

**kemira**

**SUSTAINABILITY REPORT**

- Our Management Approach
- Climate Action and Nature Stewardship
- Resource Use and Circular Economy
- Social Responsibility
- Responsible Business Practices
- The Organization and its Reporting Practices
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# Sustainability Report 2023



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## Introduction

Sustainability is the key driver of our strategy and a clear requirement for our long-term success. We approach sustainability holistically and our fundament in this work is based on robust, responsible business practices. We take into consideration all aspects of sustainability; environmental, social and economic. In our approach to sustainability work we choose our most material topics and create internal focus areas and programs around those. Materiality is defined through a double-materiality assessment process in cooperation with our stakeholders, which aims to identify our most important impacts, risks and opportunities. Our work is guided by the United Nations Sustainable Development Goals (SDGs) and thus contributes to the global sustainability agenda. Our commitments to the Kemira Code of Conduct, internationally defined sustainability principles, and stakeholder expectations, as seen in our strategy, corporate policies and integrated management system, show that sustainability for us is not only about being a good corporate citizen, but actively engaging in new business opportunities.

## International Sustainability Principles, Commitments and Ratings

**The United Nations Global Compact** has been signed by Kemira Oyj since 2014 as our commitment to its 10 principles, to respect and promote human rights, implement decent work practices, reduce our environmental impact and combat corruption. Furthermore, Kemira works by the **United Nations Guiding Principles** which require companies to conduct due diligence to protect and respect human rights and remedy victims of business-related abuses.

**Responsible Care®** is a voluntary commitment by the global chemical industry to drive continuous improvement and achieve excellence in environmental, health and safety and security performance. Kemira was among the first companies in Finland to make the commitment to Responsible Care®. Through this framework, global chemical manufacturers commit to pursue an ethic of safe chemicals management and performance excellence worldwide. This helps to enhance public confidence and trust in the industry's

dedication to safely manage chemicals throughout their lifecycle while ensuring that chemistry can continue to contribute to a healthier environment, improved living standards, and a better quality of life for all. Kemira is committed to operate according to the principles of Responsible Care®.

In 2022, Kemira committed to the Science-Based Targets initiative (SBTi). Climate change is the biggest challenge facing humanity and with this commitment we make sure that our climate action work is fact-based and aligned with the expectations of our stakeholders and of those the scientific community. We also joined the Renewable Carbon Initiative, which demonstrates our commitment to accelerate the industry shift from fossil carbon to renewable carbon and raw materials. In 2023, Kemira committed to the UN Forward Faster initiative and the Water Resilience area of action. With this commitment, Kemira wants be a solutions provider to water scarcity, reduce water risks and increase water resilience in its own and its customers global value chains.



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Our stakeholders share an interest in our sustainability performance and thus Kemira is actively reporting to external rating offices to increase transparency around sustainability topics. The most important reporting platforms in 2023 have been the CDP Climate Change and CDP Water Security platforms, and as well as EcoVadis. The investor platforms ISS ESG, Sustainalytics and MSCI have evaluated Kemira's performance. In the majority of the survey results, Kemira is an average or above average performer compared to chemical industry peers.

Disclosure via the CDP increases transparency towards the investor community and value chain partners. In 2023, Kemira maintained the B score in the CDP Climate rankings. Kemira has been reporting to CDP Climate since 2010 and has received a score since 2012. We are committed to improving our management systems and increasing concrete action to mitigate climate change. Kemira received a B score in the CDP Water Security 2023 rankings. This is the third year that we received a score. Water Security reporting is of great importance to us since we have publicly committed to reach leadership level in this particular area by the end of 2025.

Disclosure via EcoVadis increases transparency toward value chain partners like suppliers and customers. In 2023, Kemira was awarded the Platinum rating by EcoVadis for the third year in a row. An improved score of 80 out of 100 (78/100 in 2022) placed Kemira among the top 1% of companies in the world. This shows our commitment to our value chain partners to increase transparency, keep sustainability high on the agenda and set an example for responsible corporate practices.

In 2023, MSCI also improved Kemira's rating to AAA, which places us amongst the top 5% of companies worldwide.



KEMIRA RATINGS ARE ABOVE OR EQUAL TO THE CHEMICAL INDUSTRY AVERAGES.



