Promoting Chemical Safety at BASF

Chemical safety is a core element of BASF's product stewardship and portfolio steering. It connects risk assessment, product safety management, regulatory compliance, customer information, substitution planning and innovation. BASF uses this integrated approach to identify and manage potential risks related to chemical substances and products, to support safe handling across the product life cycle, and to guide the transformation of its product portfolio toward more sustainable solutions.

Product Portfolio Steering and the Role of TripleS

The development of BASF's product portfolio is a key lever for supporting our customers in their green transformation.[1] To assess and steer the sustainability performance of its products, BASF applies its TripleS method, Sustainable Solution Steering. TripleS evaluates products against sustainability-related criteria, including requirements such as chemical safety, climate change and energy, resource efficiency and circular economy considerations.

TripleS is integrated into BASF's research and development (R&D) processes and into the innovation cycle. This supports the phaseout of products that do not meet basic sustainability requirements and have been identified as Challenged. It also facilitates the identification of innovative solutions. The methodology provides an overarching sustainability assessment spanning from the individual product level to the portfolio level. It focuses on the issues that are most relevant for BASF and its stakeholders, helps detect market changes early and connects key product properties across the entire portfolio rather than relying only on single indicators.

The methodology is based on clearly defined and transparently documented criteria covering environmental, social and governance (ESG) aspects. These criteria are described in a dedicated methodology manual. BASF regularly adapts the methodology to reflect changing conditions and new developments. In 2025, for example, BASF further refined TripleS to incorporate enhanced digital assessment capabilities and evolving regulatory requirements relating to chemical safety. These adjustments support the continued application and development of the methodology in a changing regulatory environment and market.

» For more information on TripleS, see basf.com/en/sustainable-solution-steering

TripleS Segmentation and Product Classification

Based on the assessment results, products are assigned to one of five portfolio segments: Pioneer, Contributor, Standard, Monitored, or Challenged.

Products with a positive sustainability contribution are classified as Pioneer or Contributor, depending on their performance level relative to the market standard and the magnitude of their contribution. Together, Pioneer and Contributor products form BASF's Sustainable-Future Solutions. As a quantitative and time-bound target, BASF aims for more than 50% of sales relevant to TripleS to be attributable to Sustainable-Future Solutions by 2030 (for more information see BASF Report 2025).

[1] The following understanding underpins all references to green transformation in this text: To enable our customers' green transformation, BASF systematically develops and offers solutions that minimize negative impacts on the environment and society while maximizing positive results. This includes our efforts to reduce CO_2 emissions, conserve resources and use renewable energy and renewable raw materials. In line with the three dimensions of sustainable development, we place ecological and economic balance as well as social responsibility at the forefront of our actions.

Products for which neither a positive contribution nor a negative sustainability impact has been identified are classified as Standard.

Products with sustainability concerns are classified as Monitored and are subject to closer review and management attention.

Products that do not meet basic sustainability requirements due to strong issues are classified as Challenged. Strong issues may include human health or environmental risks associated with product composition or application.

TripleS portfolio segmentation



Identification of Sustainability and Chemical Safety Risks

BASF systematically assesses the intrinsic hazards of its entire product portfolio, including marketed products. In-house toxicology and ecotoxicology experts evaluate human health, environmental and physicochemical hazards, including PBT/vPvB properties, and classify products in accordance with the Globally Harmonized System (GHS) and applicable regional regulatory frameworks such as the EU Classification, Labelling and Packaging (CLP) Regulation.

Where regulatory volume thresholds apply, the hazard assessment is embedded in a chemical safety assessment such as a Chemical Safety Assessment (CSA) under EU REACH and is documented accordingly. Our experts apply the corresponding hazard-assessment and chemical-safety requirements of the other jurisdictions in which we operate, ensuring globally consistent coverage.

Hazard and safe-use information for all our substances and products is maintained in a global product database that is continuously updated. This information is communicated to customers through safety data sheets and product labels.

Building on these hazard assessments and the related safety information in combination with exposure data, the TripleS methodology evaluates the resulting sustainability performance at product and portfolio level. As part of the TripleS assessment, BASF reviews all products for current or potential future negative sustainability impacts. The evaluation considers minimum requirements such as compliance

with the BASF Code of Conduct, hazard assessment and chemical exposure throughout the product life cycle, anticipated regulatory developments and potential reputational risks for BASF. This enables BASF to identify chemicals of concern that may be subject to phaseout plans in their respective use.

