the 120 audits conducted in 2023, we took a risk-based approach. We assess the potential risks and weaknesses of all our major activities – from research and development to production and logistics – and the potential effects of these on the environment. Worldwide, 132 BASF production sites are certified in accordance with the international environmental management standard ISO 14001 (2022: 132).

For more information on Responsible Care®, see basf.com/en/responsible-care
For more information on our Responsible Care audits, see page 101 and 131
For more information on supplier management, see page 158

Costs and provisions

We continually invest in reducing the impact of our actions on the environment. We also establish appropriate provisions for environmental protection measures and the remediation of active and former sites.

For more information, see Notes 9 and 22 to the Consolidated Financial Statements on pages 251 and 288

Costs and provisions for environmental protection in the BASF Group

Million €

	2023	2022
Operating costs for environmental protection[a]	1,162	1,305
Investments in new and improved environmental protection plants and facilities[b]	321	270
Provisions for environmental protection measures and remediation[c]	948	946

a Operating costs include costs entirely used for environmental protection as well as pro rata costs for environmental protection in production plants, energy generation facilities and laboratories.
b Investments comprise end-of-pipe measures as well as integrated environmental protection measures.
c Values shown refer to December 31 of the respective year.

Energy and Climate Protection

GRI 2, 3, 201, 302, 304, 305

As an energy-intensive company, we take responsibility for the efficient use of energy and global climate protection and are committed to the Paris Climate Agreement. The transformation of BASF toward climate neutrality is a challenge. We are determined to follow this path and become a pioneer in low-emission chemistry.

At a glance

16.9 million metric tons
Scope 1 and Scope 2 greenhouse gas emissions[1]

2.6 TWh
Electricity from renewable energy

- Ambitious emission reduction targets
  – Net Zero Accelerator unit promotes measures
- New Scope 3.1 target[3] to reduce raw materials procurement emissions
  – Supplier CO_2 Management Program for suppliers
- Corporate and product carbon footprints create transparency

Strategy and governance

Our products and solutions contribute to reducing greenhouse gas emissions in many areas. At the same time, we are working to significantly reduce our CO_2 emissions[2] along the value chain. This creates opportunities for our business activities: Thanks to our transformation toward climate neutrality, we can increasingly offer our customers products with a reduced product carbon footprint (PCF). However, emissions from our production, our energy procurement and our upstream and downstream value chain have a negative impact on the climate. Climate protection is therefore very important to us and is an important part of our corporate strategy. Climate scenarios are incorporated into the strategies of our business units. We continuously analyze short and long-term opportunities and risks for our business operations arising in connection with the topics of energy and climate protection as part of our opportunity and risk management (for more information, see page 182 onward).

We are pursuing **ambitious climate protection targets**. In addition to the targets for reducing our emissions from production processes (Scope 1)[1] and the purchase of energy (Scope 2)[1], we set ourselves a target for reducing our specific raw materials-related emissions (Scope 3.1)[3] in the reporting year (see "Global targets"). Based on increased transparency and data availability, we will be able to steer our upstream emissions, which make up the majority of our total emissions along the value chain, in a more targeted manner in the future. We have extended our long-term target of achieving net-zero greenhouse gas emissions by 2050 and are striving toward this target for Scope 3.1 in addition to Scope 1 and 2 (see page 104).

To reduce our greenhouse gas emissions and demand for fossil raw materials, we are focusing on the following measures:

– **Renewable energy:** We are increasingly meeting our electricity needs from renewable sources (see "Energy supply").

– **CO_2 abatement:** We are taking targeted measures to avoid CO_2 emissions: These include lower-emission steam generation (see "Energy supply"), the development of new technologies (see "Climate-smart technologies") and continuous measures in the area of operational excellence (see "Energy efficiency").

– **Circularity:** We are increasingly using renewable and recycled raw materials as well as raw materials based on the use of CO_2 in order to move from linear value creation to closed material cycles (see "Raw materials" from page 121 onward).

2030 targets

-25%
Reduction in our absolute Scope 1 and 2 greenhouse gas emissions[1] compared with 2018

-15%
Reduction in our specific Scope 3.1 greenhouse gas emissions[3] compared with 2022

2050 target

Net-zero
Greenhouse gas emissions by 2050 (Scope 1, 2[1] and 3.1)

We only consider external offsetting measures for our Scope 1 and Scope 2 emissions[1] as a temporary solution in the medium term if our activities do not make the desired contribution to reducing emissions. We bundle measures to achieve our Scope 3.1 target[3] primarily in purchasing-specific measures (see box on "Managing our emissions in the value chain," page 106).

By adjusting our **organizational structures**, we have created the conditions for implementing our climate protection targets and the measures that contribute to them in a focused and swift manner: The Corporate Center's Environmental Protection, Health, Safety and Quality (EHSQ) unit, which reports to the Board of Executive Directors, develops Group-wide requirements and guidelines for collecting emissions and energy data and for energy management. It conducts regular audits to monitor the implementation of and compliance with internal guidelines and legal requirements by our sites and Group companies. The Corporate Strategy & Sustainability unit develops the BASF Group's climate targets and strategic levers for achieving them. The driving force behind the implementation is the Net Zero Accelerator unit,

1 Excluding the sale of energy to third parties. Greenhouse gases are converted into CO_2 equivalents (CO_2e) in accordance with the Greenhouse Gas Protocol
2 The term "CO_2 emissions" includes all greenhouse gases in accordance with the Greenhouse Gas Protocol and is used synonymously with "greenhouse gas emissions."
3 Scope 3.1, raw materials excluding battery materials, excluding services and technical goods. Excluding greenhouse gas emissions from BASF trading business. Future adjustment of the baseline in line with the TfS guideline possible depending on the availability of further primary data.

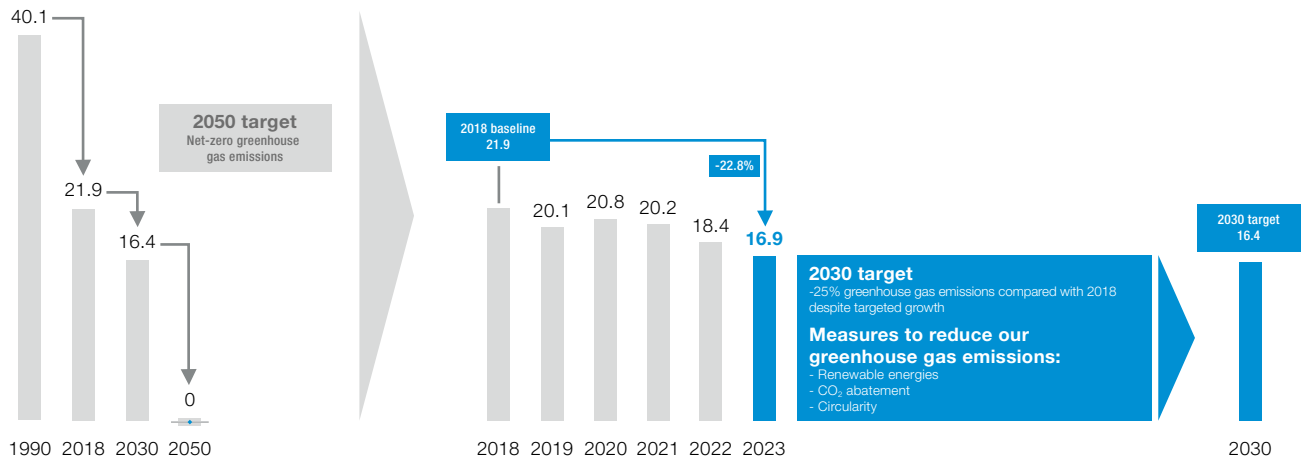
which focuses on the accelerated implementation of existing and new cross-divisional projects to reduce emissions. The Global Procurement unit, together with Corporate Development, is responsible for purchasing processes and procurement guidelines with regard to our raw materials-related targets. Global Procurement reports to the Chief Financial Officer; the Corporate Sustainability and Net Zero Accelerator units report to the Chairman of the Board of Executive Directors. This enables us to lay the foundation for integrating climate protection-relevant aspects into strategic decision-making processes such as investments, acquisitions and core business activities (see page 50). Group-wide Scope 1 and Scope 2 emissions have been anchored in the BASF Group's steering and compensation systems as the most important nonfinancial key performance indicator since 2020, giving them even more weight (see page 40).

By reducing our own CO_2 emissions and those upstream in the value chain, we contribute to our customers achieving their climate protection targets. To increase transparency and target our CO_2 reduction measures to those areas where they bring the greatest added value, we continuously determine the Product Carbon Footprint for around 45,000 sales products (see "Product Carbon Footprints"). In addition, we offer our customers solutions that help prevent greenhouse gas emissions and improve energy and resource efficiency.

We are committed to reporting transparently on our climate protection targets and progress, as well as on the impact of climate change on BASF. In this context, we support the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Since 2019, BASF's annual report has included an overview showing the sections and subsections in which TCFD-relevant information can be found (see page 21). We also participate in the program established by the international nonprofit organization CDP for reporting on data relevant to climate protection and have done so since 2004. BASF achieved a score of A- in CDP's 2023 climate change questionnaire, again attaining Leadership status.

Development of the BASF Group's greenhouse gas emissions (Scope 1 and 2)[1]

Million metric tons of CO_2 equivalents



Companies at the leadership level are distinguished by factors such as the completeness and transparency of their reporting.

All parts of society must work together to effectively protect the climate. This is why we support various national and international initiatives and are involved in partnerships. For example, we engaged in close dialog with the Science Based Targets initiative (SBTi) to derive science-based climate protection targets for the chemical sector.

For more information on climate protection, see basf.com/climate_protection

For more information on the CDP climate change questionnaire, see basf.com/en/cdp

Global targets

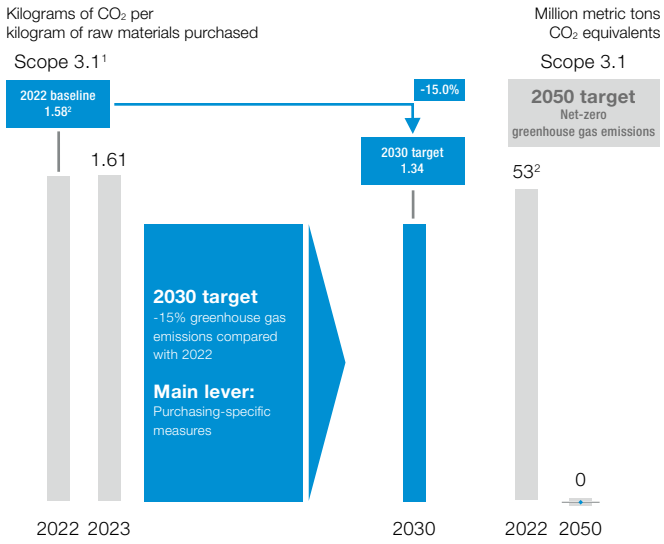
Compared with the 2018 baseline, we want to reduce greenhouse gas emissions from our production processes (Scope 1) and our energy purchases (Scope 2) by 25% by 2030.[1] This means that we aim to reduce greenhouse gas emissions from 21.9 million metric tons to 16.4 million metric tons – despite our growth plans and the construction of a new Verbund site in Southern China. This corresponds to a decrease of around 60% compared with 1990. Our long-term goal is net-zero greenhouse gas emissions by 2050.[1]

In 2023, the BASF Group's emissions from production and energy purchases[1] amounted to 16.9 million metric tons of CO_2 equivalents (2022: 18.4 million metric tons). The decline compared with the previous year as a result of a weak economy led to persistently low production volumes and therefore lower emissions in 2023. The share of electricity from renewable sources was increased compared with the previous year, to 20%, and, together with measures to increase energy and process efficiency, made a relevant contribution to reducing emissions.

1 Scope 1 and Scope 2 (excluding the sale of energy to third parties). The target includes greenhouse gases according to the Greenhouse Gas Protocol, which are converted into CO_2 equivalents (CO_2e).

We also set ourselves an ambitious Scope 3.1 target[1] for our specific raw materials-related emissions in the reporting year. By 2030, we want to reduce these in relation to the purchasing volume specifically by 15% from the 2022 baseline. This does not initially include raw materials-related emissions from battery materials, which we intend to further expand in the coming years. Battery materials make a significant contribution to reducing CO_2 emissions and thus facilitate the transformation of the transportation sector. Required raw materials such as lithium, nickel and cobalt will not be able to be replaced by more sustainable alternatives in the foreseeable future. Accordingly, we cannot reduce the associated emissions significantly in the short term. As soon as recyclable solutions come into play with the increase in available end-of-life batteries, we will include these raw materials in our target definition (for more information on our battery recycling activities, see page 125).

Development of the BASF Group's greenhouse gas emissions (Scope 3.1)



In 2023, specific Scope 3.1 emissions[1] amounted to 1.61 kilograms of CO_2 per kilogram of raw material purchased (2022: 1.58[2]). This increase is attributable to the decline in production and the associated reduced use of raw materials in Europe.

In the long term, we strive to reduce Scope 3.1 emissions to an unavoidable minimum by 2050, thereby expanding our long-term net-zero target to include these greenhouse gas emissions. Despite all our efforts, there will be residual share of emissions in 2050 that cannot be avoided using technical or economic approaches. These emissions must be offset by measurements outside our value chains. One option is to sequester carbon into the soil through farming (carbon farming, see page 36).

For more information on climate protection, see page 29
Our projection of greenhouse gas emissions for 2024 can be found in the forecast from page 170 onward

Energy supply

Our total energy consumption was 50.1 million MWh in 2023 (2022: 52.9 million MWh), slightly below the prior-year figure due to the lower production levels. Total energy consumption includes fuel demand in our own central power and steam generation plants, primary energy requirements in our process plants, and net power and steam imports.

To **generate our own steam and power**, we mainly use natural gas (78.8%) and substitute fuels (17.8%). The latter are residues from chemical production plants that cannot be reused in the BASF Verbund. In 2023, we covered 51% of our electricity demand with our own gas and steam turbines in highly efficient combined heat and power plants. Combined heat and power generation reduces the carbon footprint of our energy production and ensures that fuels are used as efficiently as possible: For instance, compared with separate methods of generating steam and electricity, we saved 10.8 million MWh of fossil fuels and avoided 2.2 million metric tons of CO_2 emissions in 2023.[3] To achieve the highest possible energy yield with the lowest possible greenhouse gas emissions, we continuously optimize our combined heat and power plants. In 2023, internally generated power in the BASF Group had a carbon footprint of around 0.26 metric tons of CO_2 per MWh of electricity and was below the national grid factor at most BASF sites.

The **Verbund system** is also key to carbon-optimized energy supply at our sites. It helps us realize synergies and manage value chains in a resource-efficient way. For example, waste heat from one plant's production process is used as energy in other plants. The Verbund saved us around 17.3 million MWh in 2023, which translates to 3.5 million metric tons less CO_2 released into the atmosphere.[3] With combined power and steam generation as well as our continuously optimized Energy Verbund, we were thus able to avoid a total of 5.7 million metric tons of CO_2 emissions in 2023. We will continue to invest in the creation and optimization of Verbund structures and drive forward the consolidation of production at highly efficient sites.

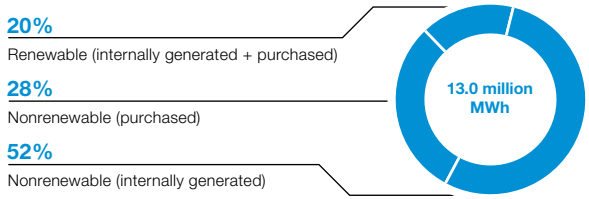
1 Scope 3.1, raw materials excluding battery materials, excluding services and technical goods, excluding greenhouse gas emissions from BASF trading business. Future adjustment of the baseline in line with the TfS guideline possible depending on the availability of further primary data.
2 The value for 2022 was adjusted due to increased data availability.
3 Calculation basis: electricity conversion efficiency of conventional power plants: 45%; steam generation efficiency 90%

A core component in reducing our greenhouse gas emissions is the gradual conversion of our energy supply from fossil to **renewable sources**. This mainly affects our electricity supply. In 2023, electricity from renewable sources as a share of total electricity consumption rose compared with the previous year to 20% (2022: 17%[1]). Our electricity consumption will increase significantly in the coming years due to the planned gradual electrification of our steam generation and the switch from natural gas-based to electricity-based, low-emission production processes, for example in our steam crackers (see page 107). Nevertheless, we aim to source more than 60% of our power needs from renewable sources by 2030.

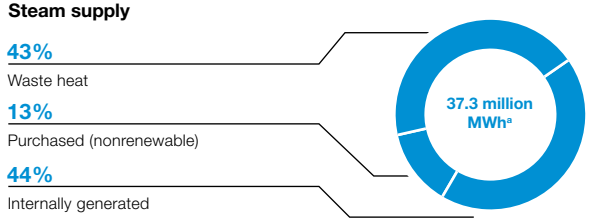
In the transformation of our power supply, we are pursuing a **make & buy** approach. Firstly, BASF is investing in its own renewable power assets. Secondly, we are purchasing green power on the market through long-term supply agreements with plant operators, power purchase agreements or renewable energy certificates, depending on the region and market regulations. Profitability and additionality are key purchasing criteria: This means that the electricity purchased is primarily sourced from new renewable energy facilities.

Energy supply of the BASF Group 2023

Electricity supply[a]



Steam supply



Fossil fuels and residual fuels used in the BASF Group's central power and steam generation plants

78.8%	**Natural gas**	25.3 million MWh
0.9%	**Heating oil**	0.3 million MWh
2.5%	**Coal**	0.8 million MWh
17.8%	**Substitute fuels**	5.7 million MWh
	Total:	32.1 million MWh

a Conversion factor: 0.75 MWh per metric ton of steam

In 2023, we successfully advanced our plan for a power supply from renewable sources. The Hollandse Kust Zuid offshore wind farm, a joint project with Vattenfall and Allianz, was officially inaugurated in fall 2023 and should be fully operational in 2024. With 139 turbines and a capacity of 1.5 gigawatts, it is one of the largest offshore wind farms in the world. We have signed a memorandum of understanding with Vattenfall for a shareholding in the wind farms Nordlicht 1 and 2 as part of a further project. It is envisaged that 49% of the shares will be sold to BASF. Construction is due to start in 2026, subject the final investment decision, expected in 2025. With a total capacity of 1.6 gigawatts, the wind farm should be completely operational in 2028. We plan to use just under half of the electricity generated to supply our production sites in Europe, particularly Ludwigshafen, Germany. In order to be able to fully supply our Verbund site in Zhanjiang in Southern China, which is currently under construction, with electricity from renewable sources in the future, we have entered into a joint venture with Mingyang for an offshore wind farm in Southern China, which includes development, construction and operation. The planned wind farm in Zhanjiang in the province of Guangdong will have a capacity of 500 megawatts and is scheduled to go into operation in 2025, subject to approval. We have also extended our long-term supply contract with the State Power Investment Corporation (SPIC) and secured a supply of 1,000 gigawatt hours of green electricity per year from 2025. In 2023, we also concluded further long-term supply agreements for green power at other sites in Asia, such as the Verbund site in Nanjing, China, and our sites in South Korea. In North America, for example, we were able to secure around 250 megawatts of solar generation capacity through virtual power purchase agreements in 2022. Further long-term supply contracts exist with X-ELIO, providing capacity of 48 megawatts of solar power to supply the Freeport, Texas, site and with EDF Energy Services, providing 35 megawatts of wind energy for the Freeport and Pasadena sites in Texas. In some regions, we have also acquired green power certificates. The aim is to gradually replace these temporary measures with our own power assets or long-term supply agreements.

The carbon footprint of purchased electricity in 2023 was around 0.22 metric tons of CO_2 per MWh (market-based approach), slightly below the prior-year level (2022: 0.23 metric tons CO_2 per MWh).[1]

1 The comparative figure for 2022 has been adjusted to reflect updated data.

Good to know

Managing our emissions in the value chain

Reducing Scope 3 emissions presents us with particular challenges, as these are only partly within our own direct sphere of influence and are subject to a large number of external factors. In recent years, we have been able to considerably increase the data availability and thereby transparency of our Scope 3.1 emissions. With our new target and dedicated measures, we want to control upstream emissions in a more targeted manner in the future.

We launched the **Supplier CO_2 Management Program** in 2021 to achieve transparency regarding these emissions. The goal is to obtain a more accurate data base and better manage and reduce emissions in the supply chain. In a first step, we have requested the Product Carbon Footprints of our raw materials since 2021 and support our suppliers in determining these, for example, by sharing our knowledge of valuation and calculation methods with them. Since the start of the program, we have asked more than 1,600 suppliers, covering around 70% of our raw materials-related greenhouse gas emissions. After around two years, we have more than 800 validated Product Carbon Footprints for our raw materials. In a second step, we will now work with our suppliers on solutions to reduce product-related emissions. To this end, we are building up a team of experts in our procurement organization, supported by interdisciplinary experts from the operating divisions and the Net Zero Accelerator unit.

We are also further developing our **purchasing processes** and establishing the Product Carbon Footprint as a relevant criterion for raw materials in the purchasing guidelines. In addition to reducing our raw materials-related emissions (Scope 3.1), we are taking targeted measures to reduce Scope 3 emissions along the entire value chain. In order to reduce emissions from the use of sold products (Scope 3.11), for example, we rely on product adaptations: For example, climate-damaging blowing agents for foaming polyurethane foams can now be largely dispensed with in the downstream value chain. We also want to reduce emissions resulting from the disposal of our products (Scope 3.12). This is possible, for example, through the increased use of renewable raw materials (see page 122) or circular solutions (see page 46). Both ensure that less and less CO_2 pollutes the atmosphere throughout the life cycle of our products.

In 2023, we built a stationary long-term sodium sulfur-based storage system (NAS®) at our Schwarzheide site in Germany. It supports the power supply of individual systems via the plant's own solar park. Together with NGK Insulators Ltd., BASF Stationary Energy Storage GmbH makes NAS batteries and develops them further.

Alongside electricity, steam generation is an important component of our energy supply. In the future, new technologies should make a significant contribution to reducing CO_2, for example by recovering energy from the waste heat of our production and infrastructure facilities. In this context, we are examining various concepts such as using electric heat pumps and e-boilers as well as electrifying steam drives.

Climate-smart technologies

To further reduce CO_2 emissions, we are also developing completely new technologies for emission-free and low-emission production. They will need large volumes of electricity from renewable sources in order to realize their full potential. The main focus here is on basic chemicals, which are often still emissions-intensive to produce. This applies, for example, to steam crackers, which use high levels of energy to break down crude petroleum into olefins and aromatics. We made significant progress here in 2023 with the construction of a demonstration plant for electrically heated steam cracker furnaces (see box on page 107). Another important basic material in the chemical industry is hydrogen, which we have so far mainly used as a raw material. One common but emissions-intensive way of obtaining hydrogen is steam reforming. We are already testing an alternative process – methane pyrolysis – in Ludwigshafen, Germany. This process is virtually emission-free if renewable energy is used and requires considerably less electricity compared with other methods, such as water electrolysis. We successfully tested a new reactor concept at the pilot plant, which went into operation in 2021, thus overcoming the first important technical hurdle for further scaling. Furthermore, we started construction of a PEM (proton exchange membrane)

Case study

Electrification of our steam crackers

Many everyday products would not exist without steam crackers. They split petroleum into olefins and aromatics – both important groups of substances for numerous chemical value chains. The cracking reaction requires high temperatures of around 850 degrees Celsius, which until now have been achieved by burning natural gas.

Heating concepts that use electricity from renewable sources could reduce process-related emissions by at least 90% in the future. We want to test the feasibility of this new process, as well as direct and indirect heating concepts together with our partners SABIC and Linde in a demonstration plant.[1] At the beginning of 2024 this plant was completed at our Ludwigshafen site in Germany and has since then been gradually being put into operation. The prototype is completely integrated into one of the two existing steam crackers at the site.

water electrolyzer[2] with a capacity of 54 megawatts at the Ludwigshafen site in Germany with Siemens Energy in 2023. Powered by electricity from renewable energy, the plant, which will go into operation in 2025, is expected to produce up to 8,000 metric tons of emission-free hydrogen and thus reduce greenhouse gas emissions at the site by up to 72,000 metric tons per year. BASF will primarily use the hydrogen produced as a raw material for the manufacture of products with a reduced carbon footprint. In addition, we expect new hydrogen applications in the future, such as energy use, and thus a trend toward increasing demand for hydrogen. Access to large quantities of low-emission or emission-free hydrogen at competitive prices is therefore becoming increasingly important for BASF.

Another focus area of our technological development is carbon capture and storage (CCS). For example, we are currently part of an industrial CCS project at the Antwerp site in Belgium (Kairos@C) as the first phase of the Antwerp@C project, which could enable BASF to avoid the emission of up to 1 million metric tons of CO_2 into the atmosphere every year from production. Together with Yara, we are also evaluating the development and construction of a world-scale production plant for low-emission blue ammonia using CCS in the United States. Approximately 95% of the CO_2 generated from the production process is to be captured and permanently stored in the ground.

Energy efficiency and specific greenhouse gas emissions

Energy use and greenhouse gas emissions are closely linked to capacity utilization at our plants and its product portfolio. Specific greenhouse gas emissions in 2023 amounted to 0.584 metric tons of CO_2 equivalents per metric ton of sales product,[3] an increase of 1.2% compared with the previous year (2022: 0.577 metric tons). This was mainly due to persistently lower and inconsistent capacity utilization at our plants, which resulted in a decline in plant efficiency. In contrast, the use of renewable power had a positive impact on specific greenhouse gas emissions. Since 1990, we have been able to lower our overall greenhouse gas emissions from BASF operations by 57.8% and even reduce specific emissions (per metric ton of sales product) by 74.5%.

Through our **operational excellence** projects, we aim to make our plants and processes even more efficient and resource saving, thereby avoiding CO_2 emissions. Certified energy management systems according to DIN EN ISO 50001 at all relevant production sites[4] play a particularly important role here. These help us to identify and implement further potential for improvement in energy efficiency. This not only reduces greenhouse gas emissions and saves valuable energy resources but also increases our competitiveness. In 2023, 78 production sites worldwide had certified energy management systems, representing around 89% of our primary energy demand.

A global working group provides ongoing support to the sites and Group companies in implementing and maintaining certified energy management systems. All energy efficiency measures are recorded in a global database, analyzed and made available to BASF sites as examples of best practices.

In 2023, we implemented more than 500 measures to reduce energy and resource consumption and increase our competitiveness. In our steam cracker in Ludwigshafen, Germany, for example, we were able to monitor and analyze energy consumption more specifically by introducing a digital tool for energy optimization, thereby further optimizing the energy efficiency of the crude gas compression process and cracking furnaces. This enables us to avoid more than 15,000 metric tons of CO_2 emissions per year. At a plant in Freeport, Texas, an optimized control system increased process efficiency while reducing the power consumption of the compressors. This led to an annual reduction of more than 6,000 metric tons of CO_2. In Caojing, China, we can reduce annual emissions by more than 25,000 metric tons of CO_2 by harnessing reaction heat through process adjustments and the integration of an absorption heat pump for steam generation.

1 The project has been granted €14.8 million from Germany's Federal Ministry for Economic Affairs and Climate Action (BMWK) under the Decarbonization in Industry funding program. This project is also being financed by the European Union via the NextGenerationEU fund.
2 The project is funded by the BMWK and the Federal State of Rhineland-Palatinate.
3 Sales product volumes include sales between BASF Group companies; merchandise is not taken into account.
4 Relevant sites are selected based on the amount of primary energy used and local energy prices.

Corporate carbon footprint

BASF has published a comprehensive corporate carbon footprint every year since 2008. This reports on all emissions along the value chain – from raw materials extraction to production and disposal. We are continually working to reduce greenhouse gas emissions both in our own production and, together with our partners, along the value chain (see "Strategy and governance").

In 2023, our greenhouse gas emissions according to the Greenhouse Gas Protocol, including **Scope 1 and Scope 2 emissions**[1] were 17.851 million metric tons of CO_2 equivalents (2022: 19.149 million metric tons[2]). Of this amount, 87% were Scope 1 emissions (2022: 87%[2]) and 13% were Scope 2 emissions (2022: 13%[2]). Carbon dioxide was by far the largest component and accounted for 98% of emissions (2022: 98%).