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Materiality and Stakeholder Engagement

IMPACTS, RISKS AND OPPORTUNITIES

The most significant environmental, social and governance related impacts, risks and opportunities are summarized below. A more detailed description of our business model and impacts can be found in our [Annual Review](#), [Board of Directors Review](#), and in the materiality section of this report.

Environmental impacts, risks and opportunities

Topics of highest materiality relate to water resources, resource use and circular economy, climate change, and biodiversity and ecosystems.

Our positive impacts come from water and wastewater management solutions, our strategic focus on renewable and recycled raw materials that we use to produce our products, and through the removal of hazardous substances.

Further opportunities also lie in increasing our positive water impacts and helping our customers become more sustainable through renewable, recycled and biodegradable products. In addition, improving our customers resource efficiency, for example through the use of water, raw materials, or energy, through our solutions is a major opportunity. Increasing our customers' circularity, which means recovering customers' resources or adding beneficial end-properties to products, is also considered an opportunity.

Negative impacts mainly relate to our upstream value chain, and those include our Scope 3 emissions and the resource intensity of our operations, e.g. the need for raw materials and water or caused pollution in the value chain. Main risks relate to the availability and price of renewable materials, the

challenge of substituting materials, energy price volatility, or disruptions caused by extreme weather conditions.

Social impacts, risks and opportunities

Topics of the highest materiality are the working conditions of our own and our value chain workforce, highlighting specifically health and safety, well-being, and employment security topics. Also the safety of consumers and end-users is highlighted.

Our main positive impacts relate to the application of leading health and safety standards and to the contribution of clean and safe products for end-users. Positioning ourselves as an attractive and responsible employer also presents a major opportunity.

Identified negative impacts include possible health and safety risks related to employees and value chain workers, and other human rights issues such as non-compliance with responsible business practices in our upstream value chain.

Governance impacts, risks and opportunities

Topics of the highest materiality include supplier management, corporate culture and political engagement.

Our positive impacts relate to the economic impacts we have through generating revenue from our solutions for industrial uses in the pulp and paper, water treatment, energy and mining industries. We have a direct economic impact on suppliers and service providers through the payments we make for purchased goods and services, to employees through compensation and benefits, to capital providers through dividends and interest payments, to the public sector through taxes, and to society through local community projects, sponsorship and donations.

Our main opportunity is to preserve our good reputation and develop further our responsible business practices. Unethical business behavior could impact Kemira's reputation and thus financial position negatively.

STAKEHOLDER EXPECTATIONS

Our key stakeholders include our customers, shareholders, lenders, employees and suppliers. Other relevant stakeholder groups include contractors, authorities and legislators, competitors, unions and trade associations, research and academia, media, local communities and neighbours where Kemira operates, decision makers, opinion leaders, NGOs, governments, insurance partners and others.

- A significant share of our investors practice ESG Investing (Environmental, Social, and Governance). These ESG investor signatories represent ~22% of the ownership of Kemira shares (20% in 2022).
- Many of our customers are sustainability leaders in their respective industrial sectors. Kemira plays a role in their value chains, and we are expected to demonstrate the same strong commitment to sustainable business as our customers.
- Our employees see sustainable business conduct as an important factor behind their engagement with Kemira, according to our employee surveys.

Our approach to stakeholder engagement includes activities ranging from information sharing to active dialogue and collaboration on issues of mutual interest. We regularly review our stakeholders' expectations and potential concerns. The latest materiality assessment, which was a double-materiality assessment, was completed in 2023.

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Due to their effects or potential effects on Kemira's ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements (including ISO Standards), Kemira has determined:

- the interested parties that are relevant to its business and Management System.
- the requirements of these relevant interested parties.
- the risks and opportunities of these relevant interested parties.
- the response in place and the improvement plan when needed.

Kemira monitors and reviews information about the relevant interested parties and their specific requirements annually.