TripleS enables steerable, portfolio-level sustainability risk management beyond mere compliance. It combines early risk identification, active risk management, a consistent portfolio view and R&D-driven derisking for new products:

- **Early risk identification** includes systematic screening of products for regulatory, toxicological, reputational and societal risks. It considers both the severity and timeline (medium-term and long-term) of an issue to materialize.
- As part of our **active risk management**, risks identified with Monitored or Challenged products trigger mandatory measure descriptions. For Challenged products, management-confirmed action plans need to be provided. BASF phases out products classified as Challenged within five years.
- The TripleS methodology creates a **comparable and decision-ready portfolio view** across businesses and regions through standardized segmentation. All relevant sales products are reassessed globally at least every four years. This regular reassessment helps BASF identify changes in regulatory, market, customer or scientific expectations and integrate these developments into portfolio management decisions.
- TripleS supports reformulation, substitution and innovation. It aligns **R&D activities for new products** with the EU's Safe and Sustainable by Design (SSbD) framework and future regulatory expectations.

Management of Challenged Products and Phaseout Planning

A clear process governs the management of Challenged products and supports the identification of new solutions. Products classified as Challenged are phased out within five years after their initial classification. BASF develops action plans for these products. Depending on the circumstances, these plans may involve transitioning customers to existing alternatives or pursuing R&D initiatives aimed at reformulating Challenged products or developing more sustainable alternative solutions.

A Challenged classification is therefore not only a risk signal. It is also a trigger for targeted innovation. In some cases, however, no technically or commercially viable alternative may exist. Where alternatives are pursued, BASF evaluates relevant market needs, business opportunities, sustainability performance and sustainability benefits to identify suitable successor products.

The resulting TripleS classifications are subject to external assurance as part of the annual BASF Report.

Chemicals of Concern

Substances with hazardous properties, including Substances of Concern (SoC) and Substances of Very High Concern (SVHC), are used in certain applications because they provide specific technical properties that are essential for manufacturing processes or product performance. In some cases, alternatives that meet the required technical and performance criteria remain limited. SoC and SVHC may be present in chemical raw materials used in manufacturing processes and may also occur in certain chemical products. Some BASF products that serve as input materials for industrial and professional applications therefore contain such substances. In chemical value chains, hazardous characteristics may diminish or disappear in the final product as substances are further reacted into downstream molecules.

Benzene, for example, illustrates how hazardous substances can be used early in the chemical value chain in controlled environments to create essential nonhazardous downstream products. Benzene has a UN GHS classification of Carc. 1A and Muta. 1B and can be handled safely in a controlled environment. Benzene is used as a starting material in the chemical value chain to produce polyurethane materials such as thermoplastic polyurethane (TPU; Elastollan®). As the substance is transformed along the chemical value chain into the final polymer, the carcinogenic and mutagenic properties mentioned above are no longer present. The resulting TPU is not classified as hazardous.

BASF manages chemicals of concern responsibly through its Responsible Care Management System and TripleS as key tools. Our product safety management activities are embedded in the Responsible Care Management System and address the safe handling, transport, use and disposal of substances.

BASF regards product stewardship as an integral component of all business processes, as a key element of our risk management and as a vital pillar of our commitment to the International Council of Chemical Associations' (ICCA) global Responsible Care® initiative. BASF continuously works to ensure that its products, including high-concern substance applications, do not pose unacceptable risks to human health or the environment when used as intended and in accordance with applicable safety instructions.

Comprehensive safety and risk assessments support compliance with regulatory requirements and enable BASF to develop and market innovative and increasingly sustainable products. These assessments also help BASF respond to evolving regulatory frameworks, increasing sustainability expectations and changing customer and market needs.

Building on its product safety management activities, BASF uses TripleS to proactively support the transition toward a more sustainable product portfolio. TripleS assesses intrinsic hazards based on product safety data in combination with exposure data. The assessment draws on validated internal and external databases and is complemented by expert judgment. This helps identify products associated with elevated sustainability-related concerns and supports the evaluation and development of viable alternatives to Challenged products, which also include SoC. Challenged products are phased out within five years following their initial classification. This underlines BASF's commitment to continuously improving our environmental, health and safety performance while safeguarding people and the environment.

Product Stewardship, Safety Data Sheets and Customer Information

To support product stewardship, BASF maintains a global database containing safety, health and environmental information for all our substances and products. This information is continuously updated and serves as the basis for communicating product-specific information to customers.

For all our products our customers are provided with Safety Data Sheets (SDS). The SDS can be generated in approximately 40 languages to meet local customer needs. They include information on physicochemical, toxicological and ecotoxicological properties, potential hazards, first aid measures, measures to be taken in the event of accidental release or disposal, and safe handling. We proactively communicate relevant changes to customers worldwide. Through these SDS, BASF aims to contribute to the prevention of leakages and emergencies and to the mitigation and limitation of their impacts.