Scope 3 emissions arising upstream and downstream of our operations in the value chain are calculated in accordance with the Corporate Value Chain (Scope 3) Accounting and Reporting Standard published by the Greenhouse Gas Protocol and the WBCSD Guidance for Accounting and Reporting Corporate GHG Emissions in the Chemical Sector Value Chain (WBCSD Chemicals). For 2023, we calculated Scope 3 emissions of around 85 million metric tons of CO_2 equivalents (2022: 94 million metric tons[2]).[3] There was a further reduction in total emissions along the BASF value chain in 2023 due to lower production volumes.

The largest contribution to emissions along the value chain in 2023 was in category 3.1 (purchased raw materials and technical goods and services) at 47 million metric tons of CO_2 equivalents (2022: 53 million metric tons[2]). To calculate these upstream greenhouse gas emissions, we used both primary data from our suppliers from the Supplier CO_2 Management Program (see box on "Managing our emissions in the value chain") and industrial averages and values from external databases.[4] We have been able to reduce our emissions from the use of products sold (Scope 3.11) by around 75% since 2018.[5] In addition to raw materials-related emissions, the disposal of our products (Scope 3.12) accounts for the second-largest share of our Scope 3 emissions at around 24 million metric tons of CO_2 equivalents (2022: 26 million metric tons).

For more information on our emissions reporting, see basf.com/corporate_carbon_footprint

For more information on the Supplier CO_2 Management Program, see basf.com/suppliers

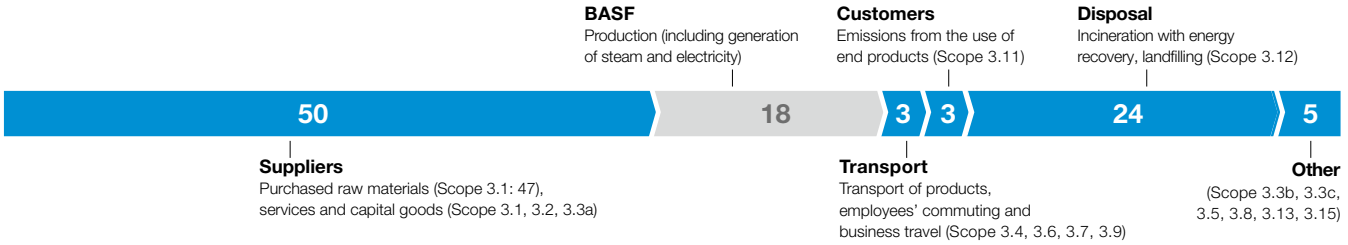
Additional key indicators for energy and climate protection in BASF operations

	2023	2022	2018 (baseline)
Specific greenhouse gas emissions[a] (metric tons of CO_2 equivalents per metric ton of sales product[b])	0.584	0.577	0.577
Primary energy demand[c] (million MWh)	49.917	54.206	60.586
Energy efficiency (kilograms of sales product[b] per MWh)	580	589	626

a Scope 1 and Scope 2 (market-based) according to the GHG Protocol, excluding emissions from the generation of steam and electricity for sale to third parties
b Sales product volumes include sales between BASF Group companies; merchandise is not taken into account.
c Primary energy used in BASF's plants as well as in the plants of our energy suppliers to cover energy demand for production processes. Purchased renewable power has a primary energy conversion efficiency rate of 100%.

Scope 3 emissions along the BASF value chain in 2023[a]

Million metric tons of CO_2 equivalents



a According to the Greenhouse Gas Protocol; Scope 1, 2 and 3; reported categories within Scope 3 are shown in parentheses. Scope 3 emissions in category 10 ("Processing of sold products") are not reported according to the standard for the chemical sector. Only direct use phase emissions are reported in the customer category (Scope 3.11). Excluding greenhouse gas emissions from BASF trading activities.

1 Market-based approach, including sale of energy to third parties
2 The comparative figure for 2022 has been adjusted to reflect updated data.
3 In 2023, we changed the calculation of Scope 3 emissions in categories 3.1 and 3.12 due to increased availability of primary and secondary data. This did not lead to any significant changes in the results. For more information on the calculation method, see basf.com/corporate_carbon_footprint
4 The database values are updated on an annual basis. Significant changes in these values are reflected accordingly in our calculations. BASF operations excluding oil and gas business
5 BASF business without oil and gas operations

Product Carbon Footprints

In 2020, we developed a digital solution to make our product-specific greenhouse gas emissions more transparent and thereby determined the carbon footprints of around 45,000 sales products. These Product Carbon Footprints (PCFs) include all greenhouse gas emissions – from raw materials extraction to the finished product leaving the factory gates ("cradle-to-gate"). PCFs provide us with important information for assessing the climate impact of our products and guidance for implementing mitigation measures so that our customers can benefit from reduced CO_2 emissions in the value chain.

In 2023, we further expanded our portfolio of products with a certified reduced carbon footprint, including engineering plastics. We already offer some of our products, such as the intermediates neopentyl glycol and propionic acid, the isocyanates MDI and Lupranat®, the amino resin Kaurit® and the adhesive raw material acResin® with a net-zero carbon footprint. These lower PCFs are primarily made possible by the substitution of fossil raw materials. For instance, we use electricity from renewable sources instead of electricity from fossil fuels to produce **low-PCF and zero-PCF products**. We also use – in whole or in part – renewable, waste-based or recycled raw materials such as castor oil, biomethane or pyrolysis oil from plastic waste. These alternative resources often have a better carbon footprint compared with fossil raw materials. The alternative resources are allocated to the end product using the mass balance approach (see box on page 124).

The digital methodology we have developed to calculate PCFs meets general life cycle analysis standards such as ISO 14040, ISO 14044 and ISO 14067, as well as the Greenhouse Gas Protocol Product Standard. In 2023, we received certification from TÜV Rheinland, which confirms that our calculation method and reporting fully comply with the requirements of Together for Sustainability (TfS). We make our automated PCF calculation approach available to interested industry players through partnerships. At the same time, we are involved in various initiatives to drive transparency, harmonization and standardization across the industry. This also took place as part of TfS, where we were involved in the creation of a uniform guideline for calculating the carbon footprint of products in the chemical industry. This will enable the climate impact of products to be directly compared and evaluated based on a standardized approach. A digital solution for sharing PCF data between companies is currently in the pilot phase and should be implemented in 2024.

Harmonizing the approaches used to calculate PCFs allows us to better manage greenhouse gas emissions that arise during the extraction of raw materials or the manufacture of precursors.

For more information on Product Carbon Footprints, see basf.com/en/pcf

BASF Group's greenhouse gas emissions according to the Greenhouse Gas Protocol[a]

Million metric tons of CO_2 equivalents

BASF operations	2023	2022	2018 (baseline)
Scope 1[b]			
CO_2 (carbon dioxide)	14.345	15.434	17.025
N_2O (nitrous oxide)	0.239	0.348[c]	0.677
CH_4 (methane)	0.025	0.025	0.027
HFC (hydrofluorocarbons)	0.026	0.035[c]	0.091
SF_6 (sulfur hexafluoride)	0	0.001	0
Scope 2[d]			
CO_2	2.289	2.547[c]	4.067
Total	16.924	18.390[c]	21.887
Offsetting	0	0	0
Total after offsetting	**16.924**	**18.390[c]**	**21.887**
Sale of energy to third parties (Scope 1)[e]			
CO_2	0.927	0.759	0.773
Total	**17.851**	**19.149[c]**	**22.660**
Use of biomass[f]			
CO_2	0.112	0.084	n.a.

a BASF reports separately on direct and indirect emissions from the purchase of energy. Scope 1 emissions encompass both direct emissions from production and generation of steam and electricity, as well as direct emissions from the generation of steam and electricity for sale. Scope 2 emissions comprise indirect emissions from the purchase of energy for BASF's use.
b Emissions of N_2O, CH_4 and HFC have been translated into CO_2 emissions using the Global Warming Potential, or GWP, factor. GWP factors are based on the Intergovernmental Panel on Climate Change (IPCC) 2007, errata table 2012 for the 2018 reporting year, and IPCC 2014 for the 2022 reporting year. HFC (hydrofluorocarbons) are calculated using the GWP factors of the individual components.
c The comparative figure for 2022 has been adjusted to reflect updated data.
d Market-based approach. Under the location-based approach, Scope 2 emissions were 3.588 million metric tons of CO_2 in 2022 and 3.317 million metric tons of CO_2 in 2023.
e Includes sales to BASF Group companies. as a result, emissions reported under Scope 2 can be considered twice in some cases.
f Emissions are reported separately from Scope 1 and Scope 2 in accordance with the Greenhouse Gas Protocol.

Material topics in focus:

Emissions to Air, Waste and Remediation

GRI 2, 3, 305, 306

We are constantly working on reducing the environmental impact of our business. This includes reducing emissions to air, preventing waste and protecting the soil by operating our plants safely and efficiently and using resources responsibly. We are also developing product solutions for our customers that can reduce emissions and waste.

> Almost half of our waste can be recycled or thermally recovered.
>
> **Dr. Claudia Kappler**
> Corporate Environmental Protection, Energy and Remediation

Strategy and governance

Our product solutions, such as catalysts and additives, contribute to reducing pollutants in the air and reducing waste. What's more, the implementation of circular models offers us business opportunities. However, emissions to air and waste from our production processes along with existing contaminated sites can have a negative impact on the environment. We systematically record opportunities and risks arising from emissions to air, waste and contaminated sites as part of our general opportunity and risk management (see page 182 onward).

The safe and efficient operation of our plants and the responsible management of resources and waste are core elements of our Responsible Care Management System. We have defined our global standards for emissions to air, waste and contaminated sites in Group-wide requirements, the implementation of which is the responsibility of the sites and Group companies. The Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center conducts regular audits to monitor compliance with legal requirements and internal provisions. BASF's global network of experts shares information, insights and best practices on an ongoing basis. Continuous monitoring and documentation of atmospheric emissions, waste streams and contaminated sites as well as the implementation of measures for improvement are an integral part of our environmental management. In addition to greenhouse gases (see page 102 onward), other air pollutants such as nitrogen oxides and ammonia are emitted as a result of power generation and production. We evaluate and analyze these emissions and reduce them using emission control technologies.

This page:
In 2020, we initiated a program for the disposal of solid waste at our site in Guaratinguetá, Brazil, with MAWERYC (Management of Waste and Recovery Cycle). The aim is to reduce environmental pollution by avoiding waste and implementing solutions with more sustainable technologies. Thanks to the program, we are currently saving around 1,000 metric tons of CO_2 equivalents each year.

Through **targeted waste management**, we want to keep material consumption and disposal volumes to a minimum by systematically tracking our material flows and following a clear hierarchy: We aim to avoid waste as far as possible, for example, by continuously optimizing our processes or developing new production methods. This is where our Verbund structure with its networked plants and value chains comes in: The by-products of one plant serve as feedstock elsewhere in the BASF Verbund, avoiding waste and enabling us to use raw materials as efficiently as possible. If these cannot be used within the Verbund structures, we assess whether they can be recycled or thermally recovered. We have established processes for the safe, proper and environmentally responsible disposal of materials that we cannot recycle or where recycling is not legally permitted. If we use external waste disposal companies, we conduct regular audits to verify that waste is disposed of properly. In this way, we also contribute to soil protection and keep today's waste from becoming tomorrow's contamination. If soil or groundwater contamination has occurred at active, acquired or

Material topics in focus: Emissions to Air, Waste and Remediation

former sites, we review and implement appropriate remediation measures.

We are committed to reducing the impact on air and soil and minimizing disposal volumes and material consumption along our value chains. We require suppliers to comply with internationally recognized environmental standards. This is assessed as part of our supplier management. We support our suppliers in developing and implementing measures for improvement, for example in waste management (see page 160).

We offer our customers a wide range of products that can remove air pollutants or reduce waste – from industrial process catalysts, fuel additives and emissions catalysts for various industries to additives and track-and-trace technologies to extend the useful life of plastics or improve mechanical recycling of plastic waste.

We are increasingly aligning our actions with the circular economy principle. For example, we are increasingly using recycled and waste-based raw materials in our production, recycling operating supplies and expanding our capacities for recovering precious metals from spent automotive and industrial catalysts. We are also developing product-specific recycling technologies and are involved in cross-industry networks and initiatives to avoid plastic waste and strengthen the circular economy.

For more information on the circular economy, see page 46

Emissions to air

Total emissions of air pollutants from our plants amounted to 21,605 metric tons in 2023 (2022: 23,354[1]). Emissions of ozone-depleting substances as defined by the Montreal Protocol totaled 12 metric tons in 2023 (2022: 14 metric tons). Emissions of heavy metals[2] in 2023 rose to 5 metric tons due to changes in the product portfolio (2022: 4 metric tons).

1 The comparative figure for 2022 has been adjusted to reflect updated data.
2 Heavy metals are included in the figure for dust (see the table "Emissions to air").

Emissions to air

Metric tons

Air pollutants from BASF operations	2023	2022
CO (carbon monoxide)	3,450	3,739[a]
NO_x (total nitrogen oxides)	8,433	9,326
NMVOC (nonmethane volatile organic compounds)	4,433	4,621
SO_x (total sulfur oxides)	1,350	1,553
Dust	1,763	2,060
NH_3 (ammonia) and other inorganic substances	2,175	2,054[a]
Total	**21,605**	**23,354[a]**

a The comparative figure for 2022 has been adjusted to reflect updated data.

We want to further reduce emissions with various measures. For instance, we reduce nitrogen oxides using catalysts and feed waste gases back into the production process.

Waste

BASF generated 2.13 million metric tons of waste in 2023 (2022: 2.21 million metric tons). Of this, 53.7% was disposed of (2022: 52.6%). Hazardous waste accounted for 74.4% of the total disposed waste (2022: 75.2%). Based on the concept of the circular economy, we are continuously examining options for recycling or thermal recovery for all waste. In this way, we were able to find new uses for 46.3% of our waste in 2023 (2022: 47.4%). We continuously identify and evaluate the safest and most environmentally sound disposal routes for nonrecyclable waste. In 2023, most of our hazardous waste was incinerated (72.3%), where possible with energy recovery. 9.9% of hazardous waste was disposed of in landfill. This was mainly contaminated construction waste that cannot be recycled due to legal requirements.

Waste generation in the BASF Group

Million metric tons

	Hazardous waste[a]		Nonhazardous waste[a]	
	2023	2022	2023	2022
Recycled	0.15	0.14	0.32	0.31
Thermally recovered	0.42	0.49	0.09	0.11
Waste recovered	**0.57**	**0.63**	**0.42**	**0.42**
Through incineration (without energy recovery)	0.61	0.64	0.06	0.05
In surface landfills	0.14	0.12	0.21	0.22
Other[b]	0.10	0.12	0.03	0.02
Waste disposed of	**0.85**	**0.87**	**0.29**	**0.29**
Total waste generation	**1.42**	**1.50**	**0.71**	**0.71**

a Waste is classified as hazardous or nonhazardous waste according to local regulations.
b Physical/chemical and biological treatment, underground disposal

Contaminated sites

We have binding global standards for managing contaminated sites, implemented by a global network of experts. We develop remediation solutions that aim to balance nature conservation, climate protection concerns, costs and social responsibility. These site and case-specific measures take into account the legal frameworks and currently available technology. We document contamination risks and the status of soil and groundwater for our sites worldwide in a database. Ongoing remediation work continued on schedule in the reporting year and planning was completed for further measures.

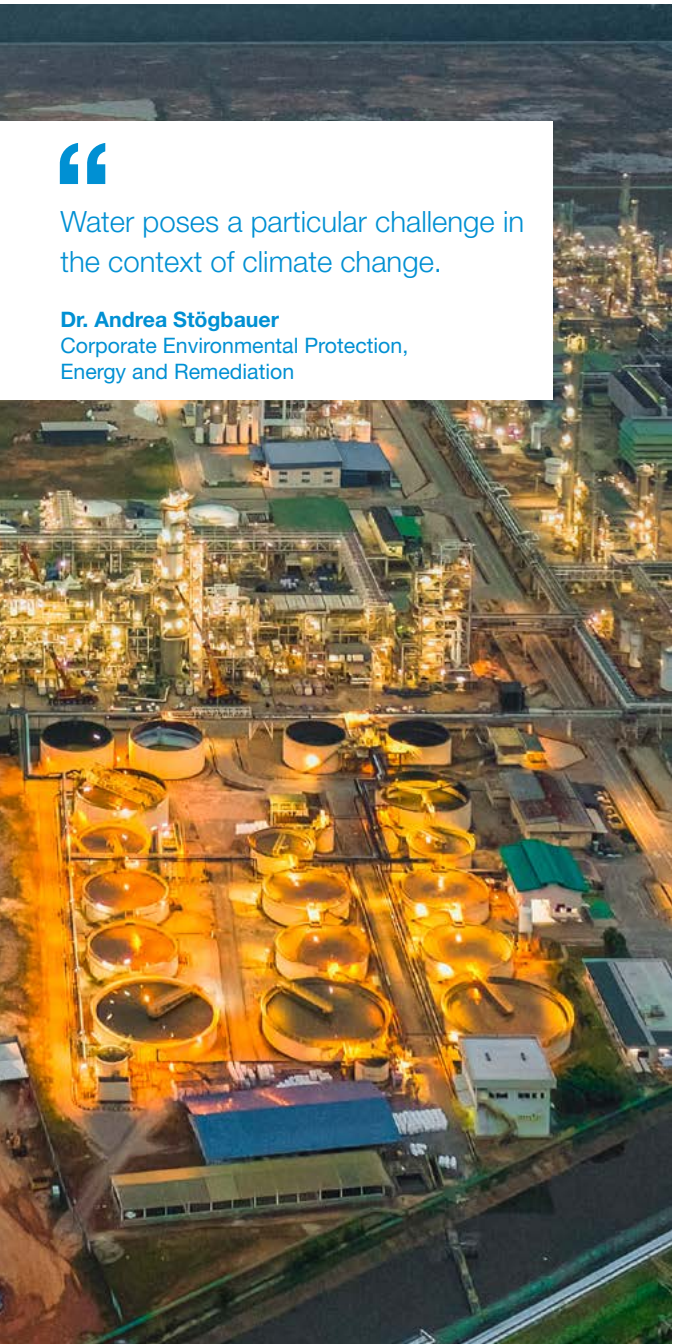
For more information, see Notes 9 and 22 on pages 251 and 288

Material topics in focus:

Water

GRI 3, 303, 304

Water is of fundamental importance in chemical production. It is used as a coolant, solvent and cleaning agent, and to make our products. Waterways are used to transport goods. At the same time, water is a scarce commodity in an increasing number of regions. That is why we promote the responsible use of this resource with sustainable water management.



> Water poses a particular challenge in the context of climate change.
>
> **Dr. Andrea Stögbauer**
> Corporate Environmental Protection, Energy and Remediation

Strategy and governance

As a manufacturing company, we need water for production. In order to use water as efficiently as possible, we are building on intelligent cooling water systems, increased reuse and multimodal transportation concepts with combined transportation methods. A lack of water presents a risk for us. Our demand for water, the volume of wastewater we generate and the associated emissions to water can have an impact on the environment. We systematically record the short and long-term opportunities and risks that arise from water as part of our general opportunity and risk management (see page 178 onward).

The responsible use of water as a resource is a core element of our Responsible Care Management System and an important part of our commitment to the United Nations' Sustainable Development Goals (SDGs). This is also reflected in our position paper on water protection, which we published in 2021.

Our global standards and provisions for water are defined in Group-wide requirements. Among other things, these stipulate that water protection concepts must be implemented at all production sites. The requirements also cover aspects such as process and transportation safety (see pages 127 and 130) in order to prevent production and transportation-related product spillages into water bodies as far as possible. Our sites and Group companies are responsible for implementing and complying with internal and legal requirements. This is regularly audited by the Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center. BASF's global network of experts shares information, insights and best practices around the responsible use of water on an ongoing basis.

Introducing and implementing sustainable water management has been a cornerstone of our strategy for many years now. Our focus here is on our Verbund sites and on production sites in water stress areas.[1] We look at water availability, water quality and the impact of our water use on the environment and other users. For this, we use the standard of the Alliance for Water Stewardship (AWS)

This page:
At our Verbund site in Kuantan, Malaysia, we are aiming to reduce our demand for water by 50% by 2030 compared with 2022. In the site-specific initiative to save and recycle water, we are focusing on increasing the reuse of wastewater, condensate and collected rainwater.

2030 target

Introduction of sustainable water management at our production sites in water stress areas and at our Verbund sites

1 We define water stress areas as regions in which more than 40% of available water is used by industry, households and agriculture. Our definition is based on the Water Risk Atlas (Aqueduct 3.0) published by the World Resources Institute. For more information, see wri.org/aqueduct.

Material topics in focus: Water

as guidance. AWS is a global multistakeholder organization that promotes the responsible use of water, which we are a member of.

In the wake of advancing climate change, the resulting water shortages and extreme weather events, **climate resilience measures** are becoming increasingly important. We have established early-warning systems for the Ludwigshafen site in Germany in order to secure our supply of raw materials and transportation via water and developed a special type of ship for extremely low water levels. In 2023, we were able to inaugurate a tanker and a ship for transporting specialty chemicals, which are optimized for low water levels and are for the exclusive use of BASF. Further measures at our sites are aimed at reducing our demand for water, for example, through recycling and intelligent cooling water systems.

For more information on our risk management, see page 178 onward

Engagement in the value chain

We advocate the responsible use of water as a resource along the entire value chain. We audit supplier compliance with environmental standards in our regular supplier assessments (see page 159). Where improvement is necessary, we support suppliers in developing and implementing appropriate measures, such as the correct handling of wastewater. In addition, we are involved in a wide range of initiatives to promote sustainability in the supply chain. For example, efficient water use is a core part of the Pragati project to improve sustainability in castor bean farming (see page 123).

We work with numerous partners along the value chain and from civil society to protect water as a resource. In addition to the Alliance for Water Stewardship, we are involved in networks such as the Alliance to End Plastic Waste (AEPW) and Operation Clean Sweep® to prevent waste from plastic production from entering water bodies.

We offer our customers solutions that help purify water and use it more efficiently and minimize pollution. These include high-performance plastics to produce ultrafiltration membranes, intermediates to produce flocculants for water treatment, or seeds with higher drought and heat tolerance.

We report transparently and comprehensively on how we use water. For instance, in 2023, we again participated in the program established by the nonprofit organization CDP for reporting on data relevant to climate protection, on the topic of water. BASF again achieved leadership status with an A- rating in the final assessment. CDP evaluates how transparently companies report on their water management activities and how they reduce risks such as water scarcity. The assessment also considers the extent to which product developments can also contribute to sustainable water management at the customers of the evaluated companies.

> "With our sustainable water management, we cover around 90% of BASF's water abstraction."
>
> **Dr. Andrea Stögbauer**

For more information on our position paper on water protection, see basf.com/water
For more information on the CDP water questionnaire, see basf.com/en/cdp

Global target and measures

Our goal is to introduce sustainable water management at our Verbund sites and at all production sites in water stress areas by 2030, covering around 90% of BASF's total water abstraction. We achieved 70% of our target in 2023 (2022: 62%).[1] Sustainable water management was introduced at seven further sites in 2023 (2022: seven sites).

As part of sustainable water management, our sites regularly assess the water situation in the catchment area. This raises awareness of potential risks and impacts such as water scarcity for the population. Based on the assessments conducted until the end of 2023, we did not identify a significant impact on water availability and quality resulting from our activities at any site.

Another important part of our sustainable water management is the continuous analysis and implementation of measures for improvement. For example, process optimizations such as the use of modified valves or the recycling of low-temperature cooling water at the General Lagos site in Argentina are leading to water savings of 15%. At our Verbund site in Freeport, Texas, we commissioned a membrane bioreactor for treating wastewater in 2023, which improved the capacity and performance of the wastewater treatment plant. In the future, the treated wastewater is to be recycled, thereby reducing the need for freshwater. Depending on the local situation, we also implement measures together with other stakeholders. One example is the Lake Winnipeg Basin project in the Canadian province of Manitoba, where we are working with project partners to analyze the benefits of water management for the environment, farmers and other stakeholders.

Water balance

Our **water abstraction** totaled 1,518 million cubic meters in 2023 (2022: 1,590 million cubic meters). This demand was covered for the most part by freshwater such as rivers and lakes (88% of total water abstraction). At some sites, we use alternative sources such as treated municipal wastewater, brackish water or seawater. A small part of the water we use reaches our sites as part of raw materials and steam, or is released in our production processes. We abstract most of the water we need for cooling and production

1 Our water target also continues to take into account the sites that we identified as water stress sites in accordance with Pfister et al. (2009) prior to 2019.

Material topics in focus: Water

ourselves. In 2023, 5% of our total water demand was covered by third parties (2022: 5%).

Water use in 2023 totaled 6,722 million cubic meters (2022: 6,917 million cubic meters). Put in relation to total water abstraction, this means that we use every liter we abstract around four times, or cover 79% of our water demand with reuse. We predominantly use water for cooling purposes (88% of total water abstraction), after which we discharge it back to our supply sources with no product contact. We reduce our water abstraction for cooling purposes mainly by using recooling plants. Around 12% of our total water abstraction is used in production plants, for example, for extraction or dissolution processes or for cleaning. Here, too, we reduce our demand for water by reusing wastewater. Most of the water used for production purposes is discharged back to water bodies after being treated in our own or third-party wastewater treatment plants.

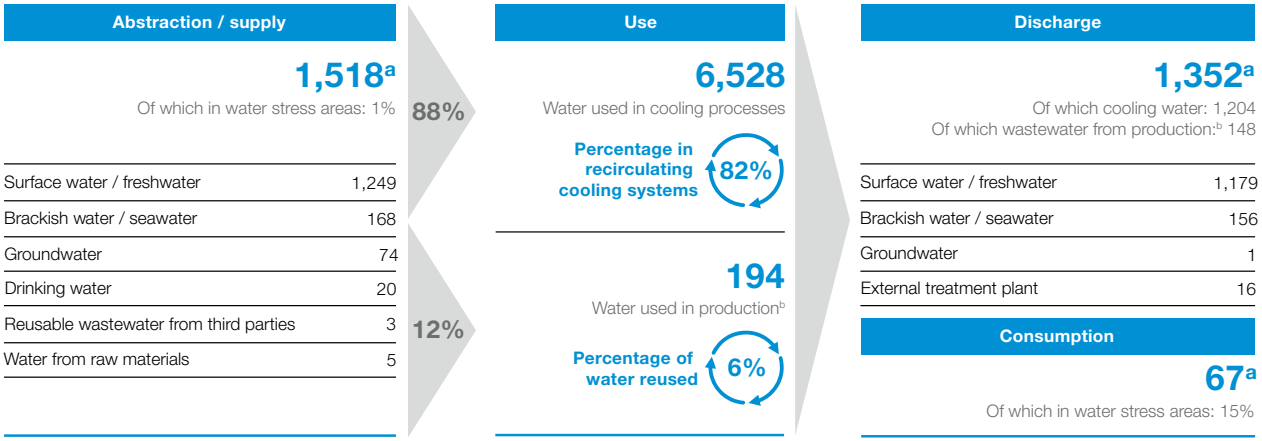
The BASF Group's **water consumption** describes the amount of water that is not discharged back into a water body, meaning that it is no longer available to other users. Consumption is mainly attributable to the evaporation of water in recirculating cooling systems. A smaller amount is from the water contained in our products. Water consumption in 2023 amounted to around 67 million cubic meters (2022: 69 million cubic meters).

In 2023, around 25% of our production sites were located in water stress areas (2022: 25%). These sites accounted for 1% of BASF's total water abstraction (2022: 1%[1]). In water stress areas, we mainly source water from third parties (79%) and largely cover our demand with freshwater. Water consumption in water stress areas accounted for 15% of BASF's total water consumption in 2023 (2022: 17%) and was primarily attributable to evaporation in cooling processes. Wastewater in water stress areas accounted for less than 1% of BASF's total wastewater. The share of wastewater from cooling processes in water stress areas is lower than for the BASF Group as a whole. Cooling water is rarely used for once-through cooling here. Instead, it is generally recirculated to reduce water demand. Production wastewater in water stress areas is primarily treated at third-party facilities.

The supply, treatment, transportation and recooling of water is often associated with a high energy demand. We are constantly working to optimize our energy consumption and the amount of water we use, and to adapt to the needs of our operations and the environment.

Water balance in the BASF Group 2023

Million cubic meters per year



a The difference between water abstraction and discharge is due to water consumption and limited measurement accuracy in water discharge.
b Total from production processes, sanitary facilities, rinsing and cleaning in production

1 Aqueduct 3.0 was used to identify sites in water stress areas to determine pro rata water abstraction and water consumption.