STAKEHOLDER ENGAGEMENT

List of stakeholder groups	Identifying and selecting stakeholders	Approach to stakeholder engagement	Key topics and concerns raised	Kemira's response
	Why is this stakeholder important to us as a company?	How do we normally engage with this stakeholder?	What are their key concerns? 3 year horizon	What are our key mechanisms that help us address these concerns?
Customers	<ul style="list-style-type: none"><li>• Our customers are Kemira's main source of value creation.</li><li>• Our customers' expectations and needs drive our product portfolio and offerings.</li></ul>	<ul style="list-style-type: none"><li>• Direct customer contacts.</li><li>• Customer webinars, events and newsletters.</li><li>• Customer satisfaction measures.</li><li>• Key drivers in customer satisfaction are the technical service, speed and proactivity, as well as our ability to offer new and sustainable solutions.</li></ul>	<ul style="list-style-type: none"><li>• Communication to customers about sustainability of products and Kemira's supply chain.</li><li>• Transparency and reporting of sustainability efforts: performance and targets (incl. data collection and management), traceability of products, product environmental data.</li><li>• Offer support to customers to become more sustainable, for example through the innovative products and services, circular end properties and partnerships</li><li>• Reliable production flow.</li><li>• Value beyond the tangible products e.g., services and digital solutions.</li></ul>	<ul style="list-style-type: none"><li>• R&amp;D project portfolio management through stage gate process and sustainability checks.</li><li>• Sustainable development in Product Development (e.g., use of circular and renewable solutions in product portfolio).</li><li>• Product lifecycle management for all aspects of product safety.</li><li>• Improve understanding of customer needs beyond current offerings.</li><li>• Sustainability performance data, like Product Carbon Footprints, submitted on request. Certificates to prove product sustainability.</li><li>• Systematic quality assurance processes (ISO 9001).</li></ul>
Shareholders and lenders	<ul style="list-style-type: none"><li>• Share of our value creation through dividends and interest payments.</li><li>• Expectations for return on investment, good corporate governance practices and sustainability performance.</li></ul>	<ul style="list-style-type: none"><li>• Regulatory financial communications: financial reporting and stock exchange communication.</li><li>• Regular events like roadshows, conference calls and one-to-one meetings.</li></ul>	<ul style="list-style-type: none"><li>• Overall management approach to sustainability issues - sustainability strategy and concrete measures and efforts supporting the agenda (such as science-based targets, transparency in reporting, transforming business portfolio).</li><li>• Sustainable profitable growth and long-term returns.</li><li>• Governance (e.g., diversity and inclusion).</li><li>• Controversy management.</li></ul>	<ul style="list-style-type: none"><li>• Transparent and regular reporting and verified disclosure according to the GRI standards.</li><li>• Participation in external reporting platforms like CDP Climate Change and CDP Water Security questionnaires.</li><li>• Responding to rating company and investor questionnaires.</li></ul>

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Employees	<ul style="list-style-type: none"><li>Our employees' engagement, safety and well-being, integrity and competencies impact our value creation, operational and sustainability performance.</li></ul>	<ul style="list-style-type: none"><li>Performance management and development process.</li><li>Regular Town hall meetings globally.</li><li>Co-operation with employee representatives.</li><li>Continuous listening and employee feedback.</li><li>Ethics and Compliance hotline and training.</li><li>Local well-being programs in all regions.</li></ul>	<ul style="list-style-type: none"><li>Understanding Kemira's sustainability strategy and future direction, linking those to employees' work.</li><li>Clear and concrete proof of actions in the sustainability agenda and long-term targets setting, especially in mitigating climate change through greenhouse gas reductions (targets, progress, KPIs).</li><li>Ways of developing and maintaining competences for the future and mitigating cost increases (inflation, energy scarcity).</li><li>Product innovation.</li><li>Company and management diversity.</li><li>Health and safety (incl. well-being; mental health).</li></ul>	<ul style="list-style-type: none"><li>Strategy and purpose communication and action planning.</li><li>Corporate sustainability programs.</li><li>Performance and development discussions.</li><li>Future leadership principles implementation.</li><li>Systematic competence development.</li><li>Team engagements on sustainability.</li><li>Rewarding and recognition.</li><li>Compensation management.</li></ul>
Suppliers	<ul style="list-style-type: none"><li>Share of our value creation through payments for goods and services.</li><li>Suppliers' sustainability performance may impact our operational efficiency and business risks.</li></ul>	<ul style="list-style-type: none"><li>Working closely with key suppliers to help them meet our performance and product expectations, and take corrective actions if needed, active supplier engagement.</li></ul>	<ul style="list-style-type: none"><li>Safety remains important.</li><li>Environmental impacts needs to be managed properly throughout the upstream value chain.</li><li>Labor and human rights issues.</li><li>Ethics in value chain.</li><li>Sustainable products and services.</li><li>Climate emissions in the value chain.</li></ul>	<ul style="list-style-type: none"><li>Suppliers are asked to commit to Kemira Code of Conduct for Business Partners.</li><li>Supplier sustainability assessments and audits performed.</li><li>Leading by example through high EcoVadis rating.</li><li>Supplier engagement relating to climate and other sustainability topics.</li><li>Sourcing sustainable raw materials.</li></ul>
Local communities	<ul style="list-style-type: none"><li>Share of our value creation in the form of tax payments and employment.</li><li>Safety and environmental performance may impact the acceptance of our local presence.</li></ul>	<ul style="list-style-type: none"><li>Dialogue and collaboration with local communities at major sites to ensure we understand and address their concerns.</li><li>Collaboration with schools and universities.</li></ul>	<ul style="list-style-type: none"><li>Exposure to safety and environmental risks.</li><li>Employment opportunities.</li></ul>	<ul style="list-style-type: none"><li>Environmental aspects and impacts and EHSQ risk assessments.</li><li>Regular and open dialogue with local communities (e.g. open-door days).</li></ul>
Regulatory bodies, trade associations, decision makers, NGOs and opinion leaders	<ul style="list-style-type: none"><li>These stakeholders have the capability to influence or make political decisions on legislation with an impact on our operations and business.</li></ul>	<ul style="list-style-type: none"><li>Memberships in industrial trade associations.</li><li>Subject-specific dialogue with regulatory bodies on national and regional level.</li></ul>	<ul style="list-style-type: none"><li>Sustainability transformation, alignment. with global goals e.g. for climate change and biodiversity.</li><li>Resource efficiency in operations.</li><li>Chemicals safety.</li><li>Environmental impact management and mitigation.</li></ul>	<ul style="list-style-type: none"><li>Actively participating in dialogue on EU directive proposals on sustainability and the chemical industry.</li><li>Participation in CEFIC.</li><li>Participation in the Chemical Industry Federation of Finland.</li></ul>