In addition, BASF's global emergency hotline network enables around-the-clock access to product safety information. Where necessary, BASF provides customers with product safety advice and guidance.

Classification, Labeling, Training and Transportation Safety

To facilitate the safe handling, transportation, use and disposal of products, BASF applies the Globally Harmonized System for the classification and labeling of products wherever legally permitted. Where applicable, BASF also takes account of national or regional adaptations of the GHS framework, including the European Union's Regulation on Classification, Labelling and Packaging of Substances and Mixtures, the CLP Regulation.

BASF establishes global requirements for the safe transportation of dangerous goods by logistics service providers. It also provides training on the safe handling and use of selected products with elevated hazard potential. Through industry associations and collaborations with other manufacturers, BASF supports voluntary global initiatives aimed at preventing the misuse of chemicals. BASF also contributes to the further development of risk assessment methodologies through participation in national and international initiatives, including activities of the European Centre for Ecotoxicology and Toxicology of Chemicals (ECETOC).

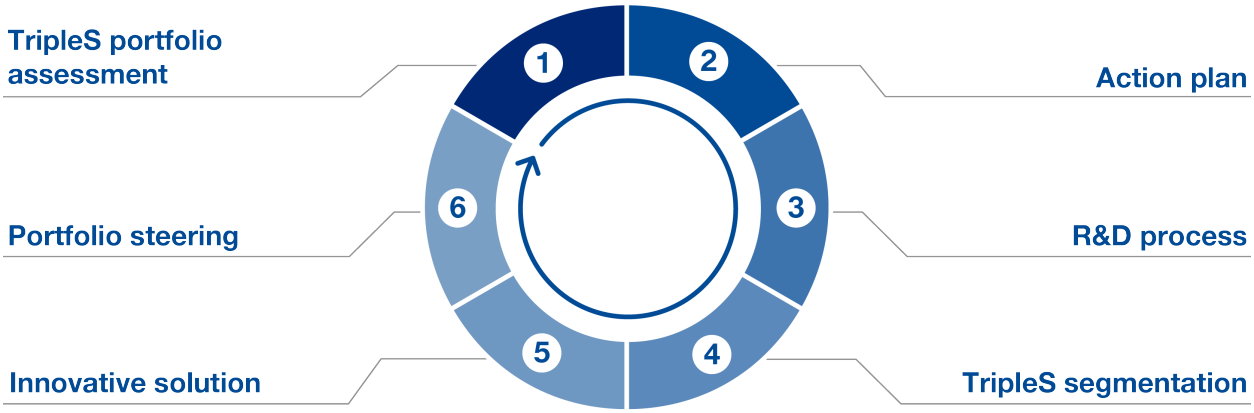
Chemical Safety in Innovation and New Product Design

Our TripleS methodology follows a risk-based approach. It is grounded in life-cycle assessment principles, covers the entire product life cycle, and starts as early as the innovation phase. TripleS was developed and introduced at BASF in 2012 and was one of the first methods on the market to enable a validated assessment process for a company's entire sales and R&D portfolio.

TripleS supports R&D in identifying projects for new products with sustainability impact in line with customer needs.[2] It also supports reformulation, substitution and innovation activities and aligns new product R&D processes with external standards such as the European Commission's Safe and Sustainable by Design (SSbD) framework as well as future regulatory expectations.

The following graphic illustrates how TripleS is integrated into BASF's R&D and Innovation Cycle, enabling the systematic consideration of sustainability requirements such as environmental and health standards, in new product design:

[2] For BASF's R&D projects, a segmentation similar to the product TripleS methodology is carried out. Due to the lack of sales in the R&D phase, R&D spending is considered instead of sales data.



1: TripleS portfolio assessment: If TripleS identifies a product as not meeting basic sustainability requirements because of strong issues, the product is classified as Challenged.

2. Action plan: This classification triggers an action plan and can initiate R&D activities to find alternatives.

3. R&D process: During the R&D process, potential alternatives are screened, assessed and scaled up. Their sustainability performance and sustainability benefits are evaluated to identify suitable successor products. The candidate product is ideally identified as “Pioneer.”

4. TripleS segmentation confirmation: The final TripleS assessment is then conducted during product launch.

5. The **innovative solution** is marketed.

6. Portfolio steering: Once an innovative solution is launched and marketed, portfolio steering remains a dynamic process regarding the identification of market innovation needs. The product remains in the Pioneer segment as long as more than 40% of the relevant market uses solutions with a lower sustainability performance.