Material topics in focus: Water

Emissions to water

Our wastewater is subject to strict controls and we carefully assess the impact of wastewater discharge in accordance with the applicable laws and regulations. Both internal audits and the responsible local authorities regularly assess whether the analyses and safety precautions at our sites comply with internal and legal requirements. A total of 1,352 million cubic meters of water were discharged from BASF production sites in 2023 (2022: 1,400 million cubic meters). Including 148 million cubic meters of wastewater from production. Emissions of nitrogen to water amounted to 2,100 metric tons in 2023 (2022: 2,400 metric tons[1]). Around 8,800 metric tons of organic substances were emitted in wastewater (2022: 10,600 metric tons). Our wastewater contained 13 metric tons of heavy metals (2022: 15 metric tons[1]). Phosphorus emissions amounted to 220 metric tons (2022: 230 metric tons[1]).

Our approach is to reduce wastewater volumes and contaminant loads at the source in our production processes and to reuse wastewater and material flows internally as far as possible. To treat wastewater, we use both central measures in wastewater treatment plants and the selective pretreatment of individual wastewater streams before these are sent to the wastewater treatment plant. We use different methods depending on the type and degree of contamination – including biological processes, chemical oxidation, membrane technologies, precipitation or adsorption. In order to avoid unanticipated emissions and the pollution of surface water or groundwater, we have water protection concepts for our production sites in place. This is mandatory for all production sites as part of our Responsible Care Management System (see page 131). The wastewater protection plans involve evaluating wastewater in terms of risk and drawing up suitable monitoring approaches. We use audits to check that these measures are being implemented and complied with.

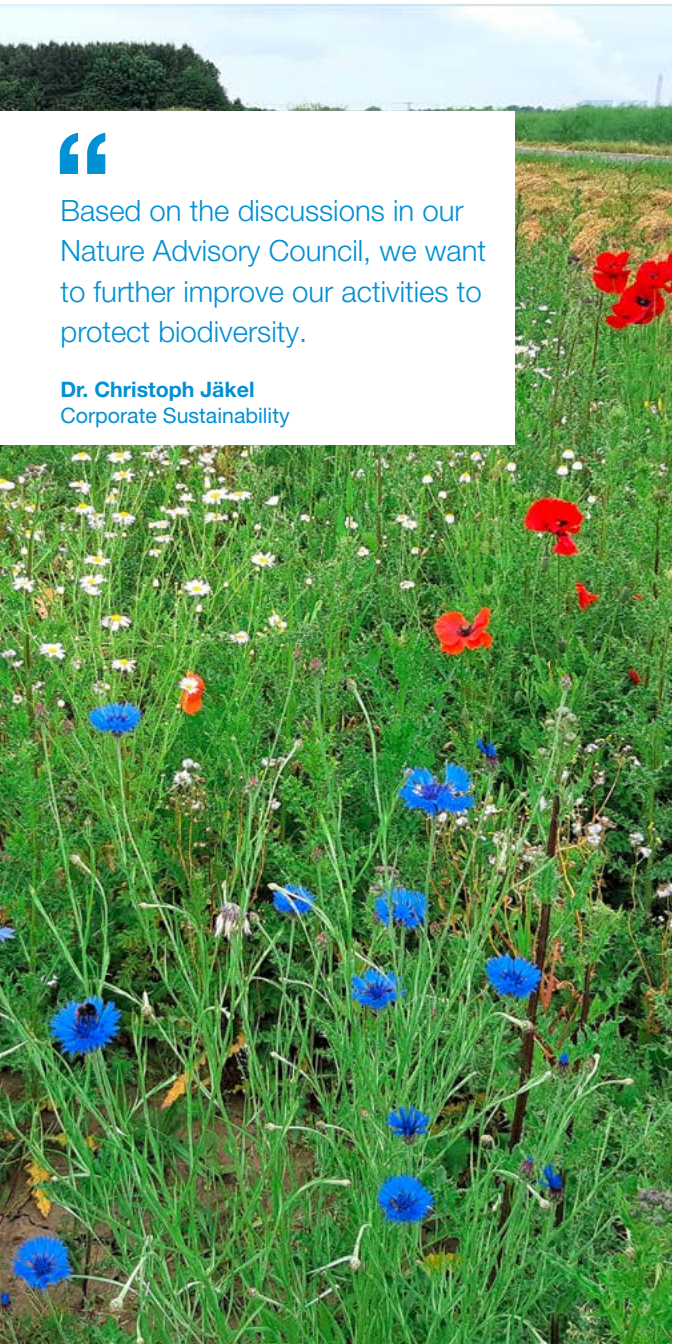
For more information, see basf.com/water

1 The comparative figure for 2022 has been adjusted to reflect updated data.

Material topics in focus:

Biodiversity and Ecosystems GRI 3, 304

Biodiversity, which describes the variety of life forms on Earth, is under threat. As a chemical company, we use many valuable resources provided by nature such as water, air and soil. At the same time, our business activities have an impact on nature, through emissions into the environment or the purchase of renewable raw materials. Protecting biodiversity is therefore a key element of our commitment to climate protection and sustainability. We want to contribute to achieving the global goal to halt and reverse biodiversity loss by 2030.



> Based on the discussions in our Nature Advisory Council, we want to further improve our activities to protect biodiversity.
>
> **Dr. Christoph Jäkel**
> Corporate Sustainability

Strategy and governance

To better understand BASF's impact on nature, we are guided by the five drivers of biodiversity loss defined by the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services (IPBES): **land-use change**, **pollution**, **climate change**, **overexploitation** and **invasive species**. We do not consider the latter to be material for BASF.

We achieve positive effects on biodiversity primarily through the responsible use of natural resources and through our solutions and technologies, such as biodegradable plastics and chemical recycling, which help reduce waste, for example. Negative impacts might arise in our supply chain through our production activities and through the use of our products. We record opportunities and risks resulting from the loss of biodiversity as part of our general opportunity and risk management.

With specific measures along our entire value chain, we minimize the loss and strengthen the preservation of biodiversity. Our sustainability-related corporate goals for climate protection (see page 102), circular economy (see page 46), water management (see page 112), responsible management of emissions, waste and remediation (see page 110) as well as the procurement of renewable raw materials (see page 122) contribute to the protection of biodiversity.

The United Nations' Convention on Biological Diversity, with the new Kunming Montreal Global Biodiversity Framework (GBF), serves as an important orientation and reference framework for BASF. It aims to halt and reverse the loss of biodiversity by 2030. We also align with the United Nations' Sustainable Development Goals (SDGs), including Life below water (SDG 14) and Life on land (SDG 15).

Biodiversity is an important aspect for many of our stakeholders, such as investors, customers, legislators, suppliers, insurers and nongovernmental organizations. We actively seek out partnerships with relevant interest groups and organizations worldwide, for example in the Taskforce on Nature-related Financial Disclosures (TNFD), to expand our knowledge, to raise awareness about biodiversity and to drive necessary actions forward (see page 140).

We align our biodiversity measures with the impact of our business activities along the value chain. Our focus here is on three areas: supply chains, sites and production, and product impacts. For this purpose, we are guided by the risk mitigation hierarchy: We try to avoid having an impact on nature. If this is not feasible, we want to reduce these impacts, support the restoration of nature or contribute to the transformation of value chains toward better environmental sustainability.

This page:
BASF is working with farms in the United Kingdom to show how agricultural use and the protection of biodiversity can be reconciled. Planting wildflower strips and creating habitats for birds and insects have led to a long-term improvement in biodiversity and soil health.

Material topics in focus: Biodiversity and Ecosystems

Currently, there is no standardized, globally accepted indicator for the loss of biodiversity (in contrast to greenhouse gas emissions as a key indicator of climate change). In addition, impacts must be considered primarily in a local context. We therefore use indicators such as nitrogen emissions to water to measure drivers of biodiversity loss and species occurrence to assess the status of ecosystems. For example, we regularly examine the fish population in the Rhine around the Ludwigshafen site using electrofishing. With this method, the animals are temporarily stunned with a weak electric field for documentation purposes and removed with a fishing net before being returned to the water. In 2023, species diversity was found to be the same as in 2021.

We use various methods to measure our sustainability performance that implicitly and explicitly consider relevant opportunities and risks for biodiversity. Examples of this include the BASF Eco-Efficiency Analysis as well as AgBalance® in the context of agricultural products and the corresponding biodiversity calculator.

Newly developed assessment methods help us to better understand influences on biodiversity. We regularly test various analysis tools available on the market. Taking into account the LEAP (Locate, Evaluate, Assess, Prepare) methodology developed by TNFD, we are systematizing our existing strategic approach. Based on this understanding, we seek dialog with partners and enter into strategic cooperations, through which we drive forward measures to protect biodiversity around the world (e.g., Wildlife Habitat Council).

An internal working group addresses strategic aspects and the identification of impacts, dependencies, opportunities and risks arising from biodiversity. In 2023, for instance, a survey of BASF's divisions was conducted on the importance of biodiversity aspects and their perceived economic relevance. This revealed significant differences: High importance and economic relevance are particularly evident in units nits that provide solutions for agriculture or source renewable raw materials. Another result of this working group was the establishment of the new Nature Advisory Council (see box).

Responsibility to our sites and production

Our risk management regularly examines the risks to our business activities from the loss of biodiversity. Moreover, when making decisions about investing in the construction of new sites or expanding existing ones, we conduct systematic assessments of sustainability aspects, such as the potential impact on forests and biodiversity.

We use the WWF Biodiversity Risk Filter, a tool developed by the World Wide Fund for Nature (WWF) and partners with global coverage of sites and value chains, to identify dependencies on ecosystem services (e.g., risk of water availability) and assess the impact of biodiversity loss on our business in addition to the impact of our activities on ecosystems (e.g., risk of environmental pollution).

When managing our sites and plants, we aim to ensure the preservation of biodiversity by minimizing negative impacts on the environment (biodiversity loss drivers: pollution, overexploitation). We therefore keep emissions from our production to air, water and soil as low as possible, avoid and reduce waste and manage contaminated sites carefully (see page 110 onward). BASF is committed to the goals of Operation Clean Sweep® and is constantly working on measures to prevent plastic production waste from entering the environment. We use databases such as the Integrated Biodiversity Assessment Tool (IBAT) to examine the proximity of production sites to internationally recognized **protected areas**. We have been documenting the results in our environmental database since 2021. This allows us to raise awareness of biodiversity at a local level, assess and, if necessary, reduce potential impacts of our sites on these areas. In 2023, 5% of our production sites were adjacent to a Ramsar site[1] and 1% were adjacent to a category I, II or III protected area as defined by the International Union for Conservation of Nature.[2] None of our production sites were adjacent to a UNESCO protected area. In addition, we used the STAR tool (Species, Threat, Abatement and Restoration), based on the IUCN Red List of Threatened Species, to analyze how many of our production sites are located adjacent to endangered species (amphibians, birds, mammals). The results show that some of our production sites are located in areas with high or very high STAR values. We took a closer look at the drivers at these locations (e.g., tourism, fishing, invasive species or the occurrence of diseases). These were generally not related to chemical production.

We are implementing local measures to protect biodiversity at a number of sites. In Breuil-le-Sec, France, for example, a team has

Good to know

New Nature Advisory Council

In 2023, BASF founded a new advisory council for topics related to the protection of biodiversity and ecosystems, the Nature Advisory Council (NAC), to obtain an independent societal perspective on our activities related to nature and biodiversity issues.

The aim is to obtain constructive feedback and specific advice on nature-related topics and our strategic approach as well as our contributions to a sustainable future.

The Nature Advisory Council is currently made up of four members from the fields of science, relevant value chains and multilateral organizations. The NAC met for the first time in November 2023 and discussed BASF's approach to sustainability and the necessary adjustments around planetary boundaries and the biodiversity crisis using concrete examples from corporate practice, such as the extraction of important raw materials and BASF's activities in the field of agriculture. Future meetings will address other important drivers of biodiversity loss and how they relate to BASF's strategy.

For more information on our Nature Advisory Council, see basf.com/en/nature-advisory-council

1 "Wetlands of international importance" in accordance with the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention)
2 We have defined "adjacent" as the area within a 3 km radius.

Material topics in focus: Biodiversity and Ecosystems

been working on increasing the site's biodiversity since 2014. Fallow land and an orchard were planted, nesting boxes were built for swallows and animal and plant species were regularly counted and monitored. The site has been certified by the local nongovernmental organization CPIE (Centre Permanent d'Initiative pour l'Environnement) for its measures to protect biodiversity. It serves as a reference site for BASF in France. Furthermore, we use recooling plants at our sites. This allows us to reuse water several times as cooling water and reduce our water consumption. Recooling also reduces thermal emissions when we return the cooling water to the waterways. This ensures that our activities have a minimal impact on the habitats of plants and animals. We are constantly working to optimize our energy consumption and the amount of water we use, and to adapt to the needs of our business and the environment (see page 112).

We are committed to complying with the provisions of the international Nagoya Protocol when using biological resources. This supplementary agreement to the U.N.'s Convention on Biological Diversity regulates access to genetic resources and benefit sharing. It sets out obligations (for example, compensation payments) for the users of genetic resources such as plantbased raw materials. We use internal control mechanisms to monitor compliance with these standards.

Management of our product impact

BASF offers products and solutions for a wide range of industries. We want to ensure that our products meet our customers' standards in terms of quality and, through appropriate use, pose no risk to humans, animals or the environment (see page 146). Our commitment to the objectives set forth by the Responsible Care® charter of the International Council of Chemical Associations (ICCA) obligates us to continuously minimize the negative effects of our products on the environment, health and safety and to optimize our products on an ongoing basis. It is important to consider the potential impacts of product use on biodiversity, for example, with regard to the biodiversity loss driver of pollution.

We evaluate our products and solutions in crop protection and seeds, for example, throughout the entire research, development and registration process. After they have been approved for the market, we continue assessing them regularly for potential risks and impacts to the ecosystems in which they are used. We have initiated various projects and offer trainings to prevent misuse of our products (see page 149).

All types of land development, such as agriculture and forestry, play a role in changing biodiversity (driver of biodiversity loss: land-use change). Activities such as tillage, drainage, fertilization and the use of crop protection products can affect flora and fauna, for example, by influencing food sources. Minimizing these impacts while ensuring the necessary productivity is one of the biggest challenges farmers are facing.

Our Agricultural Solutions division focuses on four areas to help farmers to find the right balance between productivity and sustainability. The focus areas are more climate-smart farming, more sustainable solutions, digital farming and smart stewardship (see box on page 36). In this context, we work with farmers to create balanced agricultural systems which enable productive and efficient farming of high-quality food products and at the same time promote biodiversity in the agricultural landscape. For example, we advise them on soil cultivation practices and look for suitable ways to improve biodiversity in farmlands. Our many years of experience in sustainability measurement and evaluation in agriculture are particularly useful here. Our modern seed solutions and crop protection products also enable better yield on existing farmlands and thus help protect natural habitats.

With our **AgBalance® method**, we can measure and compare the impacts of different agricultural practices on the environment according to the principle of Life Cycle Assessment (LCA). Using the corresponding biodiversity calculator, we can assess the impact on biodiversity. Based on these assessments, we issue recommendations for measures with scientifically proven effectiveness (according to the analyses of Conservation Evidence, a project team at the University of Cambridge, United Kingdom), such as planting hedges and flower strips or establishing nesting places to benefit pollinators such as wild bees and farmland birds.

Axalion® is one example of BASF's more environmentally friendly crop protection products. The insecticidal active ingredient received its first approval in Australia at the end of 2022 and has been sold there under the name Efficon® since April 2023. Approval was also granted in South Korea in 2023. Axalion® enables farmers to control a wide range of piercing and sucking pests that are harmful to crops. At the same time, it is highly compatible with beneficial insects such as pollinators. The active ingredient thus supports farmers in managing the challenges they face around productivity and environmental protection.

Material topics in focus: Biodiversity and Ecosystems

Responsibility to our supply chains

Some of the business activities of our raw materials suppliers involve land uses that can influence biodiversity (driver of biodiversity loss: land-use change). We have laid down our expectations of our suppliers with regard to environmental, labor and social standards in the supply chain as well as our commitment to preserving biodiversity in the Supplier Code of Conduct (see page 159).

BASF procures various renewable raw materials. Just as for fossil raw materials, we consider how renewable resources impact aspects of sustainability along the value chain. Alongside positive effects like avoiding greenhouse gas emissions (driver of biodiversity loss: climate change), these can also have negative effects, for example, through the drivers of biodiversity loss overexploitation and land-use change, depending on the raw material. Through our sourcing practices, we aim to preserve ecosystems and enable sustainable land development that supports the livelihoods of the people who depend on them (see page 122).

There is a high risk especially for palm and palm kernel oil that forest areas are cleared to create farmland. To anchor sustainability topics more firmly in procurement we established the BASF Palm Commitment in 2011, which was updated in 2015, and is implemented through our **Palm Sourcing Policy**. Third-party certification with standards such as the Roundtable on Sustainable Palm Oil (RSPO) standard enables us to take biodiversity criteria into account when purchasing raw materials (see page 122).

We are committed to the environmental sustainability of other supply chains through our own initiatives. One example is our **rambutan program**. It was launched in 2014 in close collaboration with partners in Vietnam to source botanical ingredients for cosmetic products from certified organic rambutan gardens. In cooperation with local farmers and NGOs, BASF's program promotes the preservation of biodiverse habitats, as well as good agricultural practices, gender equity and fair working conditions.

Our position on **forest protection** sets out our commitment to preserving biodiversity in areas of High Conservation Value such as High Carbon Stock forest areas and peatlands in the procurement of renewable raw materials. In 2023, BASF again participated in the "Forests" assessment conducted by the international organization CDP and achieved a score of A-, once more giving it Leadership status. The assessment is conducted based on detailed insights into the palm value chain and activities that impact ecosystems and natural habitats.

For more information on the CDP forests questionnaire, see basf.com/en/cdp

Partnerships for biodiversity

Engaging in ongoing dialog with a variety of stakeholders is important to BASF. On the one hand, we want to share our knowledge and on the other hand, learn from other to improve our own practices. To this end, we established a **Nature Advisory Council** (NAC) in 2023 (see page 117).

We cooperate with several organizations including the Roundtable on Sustainable Palm Oil, the Sustainable Palm Oil Forum, the Brazilian Coalition on Climate, Forests and Agriculture and the High Carbon Stock Approach Steering Group. BASF is a member in the forum of the Taskforce on Nature-related Financial Disclosures (TNFD) initiative, which provides recommendations for reporting on nature-related risks and activities. We are an active advisory member of the working group for chemical sector guidelines that TNFD established at the beginning of 2023. Our involvement in organizations such as the Alliance to End Plastic Waste and the Alliance for Water Stewardship (see page 113) helps to preserve biodiversity in bodies of water.

Together with international partners and based on the dialog with stakeholders in the food value chain, we are driving forward measures to promote sustainable agriculture. In the United States, for example, BASF is a member of the Honey Bee Health Coalition, which aims to preserve healthy honey bee populations and support healthy populations of native and managed pollinators in productive agricultural systems and thriving ecosystems. BASF France SAS is part of the Entreprises pour l'Environnement network, which launched the Act4nature campaign with the main objective of protecting and enhancing biodiversity.

We have been working with farms in the United Kingdom on pilot projects since 2002 to demonstrate how the protection of biodiversity can be reconciled with the complex challenges farmers face. Local farmers grow a variety of annual crops to establish demonstration plots. Practices within the field, such as mixtures of cover crops, as well as measures at the edge and outside the field,

Material topics in focus: Biodiversity and Ecosystems

such as planting wildflower strips and creating habitats for birds and insects, have demonstrably led to a long-term improvement in biodiversity and soil health. Data collected and analyzed on one of the farms between 2009 and 2019 by a team of local agronomists and ornithologists on behalf of BASF shows that farmland bird species considered threatened by U.K. experts (26 on the Red List and 19 on the Amber List) benefit greatly from sustainable agriculture combined with high-quality ecological habitats.

For more than 10 years, we have been working with different farmers and experts from the BASF FarmNetwork Sustainability, an association of farms in Europe, to integrate more connected biodiversity areas into agricultural production. By creating and maintaining new habitats and linking habitats for living, breeding and feeding, biodiversity can be sustainably promoted in modern, conventional agriculture. External scientists accompany the project and examine the effectiveness of the biodiversity measures. The results are published annually in a report. Based on the insights gained from working together, an advisory board of experts from agriculture, nature conservation and environmental protection developed a biodiversity checklist and published it in 2021. This summarizes 10 ecologically effective measures to promote biodiversity. Since 2021, BASF has supported farmers participating in its **#wirzahlenBiodiversität ("We pay biodiversity") program** financially and with professional advice.

BASF also offers various e-learning modules on biodiversity and agriculture to support farmers in implementing the necessary and effective measures in practice. The interactive training sessions are available to all interested farmers free of charge.

For more information on our responsible management of resources, see page 46

For more information on product stewardship, see pages 146 and 149

For more information on our commitment to biodiversity, see basf.com/biodiversity

For more information on our position on forest protection, see basf.com/forestprotection

Raw Materials

GRI 3, 203, 204, 301, 304, 308, 413, 414

Raw materials are the starting point of our value creation. We want to use these resources efficiently and responsibly. As part of our activities to achieve greater sustainability, we are turning to recycled and renewable raw materials to replace fossil raw materials and reduce emissions along the value chain. Our focus is on a secure supply and a stable supply chain, in which our suppliers source and produce raw materials in line with environmental and social requirements. At the same time, our chemical products are raw materials for our customers and we want to increasingly offer them with a reduced carbon footprint.

At a glance

~30,000
Different raw materials purchased

~1 million metric tons
Renewable raw materials purchased

- BASF's Verbund concept enables the efficient use of resources
- Recycled and renewable raw materials are gaining in importance
- Raw materials purchased from over 6,000 suppliers
- Numerous projects to improve supply chain sustainability

Strategy and governance

Our strategy covers the entire value chain – from responsible procurement and the efficient use of raw materials in our own processes and recycling by-products to developing resource-saving solutions for our customers.

Fossil raw materials continue to be among our most important raw materials and sourcing and producing them causes greenhouse gas emissions, which contribute to climate change. We are trying to reduce these emissions by using recycled and renewable raw materials. However, these alternatives can also pose sustainability challenges, such as risks in the supply chain. We see one solution in a transition to a **circular economy** in which we want to decouple growth from resource consumption with process and product innovations.

BASF's Verbund concept is key to making the use of raw materials in our own processes as efficient as possible: Intelligently linking and steering our plants and processes creates efficient value chains. By-products from one plant are used as feedstocks elsewhere. This saves raw materials and energy. At the same time, the Verbund offers numerous opportunities to use renewable and recycled raw materials. Going forward, we want to better leverage this potential.

The Corporate Center unit Corporate Development sets binding, Group-wide purchasing guidelines for the procurement of raw materials. They are supplemented by specific internal requirements, for example, on sourcing palm-based raw materials or certain mineral raw materials. We use a multistage control process to ensure compliance with these requirements. We systematically record short and long-term opportunities and risks caused by our purchase of raw materials as part of our general opportunity and risk management (see page 182 onward).

Alongside economic, environmental and social criteria, we also consider aspects such as product safety and supply security when selecting suppliers and raw materials. Our expectations of our suppliers are laid down in our Supplier Code of Conduct (see page 159). We take a closer look at suppliers in critical supply chains, for example, for mineral raw materials and renewable resources as well as a number of pigments. Upstream stages of the value chain are assessed for serious sustainability risks and, if necessary, suitable remedial measures are introduced. In addition, we develop and test approaches in joint initiatives with suppliers and other partners to make the supply of raw materials more sustainable. Examples include our cooperative ventures and investments for recycling lithium-ion batteries for electric vehicles (see page 125) and our joint activities on certified sustainable supply chains for renewable raw materials such as palm, palm kernel and castor oil.

Resource efficiency and stewardship are also becoming increasingly important for our customers. That is why we are constantly working to switch to more sustainable raw materials and reduce the resources consumed in the manufacturing of our products, for example through more efficient processes and innovative technologies. This enables us to offer our customers more sustainable solutions, for example with a smaller carbon footprint or better biodegradability. Our products also improve resource efficiency and sustainability at many points along the value chain. For example, BASF additives increase the service life and mechanical recyclability of plastics, which saves fossil resources, reduces CO_2 emissions and enables a circular economy.

For more information on our supplier management, see page 158 onward
For more information on circular economy, see page 46

Fossil and petrochemical resources

BASF's most important raw materials (based on volume) include gas and crude oil-based petrochemical products such as naphtha and benzene. We use liquid gas and natural gas as fuels to generate energy and steam, and as raw materials to produce key basic chemicals such as ammonia or acetylene. Naphtha is mainly fed into our steam crackers, where it is split into products such as olefins and aromatics. The olefins ethylene and propylene are both important feedstocks for BASF's numerous value chains. We use aromatics such as benzene or toluene to manufacture engineering plastics, among other products. Thanks to a high degree of forward and backward integration, we can produce feedstocks for our value chains efficiently while conserving resources within the BASF Verbund. This increases supply security and strengthens our resilience to fluctuations in the supply chain. We source key raw materials from different suppliers to minimize supply risks. This also applies to natural gas, for which we are further diversifying our supplier structure due to the changed supply situation in Europe. For example, we have signed a long-term supply agreement for

liquefied natural gas (LNG) from the United States starting in 2026. In the following years, the agreed delivery volume can cover about one third of BASF's expected natural gas demand in Europe. In addition, we have reduced our demand through technical optimizations in the BASF Production Verbund and converted further power plants to bivalent operation – they can thus be operated with natural gas or heating oil. We are also continuously evaluating whether fossil and petrochemical resources can be replaced with nonfossil or recycled alternatives.

Renewable resources

In addition to fossil resources, we employ renewable raw materials, mainly based on vegetable oils, fats, grains, sugar and wood. In 2023, we purchased around 1 million metric tons of renewable raw materials. We use these to produce ingredients for the detergent and cleaner industry and natural active ingredients for the cosmetics industry, for example. We further use renewable feedstocks such as biomethane and bionaphtha in our Verbund as an alternative to fossil resources. The mass balance approach allows us to attribute the amount of renewable raw materials used to a wide variety of end products (see box on page 124). Examples include biomass balanced glues and impregnating resins for the woodworking industry such as Kaurit®Zero and Kauramin® Balance, various biomass balanced versions of Trilon® and Sokalan® products for the detergent and cleaner industries, biomass balanced tetrahydrofuran (THF) for the production of elastic fibers for the textile industry, a product range of biomass balanced engine coolants under the Glysantin® brand and biomass balanced styrene as a precursor for numerous styrenics.

Our aim is to continuously increase the share of renewable raw materials in our value chains. Just as for fossil raw materials, we also consider economic criteria, aspects of supply security, process and product safety and the availability of various raw materials as well as the potential **impact on sustainability** along the value chain. Alongside positive effects such as reducing greenhouse gas emissions, these can also have negative effects, depending on the raw materials. We therefore take the protection of biodiversity and ecosystems into account when sourcing renewable raw materials and also include social factors such as working conditions and food security in our risk analyses. We carefully weigh up advantages and disadvantages, for example with life cycle analyses. At the same time, we seek dialog with our stakeholders to identify conflicting goals. We also take into consideration recognized certification standards in our decisions, such as the Roundtable on Sustainable Palm Oil (RSPO). For our biomass balance portfolio, we source renewable raw materials that are certified according to recognized standards such as the International Sustainability and Carbon Certification (ISCC) or the organization for sustainably produced biomass REDcert.

As part of our commitment to greater sustainability, we focus on supply chains that are relevant quantitatively and are involved where there is currently a lack of certification standards. We are also working on product innovations and on enhancing our production processes to improve the profitability and competitiveness of renewable resources. For example, we are developing innovative processes such as biocatalysis and fermentation for the production of vitamins and enzymes, and driving forward white biotechnology for the production of chemical components from renewable resources.