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DETERMINATION OF MATERIAL TOPICS

Kemira conducted a rigorous double-materiality assessment to identify the most important sustainability topics and align these with the business strategy, and to comply with the upcoming Corporate Sustainability Reporting Directive (CSRD). Kemira is preparing to become CSRD compliant during 2024 and the coming years.

The double-materiality assessment was used to identify, assess, and prioritize the environmental, social and governance-related sustainability impacts, risks, and opportunities of the business as well as create insight to steer action for future success by aligning business strategies, targets, and governance accordingly.

Kemira’s double-materiality assessment was conducted between June and November 2023. The assessment covered the entire Kemira value chain, including own activities as well as activities in the upstream and downstream value chain.

The assessment was coordinated by an external sustainability subject matter expert. The Kemira team participated actively through the entire process. Stakeholders were engaged through interviews and workshops. Key internal stakeholders were Business Segments, Supply Chain, Sourcing, Manufacturing, Product Lines, Commercials, Legal, Human Resources, Ethics, Compliance and Risk, Environmental, Health, Safety, Quality, (EHSQ), Corporate Sustainability, Finance, Business Control, Treasury and Corporate Strategy. From external stakeholders the focus was on customers and investors. Customer interviews were performed in both Business Segments (Pulp & Paper, Industry & Water), comprising five customer interviews in total, distributed evenly across regions. Two investors were interviewed. Interviews from the previous materiality assessment completed in the beginning of 2022 were also utilized, covering both customer and investor stakeholders.

- The methods used for the assessment were
- Desk studies based on Kemira internal materials (annual reports, strategy materials, assessments of environmental and human rights risks and impacts, surveys from customers and workforce) complemented by the identification of typical industry impacts, risks and opportunities through industry benchmarks.
  - Internal working sessions to discuss materiality analysis and potential impact.
  - Interviews with 26 internal experts and 7 external stakeholders.
  - Internal workshops to assess impact and the financial materiality of the sustainability topics.
  - The results were reviewed and validated with the relevant Kemira governance bodies.

The assessment criteria used included a 1-5 scoring range for both impact and financial materiality. The scoring is based on the more detailed estimate of severity and likelihood (actual or potential). The scale was minimal (1), informative (2), important (3), significant (4) and critical (5). This scale resembles the scale used in Kemira enterprise risk management process. The topics were considered for the entire value chain, including own operations, upstream and downstream, not limited to contractual relationships. Three different time horizons were considered, short-term (1 year), medium-term (1-5 years) and long-term (over 5 years). Medium-term was considered as a baseline in the assessment. For the impacts, risks and opportunities it was considered whether these would increase or decrease when viewed as either short- or long-term. During the upcoming years the double-materiality process is planned to be aligned and integrated into Kemira strategy- and enterprise risk management processes.