An innovative product may replace a Challenged product with significant sustainability concerns and, over time, become the new market standard. As customer expectations, regulatory requirements or scientific knowledge continue to evolve, this replacement product may itself be succeeded by a next-generation solution. This dynamic approach helps BASF identify market innovation needs and strengthen the resilience of its portfolio.

By applying TripleS also to the innovation and new product design process, BASF systematically assesses the sustainability performance of both existing and future products according to a well-defined methodology.

Based on the TripleS methodology, approximately €0.8 billion of BASF’s annual R&D expenditure in 2025 contributed to the development of potential Sustainable-Future Solutions.

Building Portfolio Resilience

As a proactive steering and decision-making tool, TripleS supports the continuous transition toward a more sustainable product portfolio. By integrating sustainability assessments into product development and portfolio management processes, TripleS highlights where BASF can optimize products or needs to manage portfolio risks. The methodology helps identify potential challenges at an early stage, address emerging sustainability requirements and evaluate appropriate response measures before they result in regulatory, market-related or reputational risks. Thus, TripleS supports the assessment of products in light of current and anticipated regulatory requirements.

TripleS provides an integrated sustainability assessment across multiple levels. The methodology is designed to assess sustainability performance in areas that are most relevant for BASF and its stakeholders. By linking product-level characteristics across the entire portfolio, it enables a broader assessment than approaches based only on individual indicators. It increases transparency regarding the sustainability contribution of BASF's product portfolio and enables the systematic consideration of aspects such as circular design principles. Overall, it supports the strategic steering of the portfolio toward more sustainable solutions and strengthens portfolio resilience.

Examples of Substitution, Phaseout and Safer Alternatives

BASF has a track record of portfolio steering driven by human health and environmental risk considerations. Replaced and phased-out substances (threshold of 0.1% (w/w) is applied):

- In 2022, BASF ceased production of N-ethylpyrrolidone. The substance was identified as toxic to reproduction, category 1B, based on developmental toxicity, and is listed as an SVHC.
- In 2019, BASF stopped manufacturing 1,2-dimethoxyethane, which was identified as an SVHC due to its classification for reproductive toxicity, category 1B.
- In 2018, BASF discontinued the production of triclosan, since the substance was suspected of having persistent and bioaccumulative properties as well as potential endocrine-disrupting effects.
- BASF completed the global phaseout of lead pigments in 2017, with several regions having already transitioned earlier. Throughout the process, BASF supported paint manufacturers with reformulation guidance and a sustainable, lead-free product portfolio. Lead pigments are identified as SVHC.
- In 2015, BASF ceased global production of products containing the flame retardant hexabromocyclo-dodecane (HBCD) and replaced it with a highly effective, sustainable polymeric brominated flame retardant (Polymer-FR). BASF was the first manufacturer to offer its global portfolio of expandable polystyrene (EPS) raw materials for thermal insulation exclusively with the new flame retardant. HBCD has since been listed in Annex A of the Stockholm Convention on Persistent Organic Pollutants.
- BASF discontinued the UV absorbers UV-320, UV-327 and UV-350 in the 2000s and deliberately did not register them under EU REACH legislation. Their classification as SVHC, based on persistent and bioaccumulative properties, was subsequently confirmed by the European Chemicals Agency (ECHA) between 2014 and 2020. At that time, BASF already offered alternative solutions to customers.
- BASF started developing Hexamoll® DINCH, a non-phthalate plasticizer, in the 1990s, long before major restrictions on plasticizers such as the former standard general-purpose plasticizer DEHP entered into effect. Hexamoll® DINCH was launched in 2002 after extensive toxicological testing. Hexamoll® DINCH and other safer alternative plasticizers replaced DEHP and other low molecular weight ortho-phthalates, including DBP and DMEP.

PFAS Product Steering

BASF is committed to safe and sustainable products and supports balanced regulatory measures for per- and polyfluoroalkyl substances (PFAS). PFAS are a class of thousands of chemicals with unique physicochemical properties that have in common the presence of carbon-fluorine (CF) bonds.

As a global company, BASF applies the PFAS definitions that are applicable in the respective jurisdictions and combines them with product-specific evaluations. In the EU and in regions that have not implemented PFAS-specific regulations, BASF applies the scope currently projected in the EU PFAS restriction proposal, although it remains a proposal and will not be implemented for several years. In North America, the definition of the United States Environmental Protection Agency (EPA) forms the basis for our product steering.