Palm oil, palm kernel oil and their derivatives are some of our most important renewable raw materials. We mainly use these to produce ingredients for the cosmetics, detergent, cleaner and food industries. We aim to ensure that palm-based raw materials come from certified sustainable sources. We have been a member of the RSPO already since 2004 and are involved in other national and international initiatives, such as the German Forum for Sustainable Palm Oil and the High Carbon Stock Approach organization. Based on our Group-wide Supplier Code of Conduct (see page 159), we have outlined our expectations of suppliers in the palm-based value chain in an additional sourcing policy (BASF Palm Sourcing Policy). This addresses aspects such as forest and peat conservation, respect for human and labor rights, smallholder inclusion, and certification and traceability standards. As part of our supplier and risk management, we have used the internet platform palmoil.io to monitor deforestation activities and other possible breaches of regulations at our suppliers' sites. For the first time in 2023, our Care Chemicals division published a comprehensive **Responsible Sourcing Report**, in which we will report annually on our measures and progress toward more sustainability and transparency in the palm value chain as well as further renewable raw materials value chains. It replaces the previously published Palm Progress Report.

We purchased 159,798 metric tons of palm oil and palm kernel oil in 2023 (2022: 191,714). We again met our own voluntary commitment to source only RSPO-certified palm oil and palm kernel oil. This avoided more than 225,000 metric tons of carbon emissions compared with the procurement of conventional palm oil and palm kernel oil. As part of our voluntary commitment, we also aim to procure the main derivatives[1] based on palm oil and palm kernel oil entirely from certified sustainable sources by 2025. In addition, we maintained the RSPO supply chain certification of our sites for cosmetic ingredients. At the end of 2023, 25 production sites worldwide were certified by the RSPO (2022: 25).

We source most of our palm-based raw materials from Malaysia and Indonesia. As of the end of 2023, we were able to trace around 96% of our global palm footprint[2] to oil mill level (2022: 97%). Smallholders account for around one-third of the total volumes produced there. We are involved in local initiatives to expand our supplier base for RSPO-certified palm oil products while strengthening smallholder structures and sustainable production methods at local level. Since 2018 we have been working together with The Estée Lauder Companies, the RSPO and civil society organization Solidaridad in Indonesia. The project in the province of Lampung supported around 1,000 independent smallholders in improving their livelihoods and the sustainable production of palm oil

1 Fractions and primary oleochemical derivatives as well as vegetable oil esters
2 The global palm footprint in this context includes certified and noncertified palm-based raw materials.

and palm kernel oil. Upon completion of the project, the declared goal of certifying one-third of the participants of the program according to the RSPO Smallholder Standard was almost achieved (313 certifications). In 2023, BASF partnered with a leading natural cosmetics manufacturer and the Indonesian nonprofit organization Kaleka to support smallholders in Central Kalimantan. The aim is to promote regenerative agricultural methods as well as to help establish political framework conditions and regulations. We are also involved in a local project in Sumatra through the Forum for Sustainable Palm Oil (FONAP).

Also important for BASF, albeit at a much smaller scale, is **castor oil**. We use castor oil to manufacture products such as plastics and ingredients for paints and coatings, as well as products for the cosmetics and pharmaceutical industries. With the objective of establishing a certified sustainable supply chain for castor oil, we launched the Sustainable Castor Initiative – Pragati in 2016 together with the companies Arkema and Jayant Agro and with Solidaridad. The initiative aims to improve the economic situation of castor bean farmers in India and, at the same time, raise awareness of sustainable farming methods. Over 80% of the world's castor beans are produced in India, mainly by smallholders. As part of Pragati, smallholder farmers receive training on topics such as cultivation methods, efficient water use, health and the safe use of crop protection products based on a specially developed sustainability code, SuCCESS. Since the project was initiated, more than 7,000 smallholders and over 27,000 hectares of land have been certified for sustainable castor cultivation. Yields from this land were 36% higher than average amounts for the region published by the local government for the 2022/2023 harvest cycle. In addition to SuCCESS, the Sustainable Castor Association (SCA), which was launched in 2019 by the founders of the Pragati initiative, has also developed a sustainability code for the wider supply chain. This will allow castor beans obtained from the program to be further processed into certified castor oil and derivatives and to be introduced into the downstream supply chain. In 2023, we again sourced certified sustainable castor oil from the program after our Düsseldorf-Holthausen site in Germany became the first chemical company in the world to be certified in 2021. The site supplies customers with the first certified products based on certified sustainable castor oil.

We are also driving the market transformation toward certified, sustainably sourced oleochemicals for another renewable raw material: **coconut oil**. We use coconut oil to manufacture ingredients for products such as detergents, cleaning agents and cosmetics. BASF is the world's first chemical company to offer certified sustainable ingredients for personal care products based on coconut oil. Following our production site in Cassina Rizzardi, Italy, we successfully certified another site in Zona Franca, Spain, under the Rainforest Alliance Mass Balance Coconut scheme in 2023.

Plants also form the basis of many other products in our portfolio for cosmetics. These include our biopolymers, which we have been offering under the Verdessence™ brand, and our bioactives. Through sustainable sourcing practices, we aim to preserve ecosystems and enable sustainable management for the people whose livelihoods depend on them. For example, we have already been combining economic, environmental and social aspects for several years in our holistic procurement initiatives for argan (Morocco), rambutan and galanga (both Vietnam). With the **Responsibly Active program**, we are bundling our existing activities (see box on page 123).

For more information on biodiversity, see page 116 onward

For more information on our voluntary commitment to palm oil products and the Responsible Sourcing Report, see basf.com/en/palm-dialog

For more information on the Responsibly Active program, see personal-care.basf.com/responsibly-active

Case study

Responsibility for bioactives

With the **Responsibly Active program**, we are bundling our activities in the area of bioactives to protect natural resources, to improve the working conditions of people along the supply chain and to reduce the impact on the climate and environmental footprint in production. We have made concrete progress:

As part of full traceability in the botanical supply chain, for example, we have developed a digital tool that tracks every step of argan oil production. Thanks to developments such as these, our Care Chemicals division is able to trace 98% of its botanical supply chains to the country of origin and 42% to the source.

In another project, we worked with suppliers and non-governmental organizations to support women and small businesses along the moringa[1] supply chain through training.

1 Moringa oleifera Lam (Moringaceae) is a tree native to India that is cultivated in the tropics and subtropics. BASF researches active ingredients and markets them for cosmetic applications.

Recycled feedstocks

Recycling is playing an increasingly important role due to limited resources, growing sustainability requirements in the markets, and regulatory developments. In a challenging environment with limited availability of alternative raw materials, we still aim to process 250,000 metric tons of recycled and waste-based raw materials in our production plants annually from 2025, replacing fossil raw materials.

A focal point of our activities here is the **chemical recycling** of plastics. This technology complements mechanical recycling and can help to reduce the amount of plastic waste that is disposed of in landfills or thermally recovered. Chemical recycling breaks down plastics into their building blocks or converts them into basic chemicals. Different methods are used to achieve this.

In our ChemCycling® project, our technology partners use the pyrolysis process to extract pyrolysis oil from mixed plastic waste or end-of-life tires, which are not mechanically recycled as of yet. We feed the pyrolysis oil into the BASF Verbund as a substitute for fossil raw materials and manufacture new products from it using the mass balance principle (see page 124). Our customers can process these mass balanced products in the same way as conventional products. Our portfolio of Ccycled® products now comprises around 240 products, which our customers use for a wide range of applications – from food packaging and transport cases for temperature-sensitive drugs to high-performance plastics for the automotive industry and functional textiles. In order to expand our customer portfolio with mass balanced Ccycled® products, we signed a new cooperation agreement with our partner Pyrum in 2023. This provides for a conditional loan of initially €25 million. It is intended to serve as startup financing for the planning, project development and construction of at least three new Pyrum plants, each with an annual capacity of 20,000 metric tons of end-of-life tires. BASF intends to use the pyrolysis oil produced in the new plants as a recycled raw material in production.

Good to know

The mass balance approach

Many BASF value chains start in syngas plants or steam crackers, where fossil resources, mostly natural gas and naphtha, are converted into hydrogen and carbon monoxide or important basic chemicals such as ethylene and propylene. These are used to create thousands of products in the BASF Verbund.

In addition to fossil raw materials, we feed alternative raw materials into the Verbund that come from bio-based and chemically recycled sources, such as bionaphtha, biomethane and pyrolysis oil. These alternatives are used in place of fossil feedstocks for our mass balance products. As fossil, bio-based and recycled feedstocks are processed simultaneously, the raw materials cannot be directly physically assigned to resulting derivatives. However, through monitoring by independent third parties such as TÜV Nord on the basis of recognized certification systems, such as REDcert² or ISCC PLUS, it can be verified that an adequate amount of alternative raw materials has been used for the amount of mass balance sales product. This ensures that fossil raw materials are saved with every sale of these certified products.

Mass balanced products are identical in quality to conventionally produced products, but the use of alternative raw materials contributes to sustainability, for example, through fewer carbon emissions and lower demand for fossil raw materials. This method has already been applied to over 1,400 BASF products including engineering plastics such as polyamide as well as superabsorbents, dispersions and intermediates.

We share our expertise in numerous stakeholder platforms, including the World Business Council for Sustainable Development (WBCSD), Together for Sustainability (TfS) and nova-Institute's Renewable Carbon Initiative, to harmonize and standardize different attribution methods and certification schemes for mass balance products.

For more information on the mass balance approach, see basf.com/massbalance

In addition, BASF continues to drive forward the recycling of foams from used mattresses. Using a process developed by BASF, the raw materials can be recovered from flexible polyurethane foams to produce new mattresses. Thanks to this new process, in 2023, our cooperation partner NEVEON was able to produce new polyurethane foams from the polyol recovered for the first time on a metric ton scale. The mattresses produced with this material contain 80% recycled content in the polyol component. Approximately 100 mattresses produced using this process are used exclusively in BASF's own business hotel René Bohn in Ludwigshafen, Germany.

We have many years of experience and a high degree of specialization in **recycling precious metals** such as platinum, palladium and rhodium. They are used in mobile emissions catalysts as well as in process and chemical catalysts. We primarily use the precious metals recovered in this way as feedstocks to manufacture new products for the automotive, chemical, electronics and green hydrogen industries. The carbon footprint for recycled precious metals is up to 90% lower than for primary metals from a mine.

With the rapidly growing market for electric vehicles, there is also an increasing need for **recycling lithium-ion batteries**. As a leading producer of battery materials with local production capacities in the three main markets – Asia, Europe and North America – BASF has in-depth expertise in battery chemistry and process technology. We are utilizing these competencies to address battery recycling as an additional growth market in cooperation with partners along the value chain (see page 32). In this way, we want to ensure that valuable metals remain in the production cycle for as long as possible. This conserves resources and significantly reduces the carbon footprint of cathode active materials compared with the industry standard. At our site in Schwarzheide, Germany, a new plant for the production of black mass from spent lithium-ion batteries and battery production waste will be built in the course of 2024, as well as a prototype plant for a metal refinery, which is scheduled for completion in early 2024. This will allow for the development of new operating procedures and optimization of technology to deliver superior recovery rates of metals, such as lithium, nickel, cobalt and manganese, from the black mass. In addition, we will produce cathode active materials from recycled metals on a commercial scale at our U.S. site in Battle Creek, Michigan, from 2024. This will reduce the carbon footprint of cathode active materials by around 25% compared with the use of primary metals. These are used in the lithium-ion battery cells from our partner Nanotech Energy. Together with Nanotech Energy, American Battery Technology Company (ABTC) and TODA Advanced Materials Inc. (TODA), we are aiming to establish a local battery value chain in a closed cycle.

For more information on circular economy, see page 46

Mineral raw materials

We procure a number of mineral raw materials, which we use to produce automotive and process catalysts or battery materials for electromobility, among other products. We are continually improving our products and processes to minimize the use of primary mineral raw materials.

Responsible sourcing of mineral raw materials is important to BASF as we are aware of the challenges in the supply chain and our due diligence. We have implemented the E.U. Conflict Minerals Regulation. This defines supply chain due diligence for tin, tantalum, tungsten and their ores as well as gold (3TG) imported into the E.U. from conflict-affected and high-risk areas (CAHRAs).

In addition, BASF is committed to responsible and sustainable global supply chains for other mineral raw materials. These include **cobalt**, a key component in the production of battery materials. We have organized our cobalt supply chain according to established sustainability guidelines such as the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals. Our goal is to not purchase cobalt from artisanal mines as long as responsible labor, social and environmental standards cannot be verified.

Together with BMW Group, Samsung SDI Co. Ltd., Samsung Electronics Co. Ltd., Volkswagen AG, Stihl AG & Co. KG and GIZ, we have been involved in the cross-industry Cobalt for Development initiative since 2018. It aims to improve working and living conditions for artisanal miners in the Democratic Republic of Congo. To achieve this, the initiative offers programs such as training on important environmental, social and governance aspects of responsible mining practices. In 2023, mining cooperatives continued to receive trainings on topics such as occupational safety and environmental management. Furthermore, together with local nongovernmental organizations and Bon Pasteur/the Good Shepherd International Foundation, GIZ is supporting local communities to develop stable sources of income as an alternative to mining. Residents are trained, for example, in farming during the dry season, learning a trade, starting a business and using financial resources effectively. As a result, households have increased their income by 36% and are better able to cope with crises or shortages. Around 3,000 people are already benefiting from this. The pilot project has also financed the construction and equipment of a school, provided educational training for teachers and developed teaching materials. Today, 600 children are taught in a new school building.

BASF is currently exploring an investment to develop a nickel-cobalt refining complex in Indonesia together with Eramet, a global mining and metallurgy company, to supply cathode active materials to the growing electric vehicle market. BASF has not yet decided whether this project will be implemented. Part of the evaluation process is an intensive review and assessment of environmental, social and governance risks (ESG).

We are also involved in various German and international initiatives to strengthen sustainability and innovation in the value chain for batteries. For example, we are a partner in a consortium led by the system change consultancy Systemiq that has received funding of €8.2 million from the German Federal Ministry of Economics and Climate Action to develop a digital product passport for batteries. This aims to address the requirements of the E.U. Battery Regulation and both capture data that maps information about the origin of raw materials and create the basis for an efficient circular economy.

Close cooperation with the Global Battery Alliance (GBA) is also intended to ensure global compatibility of the digital battery passport. Cofounded by BASF in 2017, the GBA has over 150 members and promotes dialog between business, governments and civil society. It develops the steering tools aiming to establish a sustainable and responsible battery circular economy by 2030. Following the publication of the Greenhouse Gas Rulebook in 2022, the GBA unveiled a revised edition in 2023 as the result of a public consultation. As the first framework of its kind, it contains around 80 specifications and rules for the globally harmonized – and therefore comparable – accounting of greenhouse gas emissions along the battery value chain. As an impartial platform, GBA strives to facilitate a consensus between the relevant stakeholders. The aim of this and further rulebooks is to create transparency for comprehensive and standardized reporting of ESG topics on the basis of broad acceptance.

Together with BMW Group, Mercedes-Benz AG, Fairphone B.V., Daimler Truck AG and Volkswagen Group, we have also been a member of the **Responsible Lithium Partnership** since 2021. It advocates for the responsible use of natural resources in Chile's Salar de Atacama, home to the world's largest lithium reserves and a significant portion of global production. To this end, GIZ was commissioned to organize a local multistakeholder platform on the water-related opportunities and risks of lithium and copper mining and other economic activities and to promote action plans. BASF participated in a study organized by BMW together with experts from the University of Alaska and the University of Massachusetts to investigate hydrological conditions in the Salar de Atacama. The results of this study are incorporated as an important component of the Responsible Lithium Partnership's work.

Another mineral raw material that BASF processes is **mica**.[1] As a base for effect pigments, it is mainly used in the production of coatings and seed coatings. BASF is conscious of its social responsibility with regard to mica sourcing and applies high standards which, among other things, exclude child labor. Suppliers are asked to source mica in accordance with our Supplier Code of Conduct. As an active member of the Responsible Mica Initiative (RMI), we advocate for the eradication of child labor and unacceptable working conditions, specifically in India's mica supply chain. The initiative focuses on labor standards, strengthening local communities and legal frameworks. As RMI's most recent progress report shows, activities in the relevant regions of India have already led to improved income and living conditions. These include improved access to clean drinking water through the installation of pumps and filtration systems and improved access to health care through doctors' visits in villages and enrollment in public health insurance plans.

For more information on responsibility for human rights, labor and social standards, see page 154

For more information on the Cobalt for Development project, see basf.com/cobalt-initiative

For more information on the Global Battery Alliance, see globalbattery.org

For more information on the Responsible Mica Initiative, see responsible-mica-initiative.com

1 Mica minerals, such as muscovite, phlogopite, biotite, damourite, alurgite, annite, gilbertite, mariposite and fuchsite, are classified as phyllosilicates. In colloquial language, mica minerals are referred to as mica.

Material topics in focus:

Process Safety

GRI 2, 413

Process safety is a core part of safe, reliable and thus future-proof production. Our comprehensive safety concepts are designed to provide the best possible protection for employees, contractors and our sites' neighbors, and to prevent damage to property and the environment.

"For us, emergency response means being prepared at all times and at all locations for a possible incident.

Gert Van Bortel
Emergency Response

Strategy and governance

We rely on comprehensive preventive measures to ensure process safety and are continually improving the safety of our production processes. Opportunities arise in particular in the automation and digitalization of processes. In our complex production plants, incidents may nevertheless occur that have a potential impact on humans and the environment. We systematically record opportunities and risks in the area of process safety as part of our general opportunity and risk management (see page 178 onward).

Our production plants are at the heart of our business. To ensure efficient and safe production and to counteract incidents in our plants, we set binding global standards for process safety. Our sites and Group companies are responsible for implementing and complying with Group-wide requirements and local standards. The Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center performs regular audits to check compliance with these requirements.

This page:
In September 2023, around 100 Emergency Response personnel trained for emergencies as part of the major incident drill that takes place twice a year in Ludwigshafen, Germany. The scenario: A defective seal causes a solvent-containing liquid to escape from a system, leading to ignition and deflagration. Exercises of this kind are an integral part of the preventive safety concept at our sites.

2030 target[1]

Reduce our worldwide High Severity Process Safety Incidents per 200,000 working hours[a] ≤ 0.10

a Hours worked by BASF employees, temporary workers and contractors

We pursue ambitious targets for process safety. As part of our continuous improvement process, we regularly monitor progress toward our goals. We critically reviewed our occupational and process safety targets and key performance indicators in 2022. Since 2023, we have been focusing on high-severity incidents. Our reporting continues to be based on established industry standards, with a stronger focus on people.

Global targets and measures

We set high safety standards in the planning, construction and operation of our plants around the world. These meet and, in some cases, go beyond local legal requirements. Our global requirements provide the framework for the safe construction and operation of our plants as well as the protection of people and the environment. Our experts develop a safety concept for every plant that considers the key aspects of safety, health and environmental protection – from

1 In 2023, we adjusted our safety targets.

Material topics in focus: Process Safety

plant design to the end of production – and that defines respective safety measures.

In order to maintain a high level of safety at our plants worldwide over their entire life cycles, we carry out implementation checks in all our plants at regular intervals based on risk potential to verify the implementation of our safety concepts. This also applies to the timely completion of the prescribed (process) safety assessments and the resulting safety measures. We regularly update our plants' safety concepts, taking into particular account new findings, technological opportunities and regulatory developments.

We use the number of High Severity Process Safety Incidents (hsPSI) per 200,000 working hours as a reporting indicator. We have set ourselves the target of reducing High Severity Process Safety Incidents to a rate of no more than 0.10 per 200,000 working hours by 2030.[1] In 2023, we recorded 0.05 hsPSI per 200,000 working hours worldwide. The rate of all process safety incidents in the BASF Group was 0.3 in 2023 (2022: 0.3). We investigate every incident in detail, analyze causes and use the findings to derive suitable measures. We share the findings in our global network in the interest of continuous improvement.

To reduce process safety incidents, we focus in particular on technical measures, digital solutions and on a leadership culture that places even greater emphasis on process safety and dealing openly with mistakes. In addition, we are continually refining and expanding our training methods and offerings to increase risk awareness and strengthen our safety culture. In 2023, for example, a program to reduce process incidents at our site in Pudong, China, focused on the topic of tightness and the prevention of leaks and covered this in training courses.

> "We focus our targets on high-severity incidents in order to focus more strongly on people."
>
> **Gert Van Bortel**

We play an active role in improving process safety around the world in internal and external networks, through our involvement in organizations such as the International Council of Chemical Associations (ICCA), the European Process Safety Centre (EPSC) and the Center for Chemical Process Safety (CCPS), and by fostering dialog with government institutions.

For more information on process safety, see basf.com/process_safety

For more information on occupational safety and health protection, see page 143 onward

1 Hours worked by BASF employees, temporary workers and contractors

Case study

Learning through simulation

An Operator Training Simulator (OTS) can be used to provide a realistic training environment for plant operators so they can learn the skills needed in practice. Similar to a flight simulator, OTS systems can be used to simulate the processes of complex chemical plants.

In this way, new employees can familiarize themselves with their field of work in a practical manner. They can train how to operate the plant, which valves need to be opened or closed under which conditions and which trends in the process control system are particularly important to keep an eye on. An OTS can also be used to simulate conditions that rarely occur in day-to-day work – such as exceptional malfunctions. The simulator is therefore also suitable for training experienced employees.

By using OTSs, we want to further increase the operational safety of our plants and rectify faults faster and better. Several of our operating divisions use simulators. The Petrochemicals division is currently developing OTSs for all of its plant clusters at the Verbund site under construction in Zhanjiang, China, in close cooperation with the Global Engineering Services unit. The advantage of considering an OTS at the same time as planning new projects is that weak points can be identified and rectified before construction begins.

In Nanjing, China; Port Arthur, Texas; Ludwigshafen, Germany; and Antwerp, Belgium, the simulators have already been in successful use at selected plants for several years.

Emergency Response

GRI 2, 410, 413

We aim to avoid safety-related incidents as far as possible with comprehensive preventive measures and clearly defined responsibilities. Should an emergency nevertheless arise, we have established structures and processes that enable effective crisis management.

Strategy and governance

We want to be as prepared as possible for crisis situations at global, regional and local level – from process safety incidents to goods spillages and emergencies – through extensive emergency preparedness and emergency response regulations and measures. That is why our **emergency and crisis management** focuses on the protection of our employees, contractors and neighbors, the safety of our plants and sites, and the protection of the environment. To ensure rapid and effective crisis management, we have defined appropriate structures and processes and laid them down in binding Group-wide requirements. Our sites and Group companies are responsible for implementing and complying with these internal requirements and the legal specifications. The Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center conducts regular audits to monitor this.

Unusual incidents are recorded and reported centrally in accordance with a standardized Group-wide procedure (e-Rapid Incident Report). The aim is to identify risks at an early stage and, if necessary, initiate appropriate remedial and communication measures. All incidents are followed up on to identify potential for improvement, which is integrated into existing concepts as needed.

Organization and responsibilities

Incidents are initially handled by the local crisis organization or local emergency response team. We have implemented precautionary organizational measures with clearly defined responsibilities and procedures at all sites for this purpose. The employees responsible receive regular training. This includes safety and emergency drills, which vary in scope and the number of people involved. Depending on the situation, we also involve business partners and our sites' communities, such as local authorities or neighboring companies, both in drills and in the event of an emergency. Additional teams may be called in for emergencies, depending on the extent of the damage and how it develops.

The Global Crisis Management Support Team (GCMS), led by a member of the Board of Executive Directors is activated in the event of a crisis situation. It provides the strategic direction for crisis management and is supported by issue-specific and specialist working groups.

We are involved in external networks, which quickly provide information and assistance in emergencies. These include the International Chemical and Environmental (ICE) initiative and the German Transport Accident Information and Emergency Response System (TUIS), in which BASF plays a coordinating role. In 2023, we provided assistance to public emergency response agencies and other companies in 116 cases (2022: 131). This included information on chemicals and their proper disposal, on-site operational support for transportation accidents involving hazardous goods and information on human biomonitoring.[1] We apply the experience we have gathered to improve our own processes and set up similar systems in other countries.

For more information on emergency response, see basf.com/emergency_response

1 Human biomonitoring (HBM) is a tool for health-related environmental monitoring with which populations are examined for their exposure to pollutants from the environment.

Transportation Safety

GRI 2, 306

Our regulations and measures for transportation safety are part of our Responsible Care Management System. These cover the delivery of raw materials, the handling and distribution of chemical products between BASF sites, warehouses and customers, and the transportation of waste.

At a glance

Zero

Transportation incidents with significant impact on the environment

- Risk minimization along the entire transportation chain
- Risk assessment based on national and international dangerous goods regulations
- Regular review of logistics service providers

Strategy and governance

As a chemical company, we transport some hazardous goods that may have potentially negative effects on people and the environment if handled improperly or in the event of accidents involving third parties. Whether by road, rail, ship or air, we want to ensure that our products are loaded, transported and handled in accordance with the relevant regulations and their hazard potential. That is why we depend on global standards, an effective organization, training and reliable logistics partners. Our goal is to **minimize risks** along the entire transportation chain.

All BASF products intended for transport must be clearly identifiable, classified, securely packaged and labeled. The transportation of dangerous goods is subject to mandatory national and international dangerous goods regulations as well as our global requirements. Our sites and Group companies are responsible for implementing these transportation safety regulations and requirements. Compliance is regularly monitored by the Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center using globally standardized transportation safety reviews. External logistics partners are evaluated based on risk either through assessments or on-site audits.

Our global network of BASF experts trains the responsible leaders and their employees on transporting dangerous goods. This network also ensures that information, insights and best practices are shared on an ongoing basis.

Preventive safety measures

National and international dangerous goods regulations are based on an assessment of transportation risks and define rules and measures for safely transporting dangerous goods. We use various tools to minimize transportation risks. For example, for every dangerous good to be transported, we check in each case whether the packaging has been approved for that product and is suitable for the type of transport. We conduct digital dangerous goods checks before shipping orders are released. In addition, vehicles are subjected to a thorough dangerous goods check prior to loading and rejected if there are any issues.

Above and beyond this, we use our global requirements to specifically assess the safety and environmental risks of transporting and handling raw materials and sales products with high hazard potential. This is based on the Guidance on Safety Risk Assessment for Chemical Transport Operations published by the European Chemical Industry Council (CEFIC).

We stipulate worldwide requirements for our logistics service providers and assess them in terms of safety and quality. Our experts use our own tools as well as internationally approved schemes for evaluation and monitoring. These include the ship inspection reports issued by the Chemical Distribution Institute (CDI) and the Oil Companies International Marine Forum (OCIMF).

Transportation incidents

To evaluate transportation safety, we systematically record transportation incidents according to defined criteria. We use the number of transportation incidents[1] as a reporting indicator. In 2023, we recorded 16 transportation incidents worldwide (2022: 25).

A particular focus is incidents involving goods spillages that could lead to significant environmental impacts. These include dangerous goods leaks in excess of 200 kilograms on public traffic routes, provided transport was arranged by BASF. We recorded no incidents in 2023 with spillage of more than 200 kilograms of dangerous goods[2] (2022: 1). There have therefore been no incidents with a significant impact on the environment (2022: 0).

For more information on transportation safety, see basf.com/distribution_safety

1 Data is collected based on the International Council of Chemical Association's (ICCA) Guidance for Reporting Performance and includes road, rail and container shipping incidents.
2 Hazardous goods are classified in accordance with national and international hazardous goods regulations.

Social

As a global company, we are responsible for our actions along the entire value chain. A trust-based relationship with our stakeholders and careful management of our supply chains are crucial to our business success. We value an inspiring and safe working environment for our employees. We are in close contact with our local community and respond to the needs of our customers and the concerns of society.

In this section:

Our Management and Control Systems

GRI 2, 3, 303, 403

The health and safety of our employees and contractors is our top priority, as is the quality and safety of our products. To this end, we have established comprehensive management and control systems. Our Responsible Care Management System comprises the global directives, standards and procedures for environmental protection, health and safety.

Responsible Care Management System

BASF is actively involved in the International Council of Chemical Associations' global Responsible Care® initiative. Our Responsible Care Management System covers the environmental protection, health and safety aspects that we have identified as material. When it comes to health protection and safety, this is particularly relevant for the production at our plants, activities at our sites and warehouses, as well as distribution of our products down to our customers' application of our products. The Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center defines Group-wide mandatory management and control systems and monitors compliance with internal requirements as well as legal regulations through audits, while the sites and Group companies implement these requirements locally. Our global network enables information and insights to be shared across the BASF Group on an ongoing basis.

Our policies and requirements are continuously updated. We also maintain dialog with government institutions, associations and international organizations for this reason. We set ourselves ambitious goals for safety and health protection (see page 41). We assess the potential risks and weaknesses of all our major activities – from research and development to production and logistics – and the potential effects of these on safety, the environment and our surroundings. We use databases to record accidents, near misses and safety-related incidents at our sites as well as along our transportation routes. This documentation helps us to continuously improve. Appropriate measures are derived according to specific cause analyses.