BASF does not synthesize carbon-fluorine bonds in its production processes and is therefore not active in fluorination chemistry. Taking the scope of the EU PFAS restriction proposal as a reference, BASF has a limited number of products that contain substances belonging to the PFAS class. These products have been developed to meet market needs and regulatory compliance requirements.

BASF will phase out chemical products that are formulated with PFAS. TripleS is used to monitor the phaseout process and support the identification of new innovative alternatives for customers. Active ingredients of our Agricultural Solutions business are regulated under sector-specific laws and are handled accordingly.

» For more information see BASF's Position on PFAS

Animal Welfare

BASF is committed to high standards of animal welfare. Animal studies are conducted when legally required or scientifically justified to assess the safety of products. All studies, whether conducted internally or externally, must comply with applicable animal welfare legislation and recognized international standards. These standards include the German Animal Welfare Act. In Germany, all animal studies are subject to regulatory review and approval. They are monitored by the competent authorities.

BASF's animal research facilities are accredited by AAALAC International (Association for Assessment and Accreditation of Laboratory Animal Care International), reflecting our commitment to standards that go beyond legal requirements. Animal welfare is embedded in BASF's governance framework. Dedicated Animal Welfare Officers support the planning and conduct of animal studies, ensure compliance with legal requirements and promote high standards of animal welfare.

The 3Rs: Reduction, Refinement, Replacement

BASF applies the internationally recognized 3R principles (Reduction, Refinement, Replacement) throughout its research and testing activities. Where animal studies remain necessary, BASF seeks to use the minimum number of animals required to obtain scientifically robust results. BASF also strives to minimize potential burdens on the animals. At the same time, BASF develops, validates and implements New Approach Methodologies (NAMs) and other non-animal methods to replace animal studies wherever scientifically feasible and acceptable to regulatory authorities.

Scientific Innovation and Regulatory Acceptance

BASF has played a leading role in the development, validation and application of NAMs for chemical safety assessments. The company maintains a dedicated annual research budget for alternative methods development. BASF also works closely with regulatory authorities, industry partners, scientific organizations and initiatives such as the European Partnership for Alternative Approaches to Animal Testing (EPAA), to support their scientific and regulatory acceptance.

An important milestone was BASF's contribution to the development of the first OECD-adopted animal-free testing strategy for skin sensitization, described in OECD Test Guideline 497. This approach enables the assessment of skin sensitization without the use of animal studies.

In 2022, BASF's Experimental Toxicology and Ecology unit became the first institute worldwide to receive certification for OECD Good In Vitro Method Practices (GIVIMP), demonstrating the quality, reliability and regulatory relevance of its in vitro methods.

Conclusion

BASF's chemical safety approach combines product stewardship, portfolio steering and innovation alongside transparent customer communication and regulatory risk management. Product safety management measures embedded in our Responsible Care Management System support the safe handling of products across the value chain. These measures include the provision of Safety Data Sheets, GHS-based classification as well as labeling, training, emergency information and transport safety requirements. The TripleS methodology complements these activities by identifying sustainability-related concerns early, supporting substitution planning, guiding R&D and strengthening portfolio resilience. Together, these elements help BASF manage chemical safety risks and support the continuous development of safer and more sustainable products.

Managing Toxic Emissions and Waste at BASF

Environmental protection is integral to BASF's business activities and extends across the company's entire value chains. BASF's objective is to reduce environmental impacts associated with air emissions, water discharges or waste generation and to avoid accidental releases related to production or transportation while promoting the responsible use of natural resources.

The company pursues this objective across all operations through continuous improvements in operational performance, resource efficiency, process safety, product stewardship and environmental management. This integrated approach supports the reduction of environmental impacts, the responsible use of natural resources and the protection of ecosystems while creating long-term value for stakeholders and contributing to sustainable development.

Environmental Protection Framework

BASF's approach to reducing toxic emissions and waste is based on a comprehensive strategy that combines preventive measures, process optimization, technological innovation and continuous monitoring.

A key element of this strategy is the ongoing transformation of production processes and the product portfolio. Particular emphasis is placed on the safe and efficient operation of production facilities, the advancement of resource-efficient technologies and the continuous improvement of environmental performance. Through these efforts, BASF seeks to reduce pollution, protect water quality, enhance resource efficiency and strengthen the resilience and effectiveness of its operations and value chains. In addition, the company advances its water stewardship, production, logistics and product stewardship practices.

The approach is supported by a comprehensive framework of Group-wide policies, management systems, governance requirements, audit processes and clearly defined responsibilities to address environmental pollution issues and related environmental risks in our own production.

BASF's environmental management system is embedded in the company's Responsible Care Management System, which covers all operations.

Additional elements of our comprehensive strategy include BASF's Position on Water Protection, our principles for the responsible sourcing of renewable raw materials, our risk-based sustainability management for procurement, and the Supplier Code of Conduct.

At product level, BASF applies its TripleS methodology to assess sustainability contributions, including contributions related to health and safety, pollution reduction and water protection.

» For more information on our position paper on water protection, see basf.com/water

» For more information on our principles for the responsible sourcing of renewable raw materials, see basf.com/responsible-sourcing

» For more information on the Supplier Code of Conduct, see basf.com/supplier_code_of_conduct

Responsible Care Management System

BASF's Group-wide Responsible Care Management System is aligned with the global Responsible Care® initiative of the International Council of Chemical Associations (ICCA). The system addresses environmental protection and resource use in addition to safety and health. It provides a framework for continuously improving operational performance.

Core elements include the prevention and reduction of emissions to air and water, responsible waste management, efficient resource use and the mitigation of environmental impacts arising from production activities. The system supports ongoing improvements in environmental protection, process safety, resource efficiency and operational excellence.

Global Standards, Governance and Accountability

The Responsible Care Management System is supported by globally binding BASF requirements for environmental protection, process safety, product stewardship, transportation safety and emergency response and crisis management. These requirements establish Group-wide standards across all operations for managing emissions to air and water and for managing waste.

They apply to substances and activities with a potentially harmful impact on the environment. The requirements are intended to minimize both the likelihood and the potential consequences of production- and transportation-related releases into the environment.

They also require all production sites to implement water-protection concepts designed to prevent unforeseen emissions and the pollution of surface water or groundwater. For waste, the requirements include compliance with the waste management hierarchy of prevention, reuse, recycling, energy recovery, incineration and disposal.

BASF's unit for environmental protection, health, safety and quality defines the applicable management and control systems and monitors compliance with legal and internal requirements. It also reviews environmental, safety and health performance and progress through the audit framework. Operational responsibility for implementation and compliance rests locally with the respective sites and Group companies. Requirements and supporting guidelines are reviewed regularly, updated where necessary, and made available through BASF's internal governance systems.

Process Safety, Product Stewardship and Transportation Safety

The safe and reliable operation of production facilities is a fundamental element of the Responsible Care Management System. BASF implements comprehensive preventive measures to reduce the likelihood of process-safety incidents and to continuously improve operational performance. Further improvement opportunities arise in particular from the automation, digitalization and optimization of production processes. These measures complement environmental controls by reducing the potential for unintended releases and supporting stable and efficient operations.

Through our operational excellence projects, we aim to operate our plants even more efficiently, to make our processes even more resource-saving and thereby reduce CO_2 emissions. Energy management systems at all production sites, including externally certified systems such as those certified according to DIN EN ISO 50001, support the continuous identification and implementation of energy efficiency improvement opportunities. This not only reduces greenhouse gas emissions and saves valuable energy resources but also increases our competitiveness.

Product stewardship, transportation safety and the remediation of contaminated sites are also part of the Responsible Care Management System. BASF uses comprehensive safety concepts, preventive measures and clearly defined responsibilities to prevent environmental damage to the greatest extent possible. The company continuously develops its production and logistics processes as well as its product stewardship approaches further.

For example, BASF maintains a global database containing safety, health and environmental information for all its substances. Our customers are provided with Safety Data Sheets (SDS) for all our products.

As a chemical company, BASF transports dangerous goods. Products are to be loaded, transported and handled in accordance with applicable regulations and their hazard potential to minimize risks along the entire transportation chain. Responsible managers and employees receive regular training, advice, and supervision from transportation-safety experts, and the reliability of logistics partners is reviewed regularly. All BASF products intended for transportation must be clearly identifiable, classified, securely packaged, and labeled.

Emergency Response and Crisis Management

BASF maintains emergency-preparedness and response structures and processes at global, regional and local levels. These arrangements support an effective response to process safety incidents, product releases and other emergencies. The emergency response and crisis management approach focuses on protecting people, including employees, contractors and communities, as well as the environment and BASF properties.

Incidents are recorded and reported centrally according to a standardized Group-wide procedure. This process is intended to identify risks at an early stage and to initiate appropriate remedial and communication measures where required.

In the event of incidents, such as process safety incidents, their handling initially falls within the remit of local crisis organizations and/or local emergency response. 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 may vary in scope and participation depending on the scenario. Depending on the situation, external stakeholders such as business partners, municipal institutions or neighboring companies are also involved, both in drills and in the event of an emergency. Additional expert teams (working groups) may be called in for emergencies, depending on the extent of the damage.