For more information on Responsible Care®, see basf.com/en/responsible-care

Responsible Care audits

Regular audits help ensure that our safety, health and environmental protection standards are met. We conduct regular audits every three to six years at all BASF sites and at companies in which BASF is a majority shareholder. We take a **risk-based approach** here. An audit database ensures that all sites and plants worldwide are regularly audited. We have defined our regulations for Responsible Care audits in a global Corporate Requirement. The Board of Executive Directors is regularly informed about the results of the audits. Newly acquired sites and companies are generally audited for the first time after the integration phase is complete, generally within one to two years depending on complexity and number of sites. During our audits, we create a safety and environmental profile that shows if we are properly addressing the hazard potential. If this is not the case, we agree on corrective measures to be implemented within a certain time frame depending on the identified hazard potential. We monitor this in follow-up audits, among other things.

In the BASF Group in 2023, 120 environmental and safety audits were conducted at 72 sites (2022: 115 audits at 73 sites). The sites were audited based on their individual risk profile. Auditing of the sites acquired in 2020 from Solvay was interrupted due to local coronavirus restrictions in 2022 was continued and completed in the 2023 reporting year. In addition, eight sites were audited on occupational medicine and health protection (2022: 16).

For more information on occupational safety and health protection, see page 143 onward

Employees

GRI 2, 3, 201, 401, 402, 404, 405

Our employees make a significant contribution to BASF's success. We want to attract and retain talents for our company and support them in their development. To do so, we strive to cultivate a working environment that inspires and connects people. It is founded on a culture of open leadership based on mutual trust, respect and dedication to top performance.

At a glance

111,991
Employees around the world

- Global targets on employee engagement and promotion of women in leadership positions
- Focus topics in 2023: promoting diversity and supporting the resilience of teams, leaders and the organization

Strategy

Our employees are key to the successful implementation of BASF's strategy. That is why we rely on our employees and leaders. We help them to develop the necessary skills to support our customers in the best possible way and provide them with the tools they need to do so. We promote a working atmosphere based on mutual trust with attractive working conditions, in which employees can develop their individual skills and potential. We want to further strengthen our employee engagement and innovative power through the inclusion of diversity. This also positions us to meet the challenges of an increasingly rapidly changing environment.

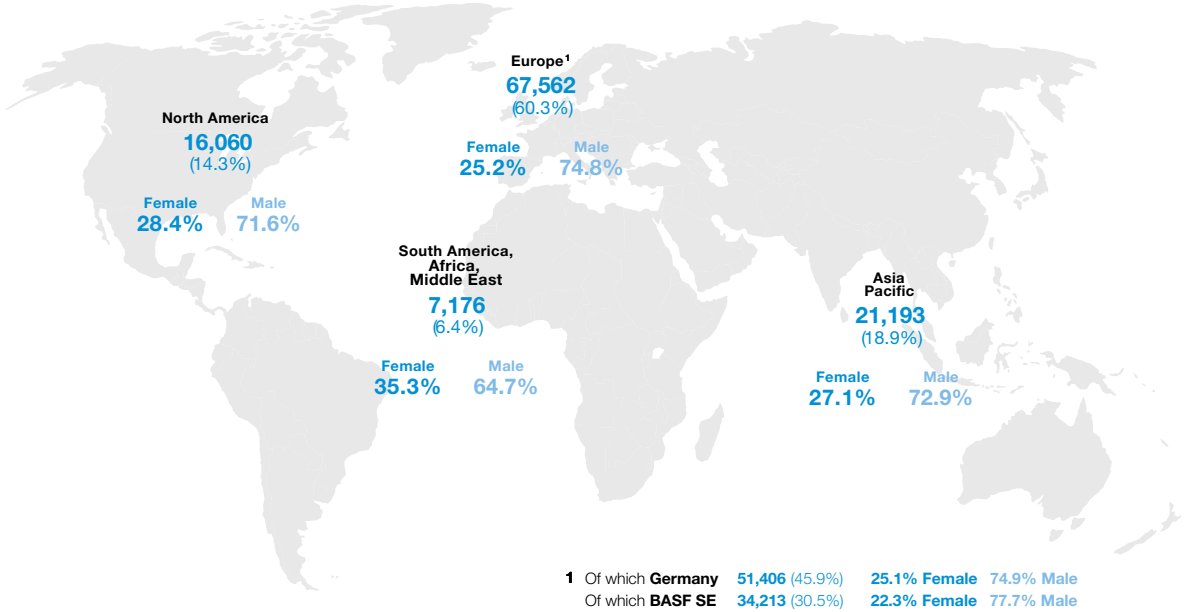
Nevertheless, attracting and retaining qualified employees presents us with an increasing number of challenges and risks. By offering various learning and development opportunities as well as attractive compensation and benefits, and with our commitment to supporting a balance between personal and professional life, we want to maintain our reputation as an attractive employer. In order to continue to attract and retain talents for our company in the future, we work continuously on BASF's attractiveness as an employer. We systematically record short and long-term opportunities and risks as part of our general opportunity and risk management (see page 182 onward).

Number of employees

As of December 31, 2023, the number of employees increased to 111,991 employees compared with 111,481 employees as of December 31, 2022. The rise was primarily due to staff increases in Asia Pacific, especially for the new Verbund site in Zhanjiang, China. This was partially offset by retirements and departures due to dormant employment as well as measures in connection with the cost savings program focusing on Europe. We employed 3,045 apprentices (2022: 3,049), of which 21.3% were women. A total of 2,305 employees were on temporary contracts (of which 43.4% were women).

BASF Group employees by region

(Total: 111,991, of which 26.7% women, as of December 31, 2023)



1 Of which **Germany** **51,406** (45.9%) **25.1% Female** 74.9% Male
Of which **BASF SE** **34,213** (30.5%) **22.3% Female** 77.7% Male

Employee engagement

BASF can rely on the engagement of its employees. Employee surveys and pulse checks are used as **feedback tools** to actively involve employees in shaping their working environment. The results are communicated to employees, the Board of Executive Directors and the Supervisory Board, among others.

We have performed regular global employee surveys since 2008, and since 2019, we have also recorded the employee engagement level as an index score based on the answers to five key questions. Overall, more than 84,400 employees worldwide participated in the 2023 survey (participation rate: 74%[1]). The survey revealed an engagement index of 79%, which constitutes a drop of two percentage points compared with the previous year (2022: 81%). Our aim is to get this score back above 80%, the target defined in the BASF strategy. We support our leaders in addressing topics that help to strengthen employee engagement together with their teams in a decentralized way. In addition, in 2023, we launched the centrally coordinated initiative "Learn from the Best." As part of the initiative, BASF units from all regions that have achieved exceptionally high levels of employee engagement are presented. These examples serve not just as inspiration for others, but also promote cross-unit exchange.

What we expect from our leaders

Our leaders and their teams should contribute to BASF's success. This is why we promote high-quality leadership and measure its impact. We understand impactful leadership as leaders that serve as role models by having – in line with our corporate values – a positive influence on the engagement and development of their employees, and by developing and implementing business strategies together with their teams. These aspects are part of the standard global nomination criteria for leadership positions.

Our leadership culture is based on BASF's corporate values (see page 33) and our specific expectations of leaders' conduct are derived from these: The **CORE Leadership Values** serve as the guiding principles for all leaders and set out our expectations of leadership conduct. They are aligned with BASF's strategic goals and reflect our company's leadership vision.

By offering a wide range of targeted training and development opportunities for leaders at all levels, we help to ensure the future viability of BASF. We offer our leaders opportunities for each phase of their career as well as various formats that enable them to learn from one another and from external experts. We aim to develop leaders who lead their teams with professional competence, optimism, empathy and trust, and in this way, create a competitive advantage for BASF.

In order to further anchor the CORE Leadership Values in day-to-day work, the focus topic **Care and Coach for Performance** was defined for our leadership training in 2023. We gave leaders impetus to work on the topic of resilience and to further strengthen their role as coaches (see page 135). These virtual training courses and inspirational events provided senior executives in particular with opportunities for self-reflection, global exchange, practicing and consolidating competencies and skills.

To identify and develop the best talent at an early stage, we also use potential assessments. Among other things, we identify indicators for future leadership success and compare the skills already developed by the talents with the requirements for management tasks with greater responsibility. This enables us to offer even more targeted development opportunities and help to further increase the quality and number of our potential leaders.

Regular feedback plays an important role in the development of leaders. In 2023, we did not make it mandatory to use our global feedback tool FEEDback&forward. Nevertheless, 800 leaders voluntarily used the tool and obtained valuable feedback from their teams. This corresponds to around 10% of our leaders. In 2024, we will make using our leadership feedback tool mandatory again.

Competition for talent

Attracting and retaining the best employees is crucial to our success. Having an attractive and compelling total offer package for employees is becoming increasingly important considering the strong global competition for the best qualified employees and leaders. This is why we are constantly working on measures to better appeal to talents worldwide and are increasingly using digital platforms such as our country-specific career websites as well as global and regional social networks.

Our **talent search activities** in 2023 were based on a mix of face-to-face events and digital offerings. For example, we are represented at digital trade fairs and conferences. This virtual contact enables a demand-oriented, flexible and location-independent approach. As a result, we were able to continue to attract and recruit talented employees.

In 2023, we introduced a new digital recruitment tool in Europe, North America and South America. On this basis, we have established a global recruiting process. The new system offers improved user-friendliness and is designed to speed up the recruitment process. Artificial intelligence (AI) features enable people applying to BASF to match their CV with all job offers. The solution is scheduled for launch in Asia Pacific in 2024.

We want to ensure the availability of qualified employees and safeguard existing knowledge today and in the years to come. At the BASF SE site in Ludwigshafen, Germany, we perform analyses to make the demographic situation for different operational job profiles transparent for the responsible leaders. On this basis, we offer specific measures for succession planning, knowledge sharing and moderated knowledge transfer. To combat the shortage of

1 The scope of employees surveyed goes beyond the scope of consolidation. However, there are exceptions for companies that represent joint ventures and joint operations, as well as companies held for sale.

skilled workers in production and technical areas in Ludwigshafen, Germany, we increasingly used social media channels to alert qualified specialists to career prospects at BASF in 2023. We also cooperated with the German employment agency, for example, to target skilled workers at informational events and to recruit suitable candidates for BASF who are currently available on the labor market or will be in the near future.

We once again achieved high scores in a number of employer rankings in 2023. For example, in a study conducted by Universum, young scientists ranked BASF as the sixth most attractive employer in Germany (2022: seventh). In North America, BASF was named as one of the top 50 companies for diversity for the 11th consecutive year by Fair360 (formerly DiversityInc). In Asia, Top Employer recognized BASF China as one of the best employers for the 13th time in succession.

The BASF Group hired 9,168 new employees in 2023. The percentage of employees who resigned during their first three years of employment – the early turnover rate – was 1.4% worldwide in 2023. This turnover rate was 0.8% in Europe, 3.0% in North America, 1.9% in Asia Pacific and 2.3% in South America, Africa, Middle East.

The voluntary turnover rate, or the proportion of employees who left the company voluntarily, amounted to 3.5% globally. This rate was 2.2% in Europe, 7.1% in North America, 4.7% in Asia Pacific and 5.2% in South America, Africa, Middle East.

As of December 31, 2023, the BASF Group was training 3,045 people in various occupations. We spent a total of around €130 million on vocational training in 2023.

For more information on careers at BASF, see basf.com/careers

BASF Group new hires in 2023

	2023	Of which women (%)
Europe	3,868	29.9
North America	2,342	31.8
Asia Pacific	2,164	32.2
South America, Africa, Middle East	812	45.9
Total	**9,168**	**32.3**

Learning and development

Learning and development are essential success factors for a strong and future-oriented company culture. The **skills and competencies** of our employees are critical for profitable growth and lasting success. For this reason, we want to further modernize our learning culture and step up our efforts to promote continuous, self-directed learning and learning from others. Employee development at BASF is underpinned by the principle that development opportunities and support are open to all employees.

We understand development as continuous learning by building individual experience and skills, further training or changing jobs. A trust-based relationship between employees and leaders as well as regular feedback through continuous meaningful conversations are crucial to employee development. These regular conversations can be initiated by both leaders or employees and take different forms – leaders and employees can agree on this in the annual employee dialog.

Employees also define their individual learning objectives together with their leader as part of the continuous conversations. These are to be adapted to the specific requirements of the position concerned and future needs. Learning can take place in various formats and at different locations – at work, as social or formal training – depending on individual and workplace demands.

Our learning opportunities are available for a variety of employee development needs: starting a career, expanding knowledge, personal growth and leadership development. In 2023, we focused some offers on strengthening resilience (see page 135). In addition, the many academies in the divisions and service units offer training on specific professional content. Since 2023, we have been offering Campus Events for newcomers in all regions to welcome them to BASF, share general information such as our strategy and give them the opportunity to network with each other.

To achieve our ambitious digitalization goals, we are focusing on digital skills development of our leaders and employees, as well as on agile transformation. One example of this is our training course on the current development of generative AI applications. We offer content on this topic for various target groups in the form of self-led learning paths, training courses and individual or group coaching. In this way, we want to enable BASF employees to gain an understanding of data, data analysis and AI. After all, in order to exploit the full potential of AI solutions, it is essential to combine new technologies with the experience and expertise of employees. Employees can gain practical experience using the chatBASF AI assistant.

Good to know

⌜Resilience helps in difficult times⌟

Resilient teams and companies with a resilient culture are better able to overcome challenges and recover from them more quickly. Resilient people can deal with difficulties more easily and use them as an opportunity for growth. For this reason, and in a challenging and increasingly rapidly changing environment, we focused on promoting resilience in the learning opportunities for leaders and in various opportunities for employees in 2023. Under the motto "Care and Coach for Performance," we offered our senior executives various training modules and learning opportunities in virtual formats. These also included training on how leaders can apply a coaching-oriented leadership style and make better use of their emotional intelligence. As role models and coaches, leaders can better promote the strengths of their team members and support them in their development.

In addition, we have provided leaders and employees with a wide range of resources and independent learning opportunities to inform themselves and develop their own skills. These included in particular strategies and rituals for self-care and caring for employees. It is important to us to enable teams to perform at their best, even in challenging situations, without neglecting their own health. This training portfolio was supplemented by tailored initiatives from our Corporate Health Management (see page 145), as well as by regional and local offerings. In North America, we offer digital solutions that enable affected employees to take advantage of offers to improve their mental health, regardless of their location or working hours. Over the past five years, BASF has built up a network of employees in the United Kingdom and Ireland who act as first aiders for mental health issues (Mental Health First Aiders). They complement Corporate Health Management and can provide confidential advice and professional support to those who need it.

Compensation and benefits

⌜We want to attract and retain engaged and qualified employees, and motivate them to achieve top performance with a comprehensive package that includes market-oriented compensation, benefits, individual development opportunities and a good working environment. Our employees' compensation is based on **global compensation principles** according to position, market and performance. As a rule, compensation comprises fixed and variable components as well as benefits that often exceed legal requirements. In many countries, these benefits include company pension benefits, supplementary health insurance and share programs. We regularly review our compensation systems at the global and local levels. We are committed to the U.N. Global Compact's goal of paying employees a living wage to support them and their families by 2030. Since 2022, we have been conducting a global analysis to determine whether we pay employees such a wage and to close any gaps.

We want our employees to contribute to the company's success. This is why the compensation granted to the vast majority of our employees includes variable compensation components, with which they participate in the success of the BASF Group as a whole and are recognized for their individual performance. The same principles essentially apply for all employees worldwide. The amount of the variable component is determined by economic success as well as the employee's individual performance. We use the BASF Group's return on capital employed (ROCE) to measure economic success for the purposes of variable compensation. This links **variable compensation** to our ROCE target.[1] Individual performance is assessed as part of a globally consistent performance management process. In numerous Group companies, our "plus" share program ensures employees' long-term participation in the company's success through incentive shares. In 2023, for example, around 26,700 employees worldwide (2022: around 27,100) participated in the "plus" share program.

1 In calculating compensation-relevant ROCE, adjustments are made for negative and positive special items resulting from acquisitions and divestitures (for example, integration costs in connection with acquisitions and gains or losses from the divestiture of businesses) when these exceed a corridor of +/-1% of the average cost of capital basis. An adjustment of compensation-relevant ROCE (in the first 12 months after closing) therefore only occurs in cases of exceptionally high special items resulting from acquisitions and divestitures.

From 2024 onward, variable compensation for senior executives in the BASF Group will be adapted to the Differentiated Steering concept and based on targets derived from the new key performance indicators for the steering of the respective business unit or the BASF Group (see page 40).

BASF offers senior executives the opportunity to participate in a **long-term incentive (LTI)** program[1] in the form of a performance share plan. The four-year program takes into account the development of the total shareholder return. It incentivizes the achievement of strategic growth, profitability and sustainability targets. To take part in this program, participants must hold BASF shares, the amount of which is based on their individual fixed compensation. In 2023, around 93% of the people eligible to participate in the long-term incentive program around the world did so, holding between 30% and 70% of their fixed annual compensation in BASF shares.

The share price-based compensation program (BASF option program, BOP), which had existed since 1999, was offered for the last time in 2020. Due to the maximum program term of eight years, exercise gains from the BOP program can still accrue until June 30, 2028.

For more information on share-price based compensation offers and BASF's share programs, see the Notes to the Consolidated Financial Statements from page 310 onward

For more information on the compensation of the Board of Executive Directors and the Supervisory Board, see the Compensation Report at basf.com/compensationreport

Personnel expenses

Expenses for wages and salaries, social security contributions and assistance, as well as for pensions totaled €10,950 million in 2023. In the previous year, these amounted to €11,400 million. The decline was mainly due to the lower additions of bonus provisions, currency effects, particularly from the U.S. dollar and the Argentine peso, as well as lower pension expenses. A higher wage and salary level as well as a higher average number of employees had an offsetting effect.

BASF Group personnel expenses

Million €

	2023	2022	+/-
Wages and salaries	8,773	9,102	-3.5%
Social security contributions and assistance expenses	1,612	1,598	+0.9%
Pension expenses	565	701	-19.4%
Total personnel expenses	**10,950**	**11,400**	**-3.9%**

Balancing personal and professional life

Our identity as an employer includes our belief in supporting our employees in balancing their personal and professional lives. We want to strengthen their identification with the company and our position in the global competition for qualified personnel. We want to achieve this with a **wide range of offerings** aimed at employees in different phases of life. We have formulated global guidelines for more flexibility that regulate where, when and how employees can work. These opportunities have become an integral part of our employees' day-to-day work, job permitting. These include flexible working hours, part-time employment, remote working, and time-off options. Desk-sharing concepts support the new form of collaboration and create areas to withdraw as well as interaction spaces for sharing ideas and being creative together. There are also external and internal coworking opportunities that employees can take advantage of.

We want to support employees in achieving a better work-life balance, for example in relation to childcare or caring for relatives, by offering additional services. We are continually working to expand these options.

Childcare is essential for many parents and enables them to return to work more quickly. The BASF SE nursery LuKids is one of the largest company childcare facilities in Germany with a total of 260 places and offers demand-oriented all-day care. It is supplemented by flexibly bookable emergency childcare places via other providers and children's holiday programs. We also offer employees at other sites in Germany and North America, for example, support with childcare or childcare solutions for emergencies.

At many sites worldwide, we offer our employees professional support with stressful situations in their personal and professional lives. In Germany, this is done by the BASF Stiftung's social and life counseling service, for example, and is increasingly also offered at sites outside of Ludwigshafen.

As part of our global Corporate Health Management, we support employees in strengthening their mental and physical health and adapting their health behavior accordingly, among other things (see page 145).

For more information on BASF Stiftung, see basf.com/international_donations

1 The LTI program referred to here is aimed at management levels 2 to 4 as well as individual employees who have attained senior executive status by virtue of special expertise.

Mutual respect and open dialog

Openness is one of BASF's corporate values. That is why our stakeholder dialog is based on **honesty, respect and mutual trust**. This also applies to dialog with our employees.

Our employees have the opportunity to form, join and support legally recognized trade unions or employee representatives. These are entitled to represent employees and their interests in collective bargaining. BASF upholds these rights and has anchored this in the Group-wide guideline on compliance with international labor norms.

Trust-based cooperation with employee representatives is an important component of our corporate culture. Our open and continual dialog lays the foundation for balancing the interests of the company and its employees, even in challenging situations. In 2023, this underpinned our efforts to manage the effects of the war of aggression in Ukraine and the corresponding increases in energy prices, as well as the current restructuring programs. In the case of organizational changes or if restructuring leads to staff downsizing, for example, or in the case of other codetermination-relevant topics, we involve employee representatives at an early stage to develop socially responsible implementation measures. Our actions are aligned with the respective legal regulations and the agreements reached, as well as operational conditions.

By focusing our discussions on the local and regional situations, we aim to find tailored solutions to the different challenges and legal conditions for each site. The BASF Europa Betriebsrat (European Works Council) addresses cross-border matters in Europe. In South America, we foster continual dialog with employee representatives in the Diálogo Social.

We are also committed to social dialog with employee representatives where freedom of association is not guaranteed under national law to the same extent as in European legal systems.

For more information, see basf.com/employeerepresentation

Material topics in focus:

Inclusion of Diversity

GRI 3, 404, 405

BASF strives to foster an inclusive working environment with room for diversity and where people encounter mutual respect, trust and appreciation. We connect people with different backgrounds, views and perspectives on an equal footing. Promoting and valuing diversity across all hierarchical levels is an integral part of our strategy and is also embedded in our corporate values.

> As a global company, we promote diversity and are committed to treating one another with respect at BASF.
>
> **Dr. Martin Brudermüller**
> Chairman of the Board of Executive Directors

Employees should be able to contribute their individual perspectives and skills in an inclusive working environment. As a global company, we serve many different customer needs. We want to reflect, value and promote this diversity among our employees in order to increase their creativity, motivation and sense of belonging to BASF.

Promoting diversity has positive consequences for BASF, for example through having an inclusive working environment and a more diverse workforce. Negative consequences could arise if our employees lose their sense of belonging, we are no longer perceived as an attractive employer or not all customers feel that we appeal to them. We systematically record short and long-term opportunities and risks as part of our general opportunity and risk management (see page 182 onward).

We expect our leaders to create an inclusive working environment and promote diversity. This is why it is one of our focal points in our leadership development. For example, our leaders learned about promoting openness as part of the CORE Leadership Values online training series. This training supports them in what they can specifically do to make the work environment more inclusive for all employees and how they can live up to their role model function and develop further in this respect.

2030 target

Proportion of female leaders with disciplinary responsibility **30%**

In addition, we expect all employees to create an environment in which different aspects of diversity and individual strengths are valued. With the Diversity Moments format, we offer teams concise information, everyday examples and reflection exercises on the topic of diversity and inclusion. In 2023, as part of the global employee survey (see page 133), we again used the **inclusion index** as a relevant point of reference for the inclusion of our employees and provided our leaders with suggestions for follow-up measures.

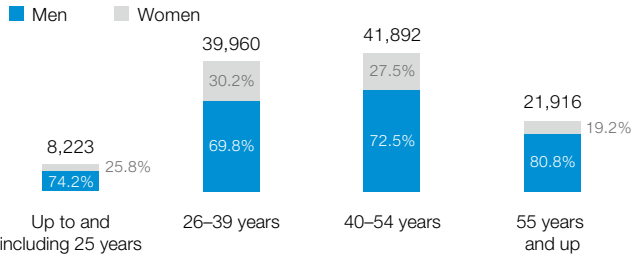
In Brazil, there is an initiative to attract, retain and include **people with disabilities** in BASF. Among other things, we are focusing on improving the accessibility of our Brazilian sites and our internal and external communication channels. With further measures as part of the initiative, we want to ensure that we consider more people with disabilities in the recruitment process and offer them specific training opportunities. The project team works closely with leaders, the HR department and the local network of employees with disabilities.

This page:
People around the world show their support for the **LGBTQI+ community** during Pride month in June. BASF also flew the rainbow flag at many of its sites in 2023, including here in Ludwigshafen, Germany, setting an example for diversity and openness.

Material topics in focus: Inclusion of Diversity

BASF Group employee age structure

(Total: 111,991, of which 26.7% women, as of December 31, 2023)



Diversity also relates to the company's **demographic profile**. Our aim is to create a suitable framework to help maintain the employability of our personnel at all stages of life and ensure the availability of qualified employees over the long term.

As we are convinced that better decisions are made by considering diverse perspectives, we set up a Shadow Board for BASF sites in Africa and the Middle East in 2023. The Shadow Board is made up of younger employees and advises the leadership team on strategic and operational topics. Using this **reverse monitoring** approach, we want to broaden and enrich the perspectives of the leadership team and bridge the gap between hierarchical levels and between generations.

We also promote diversity in the selection and development of our leaders. We have set a **global target to promote female leadership** and aim to increase the proportion of women in leadership positions to 30% by 2030. We have made important progress toward this and continually review our target. In the BASF Group, the global proportion of female leaders with disciplinary responsibility was 28.4% at the end of 2023 (2022: 27.2%).

To enable our management to monitor progress toward this target, we have developed a global dashboard that is used to regularly review the status of implementation. The systematic advancement of women is an integral part of our process for selecting senior executives and is regularly addressed in strategic dialogs with the divisions at the level of the Board of Executive Directors and in the Board's strategic talent discussions. In addition, we offer various opportunities to help female executives strengthen their network and increase their visibility at senior executive level.

Leaders and specialists in the BASF Group

	December 31, 2023	Of which women (%)
(Senior) executives[a]	9,400	28.4
Specialists/experts[b]	42,101	32.8

a With disciplinary leadership responsibility
b Without disciplinary leadership responsibility (previously "professionals")

Furthermore, we consistently take part in specific career events to specifically reach and attract female talent from various disciplines. We focus on our female employees as role models on our social media channels and with various initiatives such as career fairs and networking events aimed specifically at women.

As a signatory to the United Nations' Women's Empowerment Principles (WEPs), we are committed to promoting gender equality. We are also involved in other external initiatives to promote inclusion of diversity and equal opportunities in the workplace, such as the Business for Inclusive Growth (B4IG) initiative. In addition, we are an active member of the Charta der Vielfalt (German diversity charter), which aims to promote diversity and inclusion with a holistic approach.

For more information on diversity in the Board of Executive Directors and the Supervisory Board, see page 192 onward

For more information on diversity and inclusion, see basf.com/diversity

Stakeholder Engagement

GRI 2, 3, 413

The acceptance and support of our stakeholders is crucial for our business success. Through continuous dialog, we leverage the expertise of our stakeholders in global networks, worldwide initiatives and our own advisory bodies and actively contribute our expertise.

At a glance

- Focus in new Sustainability Lab: energy transition
- New Nature Advisory Council founded

Our continuous and open exchange on developments and joint approaches to solutions results in positive effects for BASF, such as societal support for our business activities. If we are perceived negatively by stakeholders, this can reduce our credibility and the acceptance of our business activities. We systematically record short and long-term opportunities and risks as part of our general opportunity and risk management (see page 173).

We have been a member of the U.N. Global Compact since its establishment in 2000. BASF consistently supports the **U.N. Global Compact's** 10 principles of responsible business conduct and the Sustainable Development Goals. We are active all over the world in local Global Compact networks, in some cases in a leadership role. BASF has been an active member of the **World Business Council for Sustainable Development** (WBCSD) since 1999. We cofounded the **Global Battery Alliance** (GBA) in 2017. The aim of the GBA is to develop standards and tools to steer a sustainable value chain for batteries. In 2019, we cofounded the **Alliance to End Plastic Waste** (AEPW) to drive forward solutions that reduce and avoid the disposal of plastic waste in the environment, in particular in the ocean. Together with other companies and the European CSR Europe network, we have worked on the topic of responsible social transition to climate neutrality (just transition).

Stakeholder demands and expectations of BASF

Customers

- Attractive prices
- Innovative and sustainable solutions
- Reliable partner

Investors

- Attractive dividend yield
- Strong long-term share performance
- Transparency and risk minimization

Society: politics, NGOs, media

- Jobs and taxes
- Responsible and trustworthy partner
- Production of safe products in compliance with environmental and social standards

Suppliers

- Fair and reliable business relationships
- Support in complying with our Supplier Code of Conduct (environmental and social requirements)

Community

- Safe, disruption-free operations
- Attractive jobs
- Support for local communities

Employees and management

- Attractive and fair employer
- Health protection
- Opportunities for professional development

We have contributed to both the development of a European road map and an associated toolbox.