In the event of a global crisis situation, a dedicated global crisis management team, led by a member of the Board of Executive Directors, is activated. It defines the strategic direction for crisis management and is supported by topic-specific and specialist working groups.

Incidents are investigated to identify opportunities for improvement, and relevant findings are integrated into existing concepts as appropriate. The effectiveness and quality of the actions are continuously improved and reviewed through established control mechanisms, including incident investigations, systematic learning from incidents and Responsible Care audits.

Waste Management

Preventing or reducing negative environmental impacts from waste requires an integrated approach. BASF combines efficient and resource-saving production with continuous environmental monitoring to optimize resource and waste management in its own production.

Targeted waste management is set out in the Group-wide Corporate Requirement Environmental Protection. BASF aims to reuse materials through recycling and to keep waste-disposal volumes as low as possible. Material flows are systematically tracked, and the defined waste hierarchy is applied: BASF seeks to avoid waste as far as possible, for example, by continuously optimizing processes or developing new production methods.

BASF's Verbund, with interconnected production plants and value chains, supports the efficient use of materials. If waste cannot be used within the Verbund, BASF assesses whether it can be recycled or thermally recovered. For materials that cannot be recovered, or for which recovery is not legally permitted, BASF has established processes for safe, proper and environmentally responsible disposal.

Where external waste-disposal companies are used, BASF conducts risk-based audits to verify that waste is disposed of properly. This control supports preventive soil protection and is intended to prevent current waste from becoming future contamination.

Monitoring and Evaluation of Effectiveness

BASF's environmental management system is supported by continuous monitoring, measurement, documentation and control through a combination of internal audits: Responsible Care audits, which serve as a central monitoring mechanism for the Responsible Care Management System, and ISO 14001 audits according to the external DIN EN ISO 14001 certification standard.

Together with corrective and improvement measures, these activities support operational performance management and the evaluation of the effectiveness of the underlying policies, requirements and control systems.

BASF also monitors process-safety incidents and transportation incidents with significant environmental impacts as key indicators of management-system effectiveness. In 2025, BASF recorded one process-safety incident with significant environmental impacts and no transportation incidents with significant environmental impacts. The methodology for assessing environmental impact is based on chemical-specific standards and includes criteria such as the quantity of a substance released into the environment and the environmental impact actually observed.

Responsible Care Audits and Corrective Action

The effectiveness of BASF's environmental, health and safety management framework is reviewed regularly through internal Responsible Care audits. The audits assess the adequacy of management systems and compliance with internal and external requirements. Their scope includes among others organization and management systems, product stewardship, transportation safety, process safety, occupational safety, environment (including air, water and waste) and emergency response.

BASF's Responsible Care audits are globally binding and based on the external DIN EN ISO 19011 standard. The audits are conducted at regular intervals of three to six years. They cover all BASF sites

worldwide as well as majority-owned BASF companies that operate production facilities. The audit scope is not limited to production facilities. It also includes laboratory units, infrastructure functions and larger workshops.The audit program applies a risk-based approach so that areas with elevated environmental, health or safety risks receive targeted attention. A centralized database secures global coverage and enables transparent documentation and traceability of audit activities.

In 2025, BASF conducted 130 Responsible Care audits. The audits are used to systematically identify risks, monitor the implementation of requirements, and drive continuous improvement, both globally and locally. Their regular execution supports consistent environmental protection and safety standards globally within the BASF Group.

For each audit, BASF develops an environmental and safety profile to assess whether the existing environmental and safety performance adequately addresses the relevant hazard potential. Where deficiencies are identified, corrective measures are defined, assigned and tracked within specified implementation timelines.

ISO 14001 Environmental Management and External Certification

To provide independent verification of environmental management practices, BASF conducts ISO 14001 audits according to the external DIN EN ISO 14001 certification standard in certified organizations on an annual basis. At regular intervals, the ISO 14001 audits are subject to third-party certification conducted by an external auditor.

The ISO 14001 environmental management system applies across the entire certified organization and therefore covers a wide range of functions and processes. The majority, approximately 75%, of BASF's operating divisions have either fully certified operations according to DIN EN ISO 14001 or certified activities that are considered material to their business. This coverage includes the operating divisions of the core businesses Petrochemicals, Performance Materials, Monomers, Dispersions & Resins, Performance Chemicals and Care Chemicals; the company's standalone divisions Battery Materials and Agricultural Solutions; and the site operations of European Site & Verbund Management.