In order to involve our stakeholders more intensively and to deepen specific sustainability topics, we use our own independent advisory bodies. In 2023, for example, we introduced the **Sustainability Lab** as a new stakeholder engagement format. This is a further development of the **Stakeholder Advisory Council** (SAC), which brought together members of the SAC and the BASF Board of Executive Directors in Ludwigshafen, Germany, for the 10th time in fall 2022.

With the Sustainability Lab, BASF is establishing a format to shed light on individual topics and issues related to sustainability from different perspectives. Around 100 external and internal experts discuss the complex challenges of climate change. At the first Sustainability Lab in Ludwigshafen, Germany, in July 2023, the participants worked on what BASF and other stakeholders can do to contribute to a successful energy transition under the title "Going Green – Fast and Fair." The outcomes were shared with relevant international stakeholders and will be taken into consideration in activities on the path to an energy transition at BASF and for other stakeholders. The Sustainability Lab will meet every two years to discuss a specific topic.

We address current and important issues regarding specific topics with councils. The trustful exchange within the **Human Rights Advisory Council** helps us to better understand our role and responsibilities, particularly in challenging situations concerning human rights (see page 155).

In 2023, BASF founded the new advisory council for topics relating to the protection of biodiversity and ecosystems, the **Nature Advisory Council** (NAC), to obtain an independent societal perspective on our activities related to nature and biodiversity topics (see page 117).

We have a particular responsibility toward our sites' neighbors. We promote continuous exchange between local residents and our site management and strengthen trust in our activities with **community**

advisory panels. Our globally binding requirements for community advisory panels are based on the grievance mechanism standards in the United Nations' Guiding Principles on Business and Human Rights. We keep track of their implementation through the existing global database of the Responsible Care Management System.

We also involve key stakeholders in the decision-making process about future investments at an early stage. For example, we are working with partners, local authorities and nongovernmental organizations to analyze whether and how we can build a refinery complex for nickel and cobalt in Indonesia in a responsible manner.

Our **political advocacy** is conducted in accordance with transparent guidelines and our publicly stated positions. The same applies to our activities in associations. Our Industry Associations Review compares the energy and climate protection positions of BASF and the most important associations of which we are a member, with explanations on our approach.

BASF does not financially support political parties, for example, through donations in cash or in kind. This is codified in a global guideline. In the United States, employees at BASF Corporation have exercised their right to establish a Political Action Committee (PAC). The BASF Corporation Employee PAC is an independent, federally registered employee association founded in 1998. It collects donations from employees for political purposes and independently decides how these are used, in accordance with U.S. law.

For more information on process safety, see page 127 onward
For more information on occupational safety and health protection, see page 143 onward
For more information on responsibility for human rights, labor and social standards, see page 154 onward
For more information on our stakeholder activities, see basf.com/en/stakeholder-engagement
For more information on our guidelines for responsible lobbying, see basf.com/responsible-lobbying
For more information on the Industry Associations Review, see basf.com/en/corporategovernance
For more information on the Human Rights Advisory Council, see basf.com/human-rights-council

Societal Engagement

GRI 203, 413

At a glance

- BASF wants to be a responsible neighbor around the world
- BASF engagement for health, skills and resources

Societal engagement is a cornerstone of our corporate responsibility and part of our sustainability management. Through our activities, we aim to strengthen the communities surrounding our sites worldwide, contribute to the achievement of the Sustainable Development Goals (SDGs) and have a long-term positive impact on the environment and society. By contributing our expertise and resources, we are pursuing three global goals: Strengthening public health, promoting skills (e.g., for economic participation and employability) and protecting natural resources. Our aim is to contribute to improving people's quality of life and make a positive contribution to society.

One example of our **contribution to public health** is the cooperation with the Swiss Tropical and Public Health Institute (Swiss TPH) and Promega. Swiss TPH is researching and developing novel insecticides to combat mosquito-borne diseases such as malaria. The collaboration began in September 2022 and is expected to span a three to five-year study. Its focus is on proteolysis-targeting chimera (PROTACs), small therapeutic molecules that degrade specific proteins within cells. This innovative approach holds great potential for effectively and cost-efficiently combating insect-borne diseases. With the support of BASF in molecular research and funding from the Bill & Melinda Gates Foundation, preliminary results from this collaboration are anticipated by 2025.

Education is key to personal success and the future viability of society. That is why BASF is committed to working with partners at numerous sites to achieve greater **educational equality**, especially for disadvantaged children and young people. Science education and education for sustainable development are particularly important to us. For 26 years now, children and young people in 45 countries have been able to take part in experiments in BASF Kids' Labs. The Virtual Lab program was expanded this year to include the ProtAct17 app. The mobile app is designed to teach children aged 8 and up to protect the environment and to take action in line with the United Nations' 17 Sustainable Development Goals. ProtAct17 imparts knowledge in an age-appropriate and interactive way, arouses curiosity and the spirit of research and addresses current and future challenges for the environment, economy and society. Above all, the app shows what – albeit small – possibilities young researchers have for taking action.

In this year's **Young Voices for a Sustainable Future** project, which BASF initiated in 2022 together with the nongovernmental organization JA Worldwide, more than 1,000 young people from eight countries were once again able to address the impacts of climate change in their communities with their ideas. Supported by more than 100 BASF employees, the young people looked at how they can tackle challenges in their communities. For example, they discussed how to reduce the risk of forest fires in Greece and how to manufacture resource-saving products from alternative raw materials in Indonesia.

We aim to create long-term value for BASF and society with new business models and cross-sector partnerships. Our intrapreneurship program, **Starting Ventures**, helps people from low-income areas to improve their economic opportunities and their quality of life. The program also provides access to new markets and partners, and contributes to reaching the SDGs. Eight new Starting Ventures projects were selected for implementation in December 2022. BASF is tackling challenges on the ground together with local partners and contributing to the SDGs with entrepreneurial ideas, technical expertise and time resources.

Postharvest losses are a huge challenge for smallholders in African countries. As part of the Highland Food Systems Starting Ventures project, project partner International Fertilizer Development Center (IFDC) is helping smallholders in Kenya store potato harvests and seeds safely. To this end, IFDC is providing the smallholders with low-cost, insulated containers with a capacity of 60 metric tons, which have been produced with the help of BASF's Elastospray LWP system. The project also aims to empower 100 women and young people to find employment or set up their own businesses.

BASF Group expenses for societal engagement activities[1]

~€37 million

At our headquarters in Ludwigshafen, Germany, we want to strengthen civil society with a number of projects, such as the LUnited project. The aim of the project is to find gaps and potential for action to further promote engagement in and around the city of Ludwigshafen. In 2023, BASF supported the German National Garden Show in Mannheim as a partner. A special experience space with an interactive exhibition illustrated BASF's contribution to sustainable solutions. Around 130,000 people took advantage of this program. We also ran experimentation programs for families and school classes on the topics of sustainability, climate and energy. The experiments gave older school classes an insight into technical professions. In an outdoor area shared with John Deere, we held 12 action and dialog days on the topic of experiencing agriculture.

In the area of international development cooperation, we support the independent charitable BASF Stiftung with donations for its international projects in cooperation with various organizations. The 2023 year-end donation campaign in favor of BASF Stiftung supported the United Nations Children's Fund, UNICEF, so that more children in Afghanistan can get access to education. BASF topped up the donations made by employees of participating German Group companies to a total of around €335,000.

In 2023, BASF also supported those affected by humanitarian disasters. Following the earthquakes in Turkey and Syria and the payment of €500,000 in emergency aid, BASF launched an employee donation campaign in which more than €844,000 was donated worldwide. BASF doubled the amount to more than €1.6 million, which is available for reconstruction in the affected regions. In addition, €300,000 in emergency aid went to the German Red Cross for people affected by the earthquake in Morocco.

For more information on Starting Ventures, see basf.com/en/starting-ventures

For more information on our societal engagement around the world, see basf.com/en/engagement

For more information on societal engagement at our sites, see ludwigshafen.basf.de/en

1 We report a total figure for our societal engagement activities. The figure includes all consolidated companies with employees, including joint operations.

Material topics in focus:

Occupational Safety and Health Protection

GRI 2, 3, 403

We value the health and safety of people above all else. To ensure safe working conditions we rely on comprehensive preventive measures in occupational safety and health protection. Our comprehensive safety concepts are designed to provide the best possible protection for our employees and contractors.

> The safety and health of all employees who work for us is our top priority – including our contractors.
>
> **Dr. Johannes Heinemann**
> Corporate Environmental Protection, Health, Safety and Quality

Strategy and governance

BASF's long-term economic success is closely linked to the health and well-being as well as the productivity of our employees. In the research and production of chemicals, some of our employees handle hazardous substances and operate complex systems and machines. Potential risks arise as a result, which we aim to minimize through comprehensive preventive measures. We systematically record opportunities and risks in the area of occupational safety and health protection as part of our general opportunity and risk management (see page 178 onward).

We set binding global standards for occupational safety and health protection. Our health and safety management covers all employees worldwide. Our sites and Group companies are responsible for implementing and complying with Group-wide requirements and local standards. They are supported in this task by global networks of experts. The Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center performs regular audits to ensure compliance with the requirements.

This page:
Scheduled turnarounds of our production plants harbor risks for work process-related injuries due to nonroutine work and the increased use of contractors. Special initiatives, such as the conduct-based "Consistently safe!" ("Konsequent sicher!") program at the large-scale turnaround of the styrene plant in Ludwigshafen, Germany, reinforce safety management with holistic approaches to correctly assess risks and establish a common safety culture.

2030 target[1]

Reduce our worldwide number of High Severity Work Process Related Injuries per 200,000 working hours[a] to **≤ 0.05**

a Hours worked by BASF employees, temporary workers and contractors

We pursue ambitious targets for occupational safety as well as for health protection (see page 41). In the reporting year, we adjusted our occupational safety target and the related reporting based on a Group-wide definition and are now focusing on high-severity injuries (see "Occupational safety").

We document and analyze accidents as well as their causes and consequences in detail at a global level to learn from them. We consider the systematic hazard assessments and the risk minimization measures derived from them an important prevention tool. With these and a culture of dealing openly with mistakes, division and site-specific safety activities, ongoing qualification measures and dialog across BASF's global network, we want to strengthen risk awareness among our employees and contractors,

1 In 2023, we adapted our safety targets.

Material topics in focus: Occupational Safety and Health Protection

share best practice examples and in this way, continually develop our safety culture.

Occupational safety

We have adjusted our targets and reporting based on the critical review of our targets and key performance indicators for occupational safety in 2022. Since 2023, we are focusing on work process-related high-severity injuries. These continue to be based on established industry standards, with a stronger focus on people.

Recordable work process-related injuries in 2023

	Employees[a]	Non-employees[b]	Contractors
Fatality rate[c]	0.00	0.00	0.01
Number of fatalities	0	0	2
Recordable work process-related injury rate[c,d]	0.81	1.00	1.04
Number of recordable work process-related injuries[d]	788	109	355
High-severity work process-related injury rate[c]	0.01	0.02	0.02
Number of days lost to work process-related injuries and fatalities	5,262	890	2,413

a Own employees
b Temporary workers
c Per 200,000 working hours
d Recordable work process-related injuries for BASF include all injuries recorded in the system

We use the number of High Severity Work Process Related Injuries (HSI) per 200,000 working hours as a target. In 2023, we achieved an HSI rate of 0.03. We have set ourselves the goal of reducing high-severity work process-related injuries to a rate of no more than 0.05 HSI per 200,000 working hours by 2030.[1] By focusing on high-severity work process-related injuries, we want to make our employees' working environment even safer.

Despite our efforts, there was one fatal work-related injury in 2023 (2022: 1), in which two people lost their lives. Two contractors suffered fatal injuries in a car accident on a business trip in Brazil. BASF is assisting the authorities in determining the circumstances and cause of the accident.

To prevent work process-related injuries, we encourage and promote risk-conscious behavior and safe working practices, learning from incidents and regular dialog. That is why we are constantly refining and enhancing our global requirements and training.

> We encourage and promote risk-conscious and safe working practices.
>
> **Dr. Johannes Heinemann**

In addition to the legally required briefings, BASF requires new employees and contractors to complete compulsory **health and safety training**. Employees at our production sites also receive regular training on the safe handling of chemicals and the correct use of personal protective equipment.

We do everything we can to prevent injuries and use our findings to take appropriate measures to prevent these from happening again, as far as possible. These include regular campaigns and informational events to raise employees' awareness. Many events and initiatives over the course of 2023 focused on further developing the safety culture, such as a course on the safe handling of forklifts as part of the EHS Culture of Excellence initiative in North America.

Leaders play a key role in the safety culture as role models, which is why environmental protection, health and safety are discussed with newly appointed senior executives. Senior executives with particular responsibility for such topics, for example, in production, also receive specific further training to be able to meet their responsibilities.

To further improve our processes and methods, we evaluate trends in data, analyze accidents and potential incidents, and share knowledge and best practices within our global network of experts and as part of safety initiatives. We also seek dialog with government institutions and are actively involved in external occupational safety initiatives and networks around the world led, for example, by the European Chemical Industry Council (CEFIC) or national associations such as the German Chemical Industry Association and the American Chemistry Council.

For more information on process safety, see page 127 onward
For more information on occupational safety, see basf.com/occupational_safety

1 Hours worked by BASF employees, temporary workers and contractors

Material topics in focus: Occupational Safety and Health Protection

Health protection

BASF's global corporate health management serves to promote and maintain the long-term and holistic health and productivity of our employees. The BASF health checks form the foundation of our global health promotion program and are offered to employees at regular intervals.

We also systematically raise employee awareness of health topics with offerings tailored to specific target groups. One example is the Global Health Campaign. In 2023, we chose a decentralized approach in which the regions and sites could focus on locally relevant health aspects. In North America, for example, the focus was on mindfulness in the professional and private environment. The Take a Moment campaign focused, among other things, on dealing with shift work and mental health. Specific health campaigns were offered at a total of over 459 sites in 2023.

We measure our **performance in health protection** using the Health Performance Index (HPI). It comprises five components: recognized occupational diseases, medical emergency drills, first aid, preventive medicine and health promotion. Each component contributes a maximum of 0.2 to the total score, meaning that the highest possible score is 1.0. We aim to achieve a value of more than 0.9 every year. With an HPI of 0.96, we once again achieved this in 2023 (2022: 0.96).

In 2023, 44 work-related illnesses among BASF employees worldwide were documented as recognized occupational diseases (2022: 38). The main recognized occupational diseases are occupational asthma, hearing loss, skin diseases, musculoskeletal disorders and cancer.

Another focus in 2023 was on influenza prevention. BASF employees could be vaccinated against seasonal flu at many sites around the world. At the Ludwigshafen site in Germany, for example, around 3,850 employees participated in the influenza vaccination campaign.

For more information on occupational medicine, health campaigns and the HPI, see basf.com/health

Case study

New Medical Center for comprehensive medical care

In 2023, BASF opened a new Medical Center in Ludwigshafen, Germany. The aim is to secure our employees' health and ensure that they remain able to work despite the rising average age by strengthening medical care at the site in the long term.

Alongside examination and training rooms and offices, it houses state-of-the-art medical diagnostic facilities. In addition to the clinic, the Medical Center accommodates eight external specialist and medical facilities, a physiotherapy practice and a pharmacy. With the exception of the occupational and emergency medicine section reserved for BASF employees, all facilities are also available to our neighbors in the surrounding districts of Ludwigshafen.

Occupational medicine has a long history at BASF: A document from 1866 shows that the first factory doctor was employed at BASF just one year after the company was founded. This also marks the beginning of the first company medical service in the chemical industry in Germany, long before statutory obligations existed.

For more information on the Medical Center see medicalcenter.basf.com/en

Product Safety

GRI 2, 3, 416, 417

We see product safety as an integral part of all business processes, as an important element of our risk management and as an essential pillar of our commitment to Responsible Care®. We continuously work on ensuring our products pose no risk to people or the environment when they are used responsibly and in the manner intended. A thorough safety and risk assessment enables us to serve markets with safe and sustainable products that meet regulatory requirements while responding to trends.

Strategy and governance

As a chemical company, we have products in our portfolio with physicochemical, toxicological and ecotoxicological properties that may have negative effects on people and the environment if handled incorrectly. We are committed to continuously minimizing these effects and to the ongoing further development of the safety and sustainability of our products. This commitment to product safety is enshrined in our Responsible Care® charter and the initiatives of the International Council of Chemical Associations (ICCA). We aim to comply with all relevant national and international laws and regulations. At the same time, we strive to meet the requirements of our customers worldwide with our products and contribute to the development of a sustainable future in many areas (see sustainable portfolio management on page 48). We systematically record short and long-term opportunities and risks in the area of product safety as part of our general opportunity and risk management (see page 177 onward).

Our global requirements define rules, processes and responsibilities, for example, to ensure uniformly high product safety standards worldwide. Our sites and Group companies are responsible for implementing and complying with internal and legal requirements. This is regularly audited by the Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center. BASF's global network of experts shares information, insights and best practices around product safety on an ongoing basis.

Before our products are launched on the market, they undergo various tests and assessments – depending on legal requirements and their application profile. Our aim here is to identify potential hazard characteristics as well as health and environmental risks at an early stage. Based on the results, we derive precautionary and protective measures and develop recommendations for safe handling – from production to application and disposal.

We document environmental, health and safety data and the assessments thereof for all of our substances and products in a **global database**. This information is continuously updated. The database forms the basis for communicating this information in our safety data sheets, for example, which we make available to our customers in around 40 languages. These include information on the physicochemical, toxicological and ecotoxicological properties of products, potential hazards, first aid measures, measures to be taken in the case of accidental release, and disposal. Our global emergency hotline network enables us to provide information around the clock. To ensure that people who buy, sell, use, transport or dispose of our products can quickly find out about our products and the risks associated with them, we use the Globally Harmonized System (GHS) to classify and label our products around the world, provided this is legally permissible in the country concerned. We take into account any national or regional modifications within the GHS framework, such as the E.U.'s regulation on the classification, labeling and packaging of substances and mixtures (CLP Regulation, Classification, Labelling, Packaging).

If necessary, we advise our customers on product safety. We set guidelines on the safe transport of dangerous goods for our logistics service providers worldwide (see page 130). We also train our employees worldwide on the proper handling and use of selected products with particular hazard potential.

In associations and together with other manufacturers, BASF supports the establishment of voluntary global commitments to prevent the misuse of chemicals. We are also involved at national and international level in various initiatives to further develop risk assessments, such as that of the European Centre for Ecotoxicology and Toxicology of Chemicals (ECETOC).

Global chemicals regulations

Most of the products we manufacture are subject to statutory chemicals regulations. We are bound by the relevant regional and national chemicals regulations, which continue to grow in number worldwide. Examples include REACH in the E.U., UK REACH in the United Kingdom, KKDIK in Turkey, K-REACH in South Korea and TSCA in the United States. BASF Group companies work closely together with a global network of experts to ensure that BASF complies with the applicable regulations.

In Europe, the European Commission has developed a road map that will bring about far-reaching changes to the regulation of chemicals in Europe in the coming years: the European Green Deal and, as part of this, the Chemicals Strategy for Sustainability (CSS). BASF supports the objectives of the Green Deal in principle but sees a need for adjustment, greater clarity and predictability, particularly in regulatory matters. It is necessary to strike a balance between achieving the ambitions of the CSS and safeguarding the long-term competitiveness and future viability of the European chemical industry. As part of the ongoing clarification process, we therefore seek dialog with all relevant stakeholders and advocate for a science-based and innovation-driven development of the regulatory framework.

Animal welfare in environmental and toxicological testing

Before launching products on the market, we subject them to a variety of tests, including environmental and toxicological tests using state-of-the-art knowledge and technology. If these tests include animal studies, this is generally required by law and necessary to reliably evaluate the safety and efficacy of our products. If we employ

animal studies, we adhere to the specifications laid down by the German Animal Welfare Act as well as the requirements of the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) – the highest standard for laboratory animals in the world. We develop and are continuously optimizing alternative methods to experimentally assess the safety and tolerance of our products without animal studies. In addition, we are involved in networks such as the European Partnership for Alternative Approaches to Animal Testing (EPAA) to further develop alternative methods across sectors.

Our aim is to replace, reduce or refine animal studies to minimize the impact on them. For example, we use an OECD-certified alternative testing strategy developed jointly with Givaudan for animal-free testing of allergic skin reactions. We also use other alternative methods wherever possible. In 2022, BASF SE's Experimental Toxicology and Ecology became the first institute in the world to be certified for Good In Vitro Method Practices (GIVIMP). GIVIMP is a standard published by the OECD. It increases the quality of data generated by in vitro test methods and confidence in newly developed nonanimal testing methods.

Management of nano- and biotechnology

Nanotechnology and biotechnology offer solutions for key societal challenges – such as environmental and climate protection and health and nutrition. For example, nanomaterials can improve battery performance and biocatalytic methods can increase process resource efficiency. We want to harness the potential of both technologies. Using them safely and responsibly is our top priority. Safe handling of nanomaterials is stipulated in our Nanotechnology Code of Conduct, for instance. With regard to the safety assessment and regulatory compliance of nano and particulate materials, BASF participated in the NanoHarmony, MACRAME and Nanomet projects funded by the European Union in 2023. The results were documented and communicated in publications with BASF's involvement. Furthermore, the findings will be incorporated into the OECD Test Guidelines Programme in order to develop valid and standardized test methods for the safety assessment of nano- and particulate materials.

For more information on NanoHarmony, see nanoharmony.eu

For more information on the Nanomet project, see oecd.org/chemicalsafety/nanomet

Quality Management

GRI 2, 418

Our quality management aims to ensure the high quality of our products, processes and services and enable our employees to best meet our customers' needs.

Strategy and governance

Our aim is to ensure the high quality of our products, processes and services in order to best meet our customers' needs and set ourselves apart from our competitors. Quality defects can have potential negative effects on people and the environment. We prevent these with our quality management. We systematically record opportunities and risks in the area of quality as part of our general opportunity and risk management (see page 177 onward).

Our quality management supports BASF's strategy and focuses on our customers by taking their needs as well as those of consumers and other stakeholders into account. Our quality management system comprises central requirements and processes along the value chain, which are defined by the Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center. Local implementation of these is the responsibility of our business units and sites. Quality management is monitored on a decentralized basis via a comprehensive internal audit system in accordance with ISO standards.

Quality Management System

Our Quality Management System is based on the plan-do-check-act approach and focuses on planning, implementation, evaluation and action. It is risk-based, process-oriented and focused on the satisfaction of our customers and stakeholders. Mandatory elements are set out in global requirements. These include requirements for core processes such as nonconformity management, handling of product recalls and change management.

Our quality management includes the consistent handling of incidents that relate to product quality. A core element in this context is accessibility for and communication with affected customers and stakeholders in order to be able to react as quickly as possible and initiate appropriate measures such as product recalls or withdrawals. In further steps, we systematically work through the incidents and identify and eliminate causes. This includes all our customers and products, in particular products with inherent hazard potential, which entail specific documentation requirements. We are committed to handling the data of our customers and suppliers with particular care. During the current reporting year, only individual product quality incidents relating to individual items or batches of items are known to us. These were addressed, processed and monitored directly by our operating divisions.

A key focus in the implementation of our quality management is on interlinking our targets and business-related requirements with the opportunities and risks identified by our operating divisions. This decentralized approach allows us to adapt our quality management to the requirements of BASF's diverse business areas in the individual operating divisions. We apply quality management methods commonly used in the chemical industry, including management of change, quality assurance and control and development processes. In addition to appropriate documentation and the systematic development of expertise through training, our approach also includes regular internal audits. The results of these audits are taken into account alongside other indicators in the continuous review of the management systems. If necessary, we revise their strategic and organizational alignment.

As part of World Quality Week, we draw our employees' attention to the importance of quality. In 2023, we offered a range of activities based on the theme "Quality: realizing your competitive potential," to exchange ideas internally and with customers, learn from each other and for levers to improve our quality performance.

External certification

We pursue a decentralized certification approach for our business units and Group companies. This takes into account local needs, internal and legal requirements, and our customers' requirements. Our Responsible Care audit system complies with the ISO 19011 standard and is certified according to ISO 9001. Worldwide, 132 BASF production sites are partially or fully certified in accordance with ISO 14001 (2022: 132). In addition, 59 sites worldwide are partially or fully certified in accordance with ISO 45001 (2022: 59). Several BASF sites also have an ISO 17020-accredited inspection body for user inspection or an ISO 17025-accredited analytical laboratory for environmental emissions analyses. Based on our customers' requirements, Quality Management Systems at our production sites are generally certified according to external international standards such as ISO 9001, GMP, FAMI QS or IATF 16949.

Material topics in focus:

Product Stewardship for Crop Protection Products and Seeds GRI 2

Around the world, farmers are facing enormous challenges: Under changing climatic conditions, they are expected to feed a growing world population and, at the same time, reduce their carbon footprint. Our products and technologies help them master this complex task. We are committed to the responsible and ethical use of our products throughout their entire life cycle.

> As part of our smart stewardship activities, we focus on digital and technological solutions in particular.
>
> **Dr. Volker Laabs**
> Global Product Stewardship Crop Protection

As global demand for agricultural products and solutions grows, so does the pressure on farmers. They are expected to produce healthy and affordable food and, at the same time, reduce CO_2 emissions, minimize land use and preserve biodiversity. With our integrated solutions, we help farmers find a balance between economic, environmental and societal demands. High-performance seeds from BASF help to achieve a higher yield and improve the quality of the harvest. Our innovative crop protection products reduce crop losses caused by insect pests, weeds and fungal diseases. Our digital solutions enable, among other things, better soil management and more targeted use of fertilizers and crop protection products by taking important parameters such as plant health, weed density or weather data directly into account during application.

In 2023, we invested €900 million in research and development in the Agricultural Solutions segment, which represents 9% of segment sales. Our innovation pipeline has a peak sales potential of more than €7.5 billion for products launched by 2033. The main focus here is sustainability, with four key areas: more climate-smart farming, more sustainable solutions, digital farming and smart stewardship (see box on page 36).

This page:
Drones can be used to increase safety and productivity in agriculture. The main advantages compared with conventional backpack spraying are optimized use of crop protection products, reduced risk of product contact during spraying and high efficiency in application and collection of information. BASF supports the training of drone pilots with various programs.

Strategy

Misuse of our crop protection and seed products can have a negative impact on human health and the environment. We are therefore focusing our smart stewardship activities on education and continuously improving our solutions for farmers. Alongside aspects such as efficacy and productivity, this also includes safe use by our customers and impact on the environment. We consider the entire life cycle of our products – from research and development to their proper use and disposal.

Crop protection products and seeds are highly regulated at national and international level, which brings with it strict requirements for registering and re-registering active ingredients and crop systems. Regulatory approval is only granted after comprehensive proof has been provided showing that our products are safe for humans, animals and the environment when used in the manner intended.

As a member of the CropLife International industry association, we are committed to complying with the standards on the research, registration and distribution of crop protection products set out in the International Code of Conduct on Pesticide Management issued by the Food and Agriculture Organization (FAO). We are also

Material topics in focus: Product Stewardship for Crop Protection Products and Seeds

committed to the principles of integrated pest management (IPM) – an economically viable, environmentally sound and socially acceptable approach to crop protection in which chemical measures are only considered if they are necessary and no other effective options are available. In our use of biotechnology, we are guided by the respective code of conduct set out by CropLife International and adhere to the relevant standards and legal regulations governing production and marketing.

Potential risks of our products are assessed and minimized throughout the research, development and registration process, and on an ongoing basis following market registration. We regularly conduct scientific studies and tests, including on modes of action, (eco)toxicological properties and possible residues. This ensures that, as far as possible, our registration dossiers address all questions on potential environmental and health effects.

We adapt our portfolio to the specific requirements of regional markets as customer requirements, crops, soils, climate conditions, plant diseases and farming practices vary around the world. Consequently, product registrations differ from country to country. Distribution generally requires registration and approval of our products in accordance with the respective national regulations.

Crop protection

BASF adheres to the International Code of Conduct issued by the World Health Organization (WHO) and the Food and Agriculture Organization (FAO) for the management of crop protection products. These are only marketed once they have been approved by the competent authorities. We no longer sell WHO Class 1A or 1B products (high acute oral and dermal toxicity), even if formal approvals exist. Depending on availability, we offer our customers alternatives.