ISO 14001 audits are performed globally in all applicable sites and organizations where it is required by law, considered business-relevant or supports customer and market expectations. Audits are planned annually through a risk-based sampling program. Audit frequency is increased in response to incidents or the severity of identified nonconformities.

Certification decisions consider legal requirements, the nature of the product portfolio and the environmental significance of products and operations. These factors are reviewed regularly, and certification scopes are adjusted when business conditions or regulatory requirements change.

BASF uses both standalone and multi-site certification approaches. Standalone certifications may cover organizational entities such as operating divisions or business units or entire production sites. BASF's Antwerp Verbund site, for example, has been certified following the standalone approach. The multi-site certification scheme covers approximately 40 units across Europe, the Middle East, and Africa. It is based on BASF's global governance framework, standardized management-system requirements and centralized oversight mechanisms. It includes the majority of BASF's operating divisions of the core businesses as well as two of the company's standalone divisions, Battery Materials and Agricultural Solutions. Examples of site certifications within the multi-site certification approach include BASF Polyurethanes GmbH, BASF Española S.L.U. and BASF Schwarzheide GmbH.

The certification model reflects BASF's integrated Verbund structure. At the Ludwigshafen site, for example, upstream high-volume chemical production activities in the Petrochemicals and Monomers operating divisions are certified according to DIN EN ISO 14001 and form the basis of multiple downstream value chains. Additional downstream operations, including activities in the Performance Materials, Dispersions & Resins, Performance Chemicals and Care Chemicals operating divisions, maintain their own ISO 14001 certifications where required to address customer expectations, market requirements or specific operational needs.

Environmental Management in the Upstream Value Chains

BASF is committed to environmental protection across the entire value chains and seeks to reduce impacts associated with emissions to air and water and with waste. For the upstream value chains, the procurement organization has established guidelines within a global risk-based management system that define how environmental due diligence processes are implemented. If specific incidents occur in this context, the relevant management processes are activated.

BASF expects suppliers to comply with internationally recognized environmental standards. Suppliers are also expected to reduce waste and regular emissions to air and water and to prevent product spills during upstream processing. These expectations are set out in the globally applicable Supplier Code of Conduct.

Supplier management processes are intended to support compliance with these requirements. BASF reviews compliance with relevant criteria when selecting suppliers and evaluating supplier relationships. We arrange for third parties to evaluate suppliers with a high sustainability risk. Supplier evaluation is mainly performed as part of the chemical industry's Together for Sustainability (TfS) initiative. Depending on business requirements, BASF also conducts its own Responsible Care audits at selected contract manufacturers if material environmental-protection risks have been identified.

Downstream Value Chains and Customer Solutions

In the downstream value chains, BASF seeks to collaborate continuously with customers on the development of innovations and solutions designed to support their green transformation and contribute to sustainability. BASF offers products that can help customers reduce waste generation and regular emissions to air or water. Examples range from industrial process catalysts and fuel additives to precursors used in the production of flocculants for water treatment. Products that contribute to water protection are grouped under the TripleS sustainability contribution "water protection."

BASF has also established global management systems for the downstream value chains. Safe handling and application of chemical raw materials and products are addressed through product and transportation safety management. BASF regards product stewardship as an integral part of all business processes, a key element of risk management and a central pillar of its commitment to Responsible Care®. The company aims to continuously minimize negative impacts on people and the environment and to improve the safety and sustainability of its products.

Before products are placed on the market, they undergo tests and evaluations depending on legal requirements and their application profiles. These assessments are used to identify potential hazard characteristics and health and environmental risks at an early stage. Based on the results, BASF

develops precautionary and protective measures and recommendations for safe handling, from production through transportation, use and disposal.

Conclusion

BASF applies a comprehensive and value-chain-based approach to managing toxic emissions and waste. Across its own operations and its upstream and downstream value chains, BASF seeks to prevent pollution, reduce emissions and waste, use resources efficiently, and protect air, water and soil to continuously improve its environmental performance.

The company builds on an integrated framework that combines Group-wide governance, operational controls, preventive safety measures, continuous monitoring, audit and certification programs, supplier due diligence, product stewardship, and value-chain collaboration.

The Responsible Care Management System provides the central management framework in our own operations. Globally binding environmental standards define expectations for emissions, water protection, waste management, process safety and transportation safety. Audit and certification programs, such as Responsible Care and ISO 14001 audits, as well as incident monitoring and corrective-action tracking provide mechanisms for oversight and continuous improvement.

Combined with investments in process innovation, resource efficiency, water protection and operational excellence, these measures support effective environmental risk management and demonstrate BASF’s commitment to sustainable chemical production and long-term value creation for stakeholders.