All of BASF's crop protection products can be used safely under local farming conditions if the information and directions on the label are followed. If they have any questions, complaints or issues, our customers can contact us through various channels, for example, by calling the telephone number printed on all product labels, using the contact forms on our websites or by approaching our sales employees directly.

We record all product incidents relating to health or the environment that come to our attention in a global database. If necessary, we take appropriate measures on the basis of this information to minimize preventable incidents.

> "We are committed to only considering chemical measures for crop protection if they are necessary and no other effective options are available."
>
> **Dr. Volker Laabs**

These include updating the instructions for use on product labels. We communicate these changes and general recommendations on the safe use of our products through channels such as our global training and education activities.

One of the ways we meet our **commitment to product stewardship** is by offering a wide range of courses and training on the safe storage, handling, use and disposal of our products. This ranges from on-site events to handouts and digital offerings and is aimed at farmers, retailers, advisors and other users. In India, for example, BASF launched the Suraksha Hamesha program. Suraksha Hamesha means "safety all the time." The program creates a platform for educating farmers and other users of crop protection products about the nine steps of responsible use of crop protection products and personal protection. Through Suraksha Hamesha, BASF has trained over 36,000 agricultural workers in India in 2023. BASF also involves government agencies and the central government's farm extension teams to support and promote farm safety. In addition, we reached over 10 million people through digital information and training and informed them on safety in agriculture.

As part of our smart stewardship activities, we particularly make use of the possibilities offered by digital and technological solutions to enable our customers to handle our products responsibly. In Thailand, for example, 143 drone pilots were trained in the safe use of crop protection products as part of the "We make it fly" program since 2021. Approximately 20,000 switched from backpack spraying to the safe drone application in 2023.

We also work closely together with associations such as CropLife International and CropLife Europe to promote the safe and proper use of crop protection products. For example, we support stewardship initiatives of both associations and various programs on the proper disposal and recycling of product containers. Technological innovations developed together with industry partners also help to make using crop protection products easier and safer. Examples include the closed transfer systems easyconnect in Europe and the Wisdom system in South America.

Seeds

Our biotechnology activities and our research and development capabilities comprise advanced breeding techniques, analytics, technology platforms and trait validation. To offer tailor-made, more sustainable crop solutions, our gene identification work focuses on those plant characteristics that enable higher yield and better quality, disease resistance and tolerance of environmental factors such as drought. We apply state-of-the-art scientific methods such as genetic engineering and selective genome editing. Genome editing techniques such as CRISPR/Cas and other pioneering tools in modern biosciences offer numerous opportunities for innovative solutions, for example, in the fields of health, agriculture and industrial applications.

Material topics in focus: Product Stewardship for Crop Protection Products and Seeds

With these tools and our expertise in plant breeding, we can quickly and specifically modify desired plant characteristics and introduce new varieties. We want to use this technology to gain new knowledge and thus improve agricultural applications, and therefore support transparency through dialog and information sharing.

BASF is a member of Excellence Through Stewardship (ETS), a global industry initiative for seed companies. This initiative promotes the adoption of Quality Management Systems for seeds and product stewardship programs covering the entire life cycle. It also has independent auditors verify compliance with its guidelines in a multiyear audit cycle. BASF completed all required audits for the three-year cycle prior to 2023. BASF will conduct the next third-party ETS audits in 2024 as part of the next cycle.

For more information on our Agricultural Solutions segment, see page 93 onward

For more information on biodiversity, see page 116 onward

For more information on risks from litigation and claims, see Note 23 to the Consolidated Financial Statements on page 290

Corporate, Information and Cybersecurity

GRI 2, 418

Protecting our company from criminal attacks and unauthorized activities is crucial for our continued existence, our business activities and our reputation.

Strategy and governance

As a scientific, technology-intensive company, BASF is confronted with crime, terrorism, sabotage, espionage and other security risks in a rapidly changing business environment. We consider the protection of our employees, sites, plants, information and communication systems and our intellectual property against interference by third parties to be vitally important. We systematically record physical and transitory risks from corporate, information and cybersecurity as part of our general opportunity and risk management (see page 178 onward).

A global team is responsible for our **corporate security**. To ensure rapid and effective implementation of security measures, we have defined appropriate structures and processes and laid them down in binding Group-wide requirements. Our sites and Group companies are responsible for implementing and complying with these internal requirements and the legal specifications. The Environmental Protection, Health, Safety and Quality (EHSQ) unit in the Corporate Center conducts regular audits to monitor this.

Responsibility for **information and cybersecurity** lies with the Chief Financial Officer, who is also the Chief Digital Officer. The Chief Information Security Officer is responsible for the strategic direction. A global cybersecurity team is tasked with protecting BASF's IT (information technology) and OT (operational technology) systems against hacker attacks and ensuring information security. In order to initiate and monitor suitable security measures, the organization is structured according to a global best practice framework (Identify, Protect, Detect, Respond and Recover). Our IT security management system, which is certified in accordance with DIN EN ISO/IEC 27001:2017, is the main tool for managing information and cybersecurity in the BASF Group. It is crucial to ensure the confidentiality, integrity and availability of our data and IT infrastructure while demonstrating compliance with applicable laws and regulations. We want to use the system to meet regulatory compliance requirements for our critical infrastructure. The Environmental Protection, Health, Safety and Quality unit in the Corporate Center conducts regular audits to monitor this.

Corporate security

One cornerstone of corporate security is site security. The tasks performed by our security teams range from access controls at our sites to defense against industrial espionage. Aspects of human rights relevant to **site security** are a component of the global code of conduct and qualification requirements for our internal and external security personnel.

For investment projects and strategic plans, we analyze the potential safety and security risks, and define appropriate safety and security concepts. Our guiding principle is to identify risks for the company at an early stage, assess them and derive appropriate safeguards.

We inform business travelers and transferees about appropriate protection measures prior to and during travel in countries with elevated security risks. We continuously adjust our travel recommendations. With a globally standardized travel search system, we are able to locate and contact employees in affected areas following serious incidents.

Information and cybersecurity

Information security and cybersecurity are becoming increasingly important for our company. In addition to protecting data and IT infrastructure, they form the basis for successful digitalization and the implementation of new business models. BASF applies the "security by design" principle to critically review and optimize IT applications from a cybersecurity perspective as early as the design phase. We are continually improving our ability to prevent, detect and react to security incidents with various measures and training offers.

Around the world, we work to sensitize our employees about protecting information and know-how. In 2023, we continued to raise employees' risk awareness with regular mandatory online training for all employees and complementary offerings such as seminars, case studies and interactive training. Our global network of information protection officers comprises around 600 employees. They support the implementation of our uniform requirements and hold events and seminars on secure behaviors. Around 70,000 employees were trained on the basics of cybersecurity and information protection in 2023.

Governance

BASF is committed to responsible corporate governance that complies with the law, safeguards values and strengthens its reputation. The increased integration of sustainability aspects into important processes and at various levels of the Group contributes to this – with a view to the entire value chain. We see human rights due diligence as a Group-wide responsibility and we work closely with our suppliers with regard to ethical and environmental requirements.

In this section:

We are committed to conducting our business activities in a responsible and respectful manner, guided by our corporate values and global standards (see page 33). Our actions are based on the applicable laws and regulations. Some of our voluntary commitments go above and beyond these. In doing so, we take internationally recognized principles into account. We respect and promote:

- The Universal Declaration of Human Rights and the two U.N. Human Rights Covenants
- The 10 principles of the U.N. Global Compact
- The core labor standards of the International Labor Organization (ILO) and the Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy
- The OECD Guidelines for Multinational Enterprises
- The Responsible Care® Global Charter
- The German Corporate Governance Code

We stipulate binding rules for our employees with our standards and guidelines that apply throughout the Group. Our aim is to prevent compliance violations from the outset through compulsory training for all employees and leaders. The Corporate Audit department continuously monitors compliance with requirements. The head of our legal and compliance organization also acts as Chief Human Rights Officer and oversees the overarching risk management.

We mainly approach our adherence to international labor and social standards using three elements: the Compliance Program including our Code of Conduct and compliance hotlines, close dialog with stakeholders, and the global management process to respect international labor norms.

We regularly assess our performance in environmental protection, health and safety as part of our Responsible Care Management System.

Our business partners are expected to comply with prevailing laws, regulations and internationally recognized principles. We have clearly defined our expectations in our Supplier Code of Conduct. Here, too, we have established appropriate monitoring systems.

We report in detail on the key elements of our corporate governance structures and our Group regulations on compliance in the Corporate Governance section from page 191 onward

For more information on our risk management, see the forecast from page 167 onward

Material topics in focus:

Responsibility for Human Rights, Labor and Social Standards

GRI 2, 3, 406, 407, 408, 409, 411, 413

BASF acknowledges its responsibility to respect internationally recognized human rights. Through our business, we are connected to a large number of people worldwide who are directly or indirectly influenced by our activities. We accept the resulting obligations and opportunities along the supply chain in accordance with our scope of influence. For many years, we have engaged in constructive dialog on human rights with other companies, nongovernmental organizations, international organizations and multistakeholder initiatives to better understand different perspectives and address conflicting goals.

> Human dignity is nonnegotiable for us.
>
> **Matthew Lepore**
> Chief Compliance Officer and Chief Human Rights Officer

Strategy and organization

We see human rights due diligence as a continuous, all-encompassing task that we can only perform by working together as a team throughout the entire organization. That is why we have embedded our responsibility for human rights into BASF's Code of Conduct and set this out in our Policy Statement on Human Rights. Our standards apply worldwide. All employees and leaders are responsible for ensuring that we act in accordance with our Code of Conduct and our Policy Statement on Human Rights. In everything we do, we are committed to complying with international labor and social standards.

We attach great importance to this topic and have set up our organization accordingly. The head of our legal and compliance organization also acts as **Chief Human Rights Officer** and oversees the overarching risk management. He regularly reports to the Board of Executive Directors on our human rights-related activities. Our compliance organization is responsible for the overarching governance of human rights due diligence at BASF. In addition, several specialist units are responsible for managing specific human rights topics.

This page:
In the "Wage Improvements in Seed Hybrids" project, BASF, Syngenta and Arisa are jointly addressing the fight against child labor and the payment of an appropriate wage in India's vegetable seed industry. The project team's aim is to achieve significant changes in several key areas by 2025.

At the same time, we rely on a systematic, integrated, risk-based approach and **established monitoring and management systems**. We achieve positive effects through our commitment to compliance with international standards in our cooperation with partners and through our local societal engagement. Potential negative impacts on human rights and labor and social standards arise from our global business activities, including in countries with increased risk, and from our complex supply chains. We systematically record opportunities and risks as part of our general opportunity and risk management. Specialists in the areas of international labor and social standards, environmental protection, health and safety as well as site security work in a risk-based manner to ensure that we respect the relevant human rights in our own activities. Our procurement organization has established a global risk-based management system for the upstream supply chain in order to implement our human rights due diligence processes. BASF is a founding member of the U.N. Global Compact and a

Material topics in focus: Responsibility for Human Rights, Labor and Social Standards

member of the Global Business Initiative on Human Rights (GBI). BASF is also active in initiatives such as Together for Sustainability (TfS) and Responsible Care®. We have also integrated human rights-related evaluations into our governance and decision-making processes, for example for investments, acquisitions and divestitures. In 2023, for example, we began working with partners, local authorities and nongovernmental organizations in Indonesia at an early stage, long before a potential investment decision, to analyze and evaluate in detail whether and how we could build a nickel-cobalt refining complex in a responsible manner, also taking into account the rights of indigenous peoples (see page 126).

In our **Human Rights Expert Working Group**, steered by our compliance department, experts from various areas of our company work closely together to holistically assess and refine our approach to human rights due diligence. In this way, we want to ensure that we approach our human rights responsibility in a comprehensive way and that we can continually improve our performance. The expert working group includes employees from specialist departments – Corporate Compliance, Global Procurement, Corporate Legal, Corporate Human Resources, Corporate Environmental Protection, Health, Safety and Quality, Corporate Strategy & Sustainability, Site Security, Corporate Communications and Governmental Relations – and our operating divisions. It provides support and advice in challenging and critical situations, on the development of internal processes, and on the creation of information and training offerings, among other things. In 2023, for example, a mandatory guideline with additional due diligence steps was introduced to further protect the rights of third-party workers in higher-risk countries.

International labor and social standards

Our aim of acting responsibly toward our employees is embedded in our global Code of Conduct and our Policy Statement on Human Rights through our voluntary commitment to respecting international labor and social standards. This voluntary commitment encompasses internationally recognized labor norms as stipulated in the United Nations' Universal Declaration of Human Rights, the OECD Guidelines for Multinational Enterprises, and the Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy of the International Labour Organization (ILO). In order to meet the requirement to comply with these standards worldwide, we mainly approach our adherence to international labor and social standards using three elements: the Compliance Program (including compliance hotlines), close dialog with our stakeholders (such as with employee representatives or international organizations) and the BASF guideline on compliance with international labor norms, which applies Group-wide. This guideline concretizes the topics in our global Code of Conduct under "Human rights, labor and social standards" as these relate to our employees and leaders worldwide. An additional guideline specifies that these topics must also be considered and applied when working with agency workers and freelancers. Regular training courses on these topics are held for the managing directors and employees of the BASF Group.

This forms the basis for our global, risk-based management process: We regularly monitor changes to the national law of all the countries in which BASF operates and evaluate our adherence to international labor and social standards. If the national law contains no or lower requirements, action plans are drawn up to close these gaps. If conflicts with national law or practices arise, we strive to act in accordance with our values and internationally recognized principles without violating the law of the country concerned. As part of the management process, we regularly follow up on and document the results of the comparison between national law and our guideline, as well as measures to implement the guideline. This is part of our central due diligence system.

We monitor our voluntary commitment to international labor and social standards as part of our management process. Individual elements of the guideline are also reviewed as part of internal control processes such as Responsible Care audits at BASF Group companies. In addition to these quality assurance measures, compliance with international labor and social standards is an integral part of the standard questionnaire in the compliance management audits conducted by the Corporate Audit department.

Our labor and social standards also include respect in the workplace. To promote awareness of respectful behavior at work, we launched an initiative against sexual harassment and discrimination in September 2023, initially at the Ludwigshafen site. Its aim is to draw attention to the issue in order to better investigate and prevent incidents and ensure that all employees are treated with respect. BASF strengthens cooperation between the specialist departments and with the internal advice centers.

For more information on corporate governance and compliance, see page 191 onward

For more information on labor and social standards, see basf.com/labor_social_standards

Good to know

Human Rights Advisory Council

We established a Human Rights Advisory Council in 2020 to integrate external expertise. Its members include independent international human rights experts. The trust-based dialog on human rights topics helps us to better understand different perspectives and to deal more openly with critical situations.

The meetings held in 2023 were once again attended by representatives from the Corporate Compliance and Corporate Strategy & Sustainability departments as well as other experts from the operating divisions.

The Council provided an external perspective, for example, on our internal guidelines on the responsible procurement of battery materials, on due diligence in challenging circumstances, on responsibly taking the rights of indigenous peoples into consideration and on the limits of corporate due diligence.

For more information on the Human Rights Advisory Council, see basf.com/human-rights-council

Material topics in focus: Responsibility for Human Rights, Labor and Social Standards

Human rights aspects of safety, health and environmental protection

Our measures and criteria for monitoring and respecting human rights are integrated into our **global monitoring systems for environmental protection, occupational safety, health protection and product stewardship** (see pages 101 and 131). We set up a specific risk management to ensure BASF's compliance with the specific environmental treaties covered by the German Supply Chain Due Diligence Act (Minamata, Stockholm, Basel). In addition, aspects of human rights topics are part of the global qualification requirements for security personnel and are incorporated into standard agreements with contractors.

As part of our Responsible Care Management, we aim to ensure that we also fulfill our duty of care towards local residents and that their human rights, such as the right to access clean water, are respected. To this end, we enter into dialog with residents at our sites through community advisory panels in order to promote trust in BASF's activities. Globally binding requirements for these panels are based on the grievance mechanism standards in the United Nations' Guiding Principles on Business and Human Rights (see page 140).

Cooperation along our value chains

As an international company, we are a part of society in the countries in which we operate and have business relationships with partners around the world. In our supply chains, we are confronted with risks in the areas of working conditions, environmental protection, health and safety, particularly in countries with an increased human rights risk and when purchasing higher-risk product categories.

We have trustful working relationships with our partners (suppliers, contractors, joint venture partners and customers), expect them to comply with internationally recognized human rights standards and to expect the same of their partners further along the value chain. We work to ensure that our partners meet their respective responsibilities.

We have defined these expectations as binding in our Supplier Code of Conduct, which is also part of our purchasing conditions (see page 159). We are in close contact with our business partners, especially in higher-risk areas and regions, and monitor the implementation of relevant standards and necessary measures for improvement. We use recognized assessment methods and audits to verify this. If this or other sources (e.g., media reports, compliance hotline) lead to anomalies or violations, we take this very seriously, respond and require our suppliers to implement corrective measures immediately and put an end to the violations.

For example, in March 2023, authorities in Uruguaiana, Brazil, recorded a case of unacceptable working conditions and underage labor in our supply chain. The affected workers were temporarily employed by subcontractors of BASF contractors in the fields of two rice farms that produced seeds for BASF. We deeply regret the way in which the workers of our contractors' subcontractors were treated and strongly condemn all practices that violate human rights. We immediately approached the relevant authorities and evaluated the processes. The work was stopped immediately and the contract with one of the contractual partners was terminated, as it became clear that it was not possible to work constructively on the incidents with this partner. BASF has also taken additional preventive and training measures to avoid such incidents even more effectively in the future (see page 160).

At the beginning of 2023, an internal audit of our joint venture operations in Korla, China, was carried out to verify compliance with the BASF Code of Conduct and the requirements embedded in it to respect human rights as well as key labor and social standards. This investigation, as well as past audits, did not reveal any evidence of human rights violations in the two joint ventures. We have obtained written confirmation from key suppliers, including our joint venture partners, that they accept our Supplier Code of Conduct. Nevertheless, reports from spring 2024 on the joint venture partner in Korla contain serious allegations that indicate activities that are not compatible with BASF's values. Consequently, we will accelerate the process already started at the end of 2023 to divest our shares in the two joint ventures in Korla for strategic reasons, subject to negotiations and the required approvals from the relevant authorities.

In 2023, we continued our work with our upstream supply chain, where we usually have no direct contractual relationships, less transparency and less influence. Here, we seek to increase our influence through collaboration with partners and stakeholders, and place importance on certifications such as the LBMA certificate for gold, the LPPM certificate for platinum group metals, and the Responsible Minerals Initiative's Responsible Minerals Assurance Process.

We work together with partners and civil society and we are active in cross-sector initiatives. These include the Global Battery Alliance and the Roundtable on Sustainable Palm Oil. Projects often start on the ground to build specific expertise for sustainable and responsible supply chains. The local initiatives also include the Sustainable Castor Initiative – Pragati in India, the Responsible Lithium Partnership Initiative in Chile, the Responsible Mica Initiative in India and the Cobalt for Development pilot mining project in the Democratic Republic of Congo (see page 126). In 2022, BASF, Syngenta and Arisa also worked together on a multistakeholder initiative in the vegetable seeds business in India. The initiative, WISH (Wage Improvements in Seed Hybrids), addresses the fight against child labor and the payment of an appropriate wage in the Indian vegetable seed industry. The first phase of the project examined where to start in order to improve local conditions. In the next step, the project partners will use various instruments such as training and further education, networking, the involvement of interest groups, advocacy work at local and international level and the dissemination of best practices. The project team's aim is to achieve significant changes in several key areas by 2025.

For more information on standards in our supply chain, see page 158 onward
For more information on raw materials, see page 121 onward

Information and awareness-raising measures, grievance mechanisms

Promoting awareness of human rights was once again a focus topic in 2023. Information offers on this were held in our operating divisions. In addition, managing directors of BASF's Group companies and employees in all regions were informed about and sensitized to human rights topics through presentations and discussion formats tailored to specific target groups. In Brazil, the Compliance Week was held on the theme of "Everyone for the Protection of Human Rights." The topic of human rights was also integrated even more strongly into the existing compliance training program.

Our **grievance mechanisms**, including our globally standardized hotline and reporting system, were also used intensively in 2023 (see page 203). All complaints were reviewed and forwarded to the relevant departments for in-depth investigation. If justified, appropriate measures were taken. We have not received any reports of human rights violations within the meaning of the German Supply Chain Due Diligence Act through our grievance mechanisms. We report on our global targets, monitoring systems and measures to integrate human rights topics into our business activities in publications such as this report and online.

For more information on our production standards, see page 127 and 143

For more information on the Policy Statement on Human Rights and a comprehensive report on the implementation of due diligence in human rights in accordance with the requirements of the National Action Plan developed by the German government, and in accordance with the U.N. Guiding Principles on Business and Human Rights, see basf.com/humanrights

For more information on the Human Rights Advisory Council, see basf.com/human-rights-council

Supplier Management

GRI 2, 3, 204, 308, 403, 407, 408, 409, 414

As a global company, BASF sources raw materials, energy, precursors, technical goods and services from all over the world. These raw materials and precursors are the building blocks for our value creation and thus high-quality products for our customers. Our objective is to create competitive advantages through our professional procurement structures, to establish stable and reliable supply chains, and, at the same time, meet high ethical and environmental standards. Together with our suppliers, we want to improve sustainability in the supply chain and minimize risks.

At a glance

€41 billion
Global procurement spend

89%
of relevant spend[1] covered by sustainability evaluations

- Sustainability-oriented supply chain management
- Global targets to increase sustainability in the supply chain
- Supplier Code of Conduct creates transparency
- Risk-based approach with clearly defined follow-up processes

Strategy and governance

Our procurement organization ensures a reliable supply of raw materials, energy, precursors, technical goods and services to BASF. With active supplier management, we aim to minimize purchase-related risks such as supply shortages and price fluctuations, ensure our competitiveness and seamless production processes. Alongside economic and qualitative criteria, we also take environmental, social and ethical aspects into account in the cooperation with our suppliers[2] in order to minimize risks in the supply chain and live up to our responsibility by establishing standards and initiatives. Our sustainability-oriented supply chain management is an integral part of our opportunity and risk management (see page 177 onward).

Procurement guidelines and targets are set centrally by the responsible Corporate Center unit Corporate Development and are binding for all employees with procurement responsibility worldwide. We use a multistage control process to ensure compliance with these requirements. Our expectations of our suppliers are laid down in the globally binding Supplier Code of Conduct (see "What we expect from our suppliers").

We have defined our standards in a global requirement. We are continually refining and optimizing this requirement and our structures and processes in response to changing framework conditions, such as new obligations arising from the **German Supply Chain Due Diligence Act** (GSCA), which requires large companies to conduct due diligence on human rights and certain environmental standards in their supply chains since January 1, 2023 (see page 156). In principle, this applies both to our own business operations and to direct and indirect suppliers. As part of the new statutory due diligence obligations, we have updated our purchasing conditions, adapted clauses for new contracts, revised existing contracts and proactively informed our suppliers. Our established supply chain management tools, such as our Supplier Code of Conduct or the systematic risk-oriented assessment and auditing of suppliers, remain important elements and have been updated accordingly.

Our risk-based approach aims to identify and evaluate sustainability matters in our value chains in the best possible way. We count on reliable and long-term supply relationships in order to jointly improve our sustainability performance, for example through projects (see page 122) or by helping to address shortcomings. We regularly review and document progress based on the risk level. Procurement employees receive regular training in sustainability-oriented supplier management and responsible procurement. In 2023, around 330 employees received such training, covering the requirements arising from the GSCA.

In our supplier relationships, we focus on the potential to reduce upstream, raw materials-related carbon emissions, thus contributing to our new raw materials-related climate protection target defined in 2023 (see page 102). With our Supplier CO_2 Management Program launched in 2021, we aim to increase the transparency and reduce the carbon footprint of our value chain together with our suppliers (see page 108).

In line with our strategy and our values we promote and value diversity, the sense of belonging and inclusion in our value chain. We have been involved in supplier diversity programs in North and South America for many years. We seek targeted contact with underrepresented supplier groups through interest groups and work to integrate them into our supply chain. In addition, we promote the exchange of information on sustainability topics in webinars and workshops and establish partnerships to enable dialog between customers and suppliers.

For more information on suppliers, see basf.com/suppliers

1 We understand relevant spend as procurement volumes with relevant suppliers. We define relevant suppliers as Tier 1 suppliers showing an elevated sustainability risk potential as identified by our risk matrices, our purchasers' assessments or other sources.
2 BASF considers all direct suppliers to be Tier 1 suppliers that provide services to the BASF Group in the respective business year. These are suppliers that provide us with raw materials, investment goods, consumables and services. Suppliers can be natural persons, companies or legal persons under public law.

Global targets

In 2023, we acquired raw materials, goods and services for our own production worth approximately €41 billion from our more than 70,000 suppliers. Of this, around 90% were procured locally.[1]

We actively promote sustainability in the supply chain with our ambitious targets: By 2025, we aim to have conducted sustainability evaluations for 90% of the BASF Group's relevant spend. In addition, we aim to have 80% of suppliers improve their sustainability performance upon reevaluation by 2025. In 2023, 89% of the relevant spend had been evaluated. Of the suppliers reevaluated in 2023, 82% had improved. Both global targets are embedded in the target agreements of employees responsible for procurement.

2025 targets

90%
Share of the BASF Group's relevant spend covered by sustainability evaluations

80%
Percentage of suppliers with improved sustainability performance upon reevaluation

What we expect from our suppliers

Together with our suppliers, we want to improve sustainability in the supply chain. Consequently, we require our suppliers to comply with the applicable laws in full and to adhere to internationally recognized environmental, social and governance (ESG) standards. We also expect them to make an effort to enforce these standards with their suppliers. In addition, we require our suppliers to support and comply with our Supplier Code of Conduct – or to demonstrate and ensure their commitment to the principles specified in the Code of Conduct, for example in their own code of conduct.

Our global **Supplier Code of Conduct** is founded on internationally recognized guidelines, such as the principles of the United Nations' Global Compact, the U.N. Guiding Principles on Business and Human Rights, the International Labour Organization (ILO) conventions, and the topic areas of the Responsible Care® initiative. Topics covered by the Code of Conduct include compliance with human rights, the exclusion of child and forced labor, adherence to labor and social standards, antidiscrimination and anticorruption policies, and protecting the environment. The Code of Conduct is available in the most relevant languages for our suppliers and integrated into electronic ordering systems and purchasing conditions across the Group. We expanded our Supplier Code of Conduct to include requirements from the GSCA and informed our existing suppliers of these changes in 2023. Around 5,000 new suppliers committed to the Code of Conduct in 2023.

BASF conducts audits and assessments to ensure that suppliers comply with the applicable laws, rules and standards. We reserve the right to discontinue business relationships for nonadherence to international principles. The same applies to failure to correct violations, or for displaying patterns of noncompliance with these standards. Our Code of Conduct expressly points out that potential violations of laws, rules or standards can be reported – including anonymously – to our compliance hotlines. Each case is documented and investigated, and appropriate measures are taken as necessary.

Selection and evaluation of our suppliers

New suppliers are selected and existing suppliers are evaluated not only on the basis of economic criteria, but also ESG standards in particular. As such, selection, evaluation and auditing are important parts of our sustainable supply chain and risk management. Processes and responsibilities are defined in a global requirement. Due to the large number of suppliers, they are evaluated based on risk. Both country and industry-specific risks as well as our ability to exert influence are taken into account. Observations from our employees in procurement, concerns reported through the compliance hotline and information from internal and external databases, such as Together for Sustainability (TfS) assessments (see box on page 160), are also used.

We are aware of problems in specific supply chains (see pages 122 and 125). We have suppliers with a high potential sustainability risk evaluated by third parties, either through sustainability evaluations or on-site audits. The list of suppliers to be assessed is updated every year. Sustainability evaluations and on-site audits are mainly conducted according to the TfS framework. A total of 89 raw materials supplier sites were audited on sustainability standards on our behalf in 2023. We received sustainability evaluations for 579 suppliers. We also take into account other certification systems and external audits, such as the Roundtable on Sustainable Palm Oil, when assessing our suppliers.

Audit results

We carefully analyze the results of our assessments, which are summarized in audit reports with specific plans for corrective measures, and document them in a central database. We regularly review the implementation of the measures and verify them in a follow-up audit. Over the past few years, we have identified some need for adjustment at our suppliers with respect to environmental, social and governance standards, for example in waste management, or deviations in occupational health and safety measures and standards under labor law. Follow-up audits performed in 2023 identified improvements in these areas.

In this reporting year, we recorded one case of undignified working conditions and underage labor. In March 2023, representatives of local authorities identified unacceptable working conditions on two rice farms which produced seeds for BASF in **Uruguaiana, Brazil**. The affected workers were temporarily employed by subcontractors

1 "Local" means that a supplier is located in the same region (according to BASF's definition) as the procuring company.

of BASF contractors in the fields. Immediately after becoming aware of this, we approached the relevant authorities proactively and without delay and evaluated the processes on-site. The work was stopped immediately and the contract with one of the farms was terminated as it was not possible to work constructively on the incidents with this partner. We have also strengthened our regulations and started to introduce additional preventive measures. In particular, we have reaffirmed to our seed multipliers their obligations under applicable labor laws and compliance with human rights requirements in writing, including with regard to potential subcontractors. We have strengthened our training with a focus on respect for human rights. In addition, we plan to carry out more risk-based controls of our contractors and their subcontractors, as well as training sessions.

At the beginning of 2023, an internal audit of our joint venture operations in **Korla, China,** was carried out. This investigation, as well as past audits, did not reveal any evidence of human rights violations in the two joint ventures. We have obtained written confirmation from key suppliers, including our joint venture partners, that they accept our Supplier Code of Conduct. Nevertheless, reports from spring 2024 on the joint venture partner in Korla contain serious allegations that indicate activities that are not compatible with BASF's values. Consequently, we will accelerate the process already started at the end of 2023 to divest our shares in the two joint ventures in Korla for strategic reasons, subject to negotiations and the required approvals from the relevant authorities.

As part of our due diligence, we are in regular contact with our South African platinum suppliers, including **Sibanye-Stillwater.**[1] In addition, we are in regular dialog with relevant stakeholders in order to gain a comprehensive picture of the situation at a local level and address relevant issues. Sibanye-Stillwater and the other South African platinum suppliers have agreed to conduct future audits in accordance with the Initiative for Responsible Mining Assurance (IRMA) mining standard and are in the process of conducting an IRMA self-assessment. We discuss the status and results in our regular exchanges.

We maintain dialog and a regular exchange with **Nornickel** to continuously monitor the situation and audit results, and we are in contact with civil society groups. Nornickel continues to work on implementing management systems according to internationally recognized industry standards that allow for third-party verification of mining and responsible sourcing, such as IRMA. The current conditions continue to impact our business relationship, while auditing according to the aforementioned standards is currently not possible.

Supplier development

If supplier assessments identify deviations from standards, we require suppliers to develop and implement corrective measures within a reasonable time frame in a clearly defined follow-up process. We support them in their efforts. For example, we trained 102 employees from 88 Chinese suppliers in 2023 as part of a partnership with the East China University of Science and Technology in Shanghai, China. An important part of supplier development were also the webinars on the topic of sustainability and the implementation of corrective measures held by TfS in various languages, with a total of over 2,100 participants. In addition, the new TfS Academy online learning platform is aimed at buyers and suppliers. It covers the entire spectrum of ESG topics. There are currently over 390 courses available in 11 different languages. We review our suppliers' progress according to a defined time frame based on the sustainability risk identified, or after five years at the latest. In the case of serious violations of the standards defined in our Supplier Code of Conduct or international principles, we reserve the right to impose commercial sanctions. These can go as far as the termination of the business relationship. In 2023, this happened in three cases.

Good to know

Together for Sustainability (TfS)

BASF is a founding member of Together for Sustainability. The initiative was established in 2011 to improve sustainability in the supply chain. The focus is on the standardization, simplification and mutual recognition of supplier audits and assessments. Suppliers are evaluated by independent experts in on-site audits or online assessments. The latter are conducted by EcoVadis, a ratings agency specialized in sustainability evaluations. At the end of 2023, TfS had 50 members with a combined procurement spend of around €500 billion. A total of 492 audits and 11,421 online assessments were performed in 2023. As a TfS member, BASF itself is assessed and was ranked among the top 1% companies worldwide in the sustainable procurement category.[2] As part of TfS, we are actively working on standardizing the calculation methods of Scope 3 greenhouse gas emissions in the supply chain and on a digital exchange platform for Product Carbon Footprint data (see page 109).

1 In 2012, an extended strike at a platinum mine in Marikana, South Africa, culminated in a violent confrontation between mine workers and armed South African police. Employees of the former mine operator, Lonmin, were among the fatalities. Ownership of the Marikana mine was transferred to Sibanye-Stillwater in 2019. For more information on the supplier relationship with the Sibanye-Stillwater mine, see basf.com/en/marikana

2 Based on the last evaluation (effective until October 2023)

E.U. Taxonomy

In accordance with the E.U. Taxonomy Regulation and the supplementary delegated acts, the Nonfinancial Statement includes the share of the Group's taxonomy-eligible and taxonomy-aligned sales, investments and operating expenses for 2023 relating to the environmental objectives of climate change mitigation and adaptation to climate change. In addition, in accordance with the second legal act adopted in the reporting year, we are reporting for the first time on the taxonomy-eligible economic activities for the environmental objectives of sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control and protection and restoration of biodiversity and ecosystems.

BASF activities that are not yet covered by the E.U. taxonomy, and as such, are not relevant under the taxonomy, are reported as taxonomy-non-eligible in accordance with the delegated acts. These include large parts of BASF's activities that may nevertheless be in line with the E.U.'s environmental objectives and make a considerable contribution to avoiding CO_2 emissions. We systematically analyze the sustainability performance of all BASF products using our TripleS method (see page 48).

In order to derive the financial indicators, an analysis of our product portfolio identified the following economic activities within the meaning of the E.U. taxonomy under the environmental objective of **climate change mitigation** as relevant for BASF:

- Manufacture of batteries[1]
- Manufacture of energy efficiency equipment for buildings[1]
- Manufacture of hydrogen
- Manufacture of soda ash
- Manufacture of chlorine
- Manufacture of organic basic chemicals
- Manufacture of anhydrous ammonia
- Manufacture of nitric acid
- Manufacture of plastics in primary form

The description of the economic activities by the E.U. Commission for the **four other environmental objectives not related to the climate** was published in November 2023. According to these requirements, the following economic activity under the environmental objective of pollution prevention and control will be additionally relevant for BASF for the first time from 2023 within the meaning of the E.U. Taxonomy Regulation:

- Manufacture of active pharmaceutical ingredients (API) or active substances

As the relevant activities only contribute to one environmental objective in each case, the tables supplementing the templates via footnotes in accordance with Annex II of Delegated Regulation (E.U.) 2023/2486 have been omitted.

To avoid double counting, assignment to an enabling activity is only made if a taxonomy-eligible product or project had not already been included under another activity. BASF products also enable the production of technologies for renewable energy or low-emission mobility. However, since the E.U. taxonomy focuses on the manufacture of technologies and thus excludes precursors, we have classified these activities as taxonomy-non-eligible under the E.U. taxonomy.

In addition to our core business, the production of chemical products, we have identified further activities that we have analyzed for their materiality in terms of their share of sales, investments or operating expenditures. In determining the materiality, we were guided by the materiality concept established in financial reporting and also assessed the economic activity "acquisition and ownership of buildings" as relevant in the environmental objective of climate change mitigation for the 2023 reporting year. The remaining immaterial activities neither exceed the value limit we have set for each economic activity, nor do the immaterial activities in total exceed the defined value limit for each reportable indicator (KPI). Immaterial activities include activities in the sectors forestry; water supply, sewerage, waste management and remediation; transport; information and communication; professional, scientific and technical activities; and accommodation activities. In addition, we have identified the following immaterial activities in the energy sector: Electricity generation using solar photovoltaic technology; production of heat/cool from bioenergy; production of heat/cool using waste heat; electricity generation from fossil gaseous fuels; high-efficiency cogeneration of heat/cool and power from fossil gaseous fuels; production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system. For the purposes of the templates set out in Annex XII to the Delegated Regulation 2021/2178, we would like to point out that we conduct activities in the areas of electricity generation, cogeneration of power and heat/cool, and production of heat/cool from fossil gas. As shown, these are not material in terms of sales, investments and operating expenditures. BASF does not conduct any nuclear energy activities.

Furthermore, BASF does not report any taxonomy-eligible activities under the environmental objective of **climate change adaptation**. This is firstly to avoid double counting with economic activities already recorded under the climate change mitigation objective. Secondly, in accordance with the notice issued by the E.U. Commission, a prerequisite for taxonomy eligibility under the adaptation objective is the submission of an investment plan for implementing adaptation solutions, which is not present on the part of BASF within the meaning of the E.U. Taxonomy Regulation.

1 Enabling activities within the meaning of the E.U. taxonomy

Taxonomy-eligible sales revenue, capital expenditures and operating expenditures for all six environmental objectives

We assessed the taxonomy eligibility of our sales revenue based on sales as defined and reported in the Consolidated Financial Statements of the BASF Group (see page 219). Taking into account all six environmental objectives, taxonomy-eligible sales revenue accounted for 12.2% of total sales in 2023. The largest contributions were from the activities "manufacture of plastics in primary form" and "manufacture of organic basic chemicals." Both activities are assigned to the environmental objective of climate change mitigation. Taxonomy-eligible capital expenditures (including acquisitions and excluding goodwill in accordance with the E.U. taxonomy) accounted for 23.1% of the total investments reported in the Consolidated Financial Statements. Capital expenditures on the "manufacture of organic basic chemicals" and in the "manufacture of batteries" contributed significantly here. These activities also contribute to the environmental objective of climate change mitigation. Operating expenditures include uncapitalized costs that relate to research and development,[1] maintenance and repair, and short-term lease expenses. The definition of operating expenditures follows the E.U. Taxonomy Regulation and they are not reported in the Consolidated Financial Statements in this form. All of the capital expenditures and operating expenditures of a production facility with taxonomy-eligible activity are counted as taxonomy-eligible. Taxonomy-eligible operating expenditures accounted for 12.4% of total operating expenditures. The largest contributions under the objective of climate change mitigation were from the activities "manufacture of organic basic chemicals" and "manufacture of plastics in primary form."

Taxonomy-aligned sales revenue, capital expenditures and operating expenditures with a substantial contribution to climate change mitigation

The taxonomy-eligible activities under the environmental objective of climate change mitigation identified by BASF can be classified as taxonomy-aligned if they make a substantial contribution to climate change mitigation and do no significant harm to other environmental objectives and, at the same time, ensure minimum social safeguards. As in the previous year, the contribution to climate change mitigation and harm to other environmental objectives were reviewed in a three-step process. The **first step** involved a two-part analysis based on BASF's internal product databases:

- The manufacture of products was analyzed with respect to the use of critical substances in accordance with Appendix C[2] of the E.U. Commission's Delegated Regulation 2021/2139 to avoid significant harm to the environmental objective of pollution prevention or control according to the E.U. taxonomy. This also included use in the production process. The amendment to the Delegated Regulation (E.U.) 2023/2485 published by the E.U. Commission in November 2023 was also taken into account. BASF voluntarily applied the full supplement, including Annex 1, point 28, for the 2023 financial year in order to ensure a continuous conformity assessment with regard to Appendix C for years subsequent to 2024. Experts assessed and documented in each case that no other suitable alternative substances or technologies are available on the market.
- Plastics in primary form were analyzed with respect to the share of renewable raw materials in the product. They were only considered further if this share was at least 5% and thus potentially made a substantial contribution to climate change mitigation through partial or complete production from renewable raw materials. Shares allocated using mass balance approaches (see page 124) were not taken into account here because their acceptance under the E.U. taxonomy has not yet been definitively clarified. For this reason, BASF products based on chemically recycled raw materials were not considered further in the assessment either. Mechanical recycling did not play any role for BASF here.

In the **second step**, it was assessed whether the potentially taxonomy-aligned products make a substantial contribution to climate change mitigation in accordance with the activity-specific criteria. Among other things, the greenhouse gas emissions of European and non-European plants to produce soda ash, chemicals and nitric acid were compared with the average values of the most efficient plants under the E.U. emissions trading system. For the production of hydrogen, chlorine, ammonia and plastics in primary form, the comparison was against activity-specific quantitative criteria, such as the energy or emission intensity of a product. This

Taxonomy-eligible sales revenue, capital expenditures and operating expenditures in 2023

Million €

	Total	Taxonomy-eligible	%	Taxonomy-non-eligible	%
Sales	**68,902**	**8,421**	**12.2**	**60,481**	**87.8**
Of which climate change mitigation environmental objective		8,207	11.9		
Of which pollution prevention and control environmental objective		215	0.3		
Investments (capex)	**6,006**	**1,385**	**23.1**	**4,621**	**76.9**
Of which climate change mitigation environmental objective		1,366	22.7		
Of which pollution prevention and control environmental objective		19	0.3		
Operating expenditures (opex)	**4,645**	**577**	**12.4**	**4,068**	**87.6**
Of which climate change mitigation environmental objective		536	11.5		
Of which pollution prevention and control environmental objective		42	0.9		

1 The criteria for the activity "close to market research, development and innovation" (for example, a technology readiness level of at least six) were used to determine taxonomy-eligible research and development costs.
2 Generic criteria for DNSH to pollution prevention and control regarding use and presence of chemicals

was based on a digital solution developed by BASF to determine product-specific CO_2 emissions (see page 109). For the assessment of the investment in CO_2-free hydrogen production at the Ludwigshafen, Germany, site (construction of a proton exchange membrane electrolyzer), a funding approval by the German Federal Ministry for Economic Affairs and Climate Action and a study by the German Environment Agency on greenhouse gas emissions in hydrogen production were also taken into account.

Finally, in the **third step** of the process, it was assessed whether the products identified cause significant harm to the other environmental objectives. This included an analysis of risks arising from climate change using climate risk and vulnerability assessments. At sites with material climate risk, the existence of adaptation solutions was additionally analyzed and evaluated. The avoidance of significant harm to water and marine resources[1], biodiversity and ecosystems[2], and pollution prevention and control were taken as given for production plants in Europe based on comprehensive and uniform regulatory requirements and additionally ensured through data queries. The conformity of non-European plants was assessed on a case-by-case basis. This was based on joint assessments by local and central experts using the evidence of local production requirements submitted.

The criteria for the **minimum social safeguards** as a further pillar of taxonomy alignment in accordance with Article 18 of the E.U. Taxonomy Regulation were reviewed for all activities across the BASF Group on the four core topics of human rights (including labor rights), corruption/bribery, taxation and fair competition, independent of the step-by-step process for the "contribution to climate change mitigation" and "harm to other environmental objectives" criteria. Minimum social safeguards were ensured by a systematic, integrated and risk-based approach to safeguarding our human rights due diligence obligations (see page 154), by global labor and social standards (see page 155), and by the Supplier Code of Conduct (see page 159), among other things.

Taxonomy-aligned **sales revenue** accounted for 1.6% of the total sales revenue defined and reported in the BASF Group's Consolidated Financial Statements in 2023 (see page 227). The "manufacture of batteries" made the largest contribution (1.2%). Taxonomy-aligned **capital expenditures** (including acquisitions and excluding goodwill in accordance with the E.U. taxonomy) accounted for 5.2% of the total investments reported in the Consolidated Financial Statements. At 4.1%, capital expenditures (additions to property, plant and equipment) on the "manufacture of batteries" contributed significantly here (additions to property, plant and equipment). We are also investing in a plant for the production of CO_2-free hydrogen, which will be commissioned in the coming years. This already meets the criteria for taxonomy alignment in 2023 and is accordingly recognized as an investment in accordance with Annex I, section 1.1.2.2. a) of the Delegated Regulation 2021/2178. Taxonomy-aligned **operating expenditures** accounted for 1.8% of total operating expenditures, with the largest contribution from the economic activity "manufacture of organic basic chemicals" (0.9%).

The increase in taxonomy-aligned sales revenue, capital expenditures and operating expenditures compared to the previous year was mainly due to the statutory adjustments to Appendix C of the Delegated Regulation 2021/2139, which BASF already applied in 2023 and which resulted in a taxonomy-aligned assessment of BASF's battery manufacturing activities. Due to the legal amendments to Appendix C, BASF is able to report the sustainable contribution for products in complex value chains in accordance with the E.U. taxonomy for the first time in 2023.

The taxonomy-aligned figure is, as before, significantly lower than the taxonomy-eligible figure due to various factors. Only a small proportion of plastics in primary form contain a share of renewable raw materials above the threshold value. Additionally, the proportion of taxonomy-aligned activities is reduced by the fact that many plants exceed the benchmarks used by the E.U. taxonomy. For example, the strict requirement to calculate emissions in accordance with European emissions trading means that the benefits of renewable energies were not taken into account, which is why the investment in the steam crackers at the site in Zhanjiang, China, and the investment in a demonstration plant for electrified steam cracker furnaces at the Ludwigshafen site in Germany (see page 107) had to be classified as not taxonomy-aligned despite avoiding a considerable amount of CO_2 emissions. In addition, plants that are not subject to emissions trading and thus cannot be assessed using the specified criteria were generally classified as not taxonomy-aligned.

For more information on sales revenue, see Note 7 to the Consolidated Financial Statements from page 249 onward

For more information on investments, see Note 14 to the Consolidated Financial Statements from page 264 onward

1 Protection of water and marine resources is taken as given at sites that do not use or treat water.
2 A radius of 3 km around production sites was defined for the analysis of biodiversity-sensitive areas.

E.U. taxonomy indicators: 2023 sales revenue

		2023		Substantial contribution criteria						DNSH criteria ("do no significant harm")								
Economic activities	**Code**	**Sales revenue**	**Proportion of sales revenue**	**Climate change mitigation**	**Climate change adaptation**	**Water**	**Circular economy**	**Pollution**	**Biodiversity**	**Climate change mitigation**	**Climate change adaptation**	**Water**	**Circular economy**	**Pollution**	**Biodiversity**	**Minimum safeguards**	**Proportion of taxonomy-aligned (A.1.) or taxonomy-eligible (A.2.) sales revenue 2022**	**Category: enabling activity**	**Category: transitional activity**
		Million €	In %	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	In %	E	T
A. Taxonomy-eligible activities																			
A.1. Environmentally sustainable activities (taxonomy-aligned)																			
Manufacture of batteries	CCM 3.4	847	1.2	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	Y	Y	Y	Y	-	E	-
Manufacture of energy efficiency equipment for buildings	CCM 3.5	32	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	Y	Y	Y	Y	0.1	E	-
Manufacture of soda ash	CCM 3.12	7	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.0	-	T
Manufacture of organic basic chemicals	CCM 3.14	200	0.3	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.3	-	T
Manufacture of plastics in primary form	CCM 3.17	10	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.0	-	T
Sales revenue for environmentally sustainable activities (taxonomy-aligned)		**1,095**	**1.6**	1.6%	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	**0.4**		
Of which enabling activity (E)		879	1.3	1.3%	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	0.1	E	
Of which transitional activity (T)		217	0.3	0.3%	-	-	-	-	-	-	Y	Y	-	Y	Y	Y	0.3		T
A.2. Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned)																			
				EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL										
Manufacture of batteries	CCM 3.4	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL								1.6		
Manufacture of hydrogen	CCM 3.10	12	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.0		
Manufacture of soda ash	CCM 3.12	6	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.0		
Manufacture of chlorine	CCM 3.13	3	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.0		
Manufacture of organic basic chemicals	CCM 3.14	2,157	3.1	EL	N/EL	N/EL	N/EL	N/EL	N/EL								3.4		
Manufacture of anhydrous ammonia	CCM 3.15	162	0.2	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.3		
Manufacture of nitric acid	CCM 3.16	139	0.2	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.2		
Manufacture of plastics in primary form	CCM 3.17	4,632	6.7	EL	N/EL	N/EL	N/EL	N/EL	N/EL								7.3		
Acquisition and ownership of buildings	CCM 7.7	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL								-		
Manufacture of active pharmaceutical ingredients (API) or active substances[1]	PPC 1.1	215	0.3	N/EL	N/EL	N/EL	N/EL	EL	N/EL								-		
Sales revenue for taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned)		**7,326**	**10.6**	10.3%	-	-	-	0.3%	-								**12.9**		
Total A.1. + A.2.		**8,421**	**12.2**	11.9%	-	-	-	0.3%	-								**13.3**		
B. Taxonomy-non-eligible activities																			
Sales revenue for taxonomy-non-eligible activities		**60,481**	**87.8**																
Total		**68,902**	**100.0**																

Y: Yes, taxonomy-eligible activity that is taxonomy-aligned with the relevant environmental objective
N: No, taxonomy-eligible activity that is not taxonomy-aligned with the relevant environmental objective
EL: Eligible, taxonomy-eligible activity for the respective objective
N/EL: Not eligible, taxonomy-non-eligible activity for the respective environmental objective

1 This economic activity is reported as taxonomy-eligible but not environmentally sustainable, as an assessment for taxonomy alignment will be carried out for the first time for the 2024 financial year.

E.U. taxonomy indicators: 2023 capital expenditures (capex)

		2023		Substantial contribution criteria						DNSH criteria ("do no significant harm")									
Economic activities	**Code**	**Invest-ments (capex)**	**Propor-tion of capex**	**Climate change mitiga-tion**	**Climate change adapta-tion**	**Water**	**Circular economy**	**Pollution**	**Bio-diversity**	**Climate change mitiga-tion**	**Climate change adapta-tion**	**Water**	**Circular economy**	**Pollution**	**Bio-diversity**	**Minimum safe-guards**	**Proportion of taxonomy-aligned (A.1.) or taxonomy-eligible (A.2.) capex 2022**	**Category: enabling activity**	**Category: transitional activity**
		Million €	In %	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	In %	E	T
A. Taxonomy-eligible activities																			
A.1. Environmentally sustainable activities (taxonomy-aligned)																			
Manufacture of batteries	CCM 3.4	244	4.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	Y	Y	Y	Y	-	E	-
Manufacture of energy efficiency equipment for buildings	CCM 3.5	1	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	Y	Y	Y	Y	0.0	E	-
Manufacture of hydrogen	CCM 3.10	39	0.7	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	Y	Y	Y	Y	-	-	-
Manufacture of soda ash	CCM 3.12	15	0.3	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.3	-	T
Manufacture of organic basic chemicals	CCM 3.14	13	0.2	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.1	-	T
Manufacture of plastics in primary form	CCM 3.17	0	0.0	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.1	-	T
Capex for environmentally sustainable activities (taxonomy-aligned)		**314**	**5.2**	5.2%	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	**0.5**		
Of which enabling activity (E)		245	4.1	4.1%	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	0.0	E	
Of which transitional activity (T)		29	0.5	0.5%	-	-	-	-	-	-	Y	Y	-	Y	Y	Y	0.5		T
A.2. Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned)																			
				EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL										
Manufacture of batteries	CCM 3.4	-	-	EL	N/EL	N/EL	N/EL	N/EL	N/EL								6.2		
Manufacture of hydrogen	CCM 3.10	17	0.3	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.6		
Manufacture of soda ash	CCM 3.12	0	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								**0.1**		
Manufacture of chlorine	CCM 3.13	52	0.9	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.0		
Manufacture of organic basic chemicals	CCM 3.14	618	10.3	EL	N/EL	N/EL	N/EL	N/EL	N/EL								7.6		
Manufacture of anhydrous ammonia	CCM 3.15	28	0.5	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.1		
Manufacture of nitric acid	CCM 3.16	2	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.1		
Manufacture of plastics in primary form	CCM 3.17	188	3.1	EL	N/EL	N/EL	N/EL	N/EL	N/EL								3.3		
Acquisition and ownership of buildings	CCM 7.7	146	2.4	EL	N/EL	N/EL	N/EL	N/EL	N/EL								-		
Manufacture of active pharmaceutical ingredients (API) or active substances[1]	PPC 1.1	19	0.3	N/EL	N/EL	N/EL	N/EL	EL	N/EL								-		
Capex for taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned)		**1,071**	**17.8**	17.5%	-	-	-	0.3%	-								**18.0**		
Total A.1. + A.2.		**1,385**	**23.1**	22.7%	-	-	-	0.3%	-								**18.6**		
B. Taxonomy-non-eligible activities																			
Capex for taxonomy-non-eligible activities		**4,621**	**76.9**																
Total		**6,006**	**100.0**																

Y: Yes, taxonomy-eligible activity that is taxonomy-aligned with the relevant environmental objective
N: No, taxonomy-eligible activity that is not taxonomy-aligned with the relevant environmental objective
EL: Eligible, taxonomy-eligible activity for the respective objective
N/EL: Not eligible, taxonomy-non-eligible activity for the respective environmental objective

1 This economic activity is reported as taxonomy-eligible but not environmentally sustainable, as an assessment for taxonomy alignment will be carried out for the first time for the 2024 financial year.

E.U. taxonomy indicators: 2023 operating expenditures (opex)

		2023		Substantial contribution criteria						DNSH criteria ("do no significant harm")									
Economic activities	**Code**	**Operating expenditures (opex)**	**Proportion of opex**	**Climate change mitigation**	**Climate change adaptation**	**Water**	**Circular economy**	**Pollution**	**Biodiversity**	**Climate change mitigation**	**Climate change adaptation**	**Water**	**Circular economy**	**Pollution**	**Biodiversity**	**Minimum safeguards**	**Proportion of taxonomy-aligned (A.1.) or taxonomy-eligible (A.2.) opex 2022**	**Category: enabling activity**	**Category: transitional activity**
		Million €	In %	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y; N; N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	In %	E	T
A. Taxonomy-eligible activities																			
A.1. Environmentally sustainable activities (taxonomy-aligned)																			
Manufacture of batteries	CCM 3.4	27	0.6	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	Y	Y	Y	Y	-	E	-
Manufacture of energy efficiency equipment for buildings	CCM 3.5	3	0.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	Y	Y	Y	Y	0.1	E	-
Manufacture of soda ash	CCM 3.12	4	0.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.1	-	T
Manufacture of organic basic chemicals	CCM 3.14	41	0.9	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.3	-	T
Manufacture of plastics in primary form	CCM 3.17	7	0.1	Y	N/EL	N/EL	N/EL	N/EL	N/EL	-	Y	Y	-	Y	Y	Y	0.5	-	T
Opex for environmentally sustainable activities (taxonomy-aligned)		**82**	**1.8**	1.8%	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	**0.9**		
Of which enabling activity (E)		30	0.7	0.7%	-	-	-	-	-	-	Y	Y	Y	Y	Y	Y	0.1	E	
Of which transitional activity (T)		52	1.1	1.1%	-	-	-	-	-	-	Y	Y	-	Y	Y	Y	0.9		T
A.2. Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned)																			
				EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL										
Manufacture of batteries	CCM 3.4	0	0.0	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.3		
Manufacture of hydrogen	CCM 3.10	35	0.8	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.8		
Manufacture of soda ash	CCM 3.12	4	0.1	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.1		
Manufacture of chlorine	CCM 3.13	32	0.7	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.7		
Manufacture of organic basic chemicals	CCM 3.14	182	3.9	EL	N/EL	N/EL	N/EL	N/EL	N/EL								3.8		
Manufacture of anhydrous ammonia	CCM 3.15	21	0.4	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.4		
Manufacture of nitric acid	CCM 3.16	16	0.3	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0.4		
Manufacture of plastics in primary form	CCM 3.17	164	3.5	EL	N/EL	N/EL	N/EL	N/EL	N/EL								2.9		
Manufacture of active pharmaceutical ingredients (API) or active substances[1]	PPC 1.1	42	0.9	N/EL	N/EL	N/EL	N/EL	EL	N/EL								-		
Opex for taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned)		**495**	**10.7**	9.8%	-	-	-	0.9%	-								**9.4**		
Total A.1. + A.2.		**577**	**12.4**	11.5%	-	-	-	0.9%	-								**10.4**		
B. Taxonomy-non-eligible activities																			
Opex for taxonomy-non-eligible activities		**4,068**	**87.6**																
Total		**4,645**	**100.0**																

Y: Yes, taxonomy-eligible activity that is taxonomy-aligned with the relevant environmental objective
N: No, taxonomy-eligible activity that is not taxonomy-aligned with the relevant environmental objective
EL: Eligible, taxonomy-eligible activity for the respective objective
N/EL: Not eligible, taxonomy-non-eligible activity for the respective environmental objective

1 This economic activity is reported as taxonomy-eligible but not environmentally sustainable, as an assessment for taxonomy alignment will be carried out for the first time for the 2024 financial year.