Impact materiality was scored for severity and likelihood, both positive and negative impacts were scored. The severity consisted of a qualitative assessment of scale, scope and irremediability of actual and potential impacts. Scoring 1 (very low) and 5 (very high). If impact was potential, a likelihood was assessed, scoring it from 1-5, 1 (very unlikely) and 5 (actual).

Financial materiality was scored for both the scale of potential impacts and their likelihood, considering both risks and opportunities. The size of the potential financial impact was scored from 1-5, 1 (very low) and 5 (very high). Likelihood was scored from 1-5, 1 (very unlikely) and 5 (actual).

- The assessment was performed in 6 phases:
1. Setting the ambition and designing the process
  2. Making hypothesis of potential topics
  3. Engaging stakeholders
  4. Deep-diving into impact and financial materiality
  5. Validating and finalizing the outcomes
  6. Integrating double-materiality in management practices



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**Setting the ambitions and designing the process:** The aim of this collaborative phase was to design a double-materiality assessment and stakeholder engagement process that fits with Kemira’s context. A kick-off meeting was organized to decide how to conduct the materiality assessment and to ensure that the necessary stakeholders would be available.

**Making hypotheses on potential topics:** The aim of this phase was to make a hypothesis on topics that are material or could become material across the value chain based on Kemira’s existing information and materials, as well as an external analysis of typically material industry topics. This allows for deep-diving into the topics with stakeholders, both internally and externally. The topics were chosen based on the ESRS standards topic division.

**Engaging stakeholders:** The aim of this phase was to engage stakeholders to provide further insight on their sustainability impacts, opportunities and risks. The results of the stakeholder engagement were analyzed to be utilized in the assessment of impact and financial materiality.

**Deep-dive to impact and financial materiality:** This intensive phase involved creating insight on and unpacking the impacts and financial materiality across the topics. This encompassed identifying and assessing (1) sustainability matters that concern the company’s actual or potential, positive or negative material impacts on people or the environment and (2) risks or opportunities that have a material influence on the company’s cash flows, development, performance, position, cost of capital or access to finance.

**Validate and finalize the outcomes:** In this phase, the findings were validated, and the materiality assessment was packaged in a well-documented and high-quality format which discloses not only the impacts, risks, and opportunities, but also the process. After validation was done the results were discussed and approved by the Management Board, during which also the threshold for materials topics was discussed and approved. Threshold will become visible in the financial year 2024 reporting.

**Integrating double-materiality into management practices:** The double-materiality assessment was Kemira's first of its kind, and during the upcoming years, fulfilling CSRD requirements, the organization plans to investigate how to connect the double-materiality assessment to risk and strategy processes. Further, the Kemira's sustainability framework and attached programs will be revised based on the double-materiality assessment results during 2024, and the target and KPI deck of organizational sustainability targets will also be reviewed. Further the mitigation of identified negative impacts and risks and taking advantage of the identified positive impacts and opportunities will be assessed.

Besides these steps, the assessment also decides on which topics are material enough to be reported in the upcoming CSRD reporting for the financial year 2024. Based on the double-materiality assessment results, a threshold will be decided on to narrow down to the most material topics to be reported under the new EU reporting regulation. The threshold for the financial year 2024 reporting will be decided during 2024 and reported in the first Kemira sustainability report prepared, according to the CSRD regulation and published in the beginning of 2025.

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MATERIALITY RESULTS

The double-materiality assessment results are visualized in the attached graph. The graph describes positive and negative impacts, risks and opportunities and the scoring of these. The main topics are based on the Corporate Sustainability Reporting Directive (CSRD) European Sustainability Reporting Standards (ESRS) methodology with the most significant environmental, social and governance topics.

Kemira's previous materiality assessment from the beginning of 2022 highlighted circularity, water and wastewater, climate change and safety as the most important topics to focus on. The new double-materiality assessment highlights similar topics, but new ones have also grown in importance.

For Kemira, water is still one of the most important topics. Considering Kemira's strategic focus on chemistry and digital services-based clean and safe water solutions for drinking and wastewater, this is well-aligned with our strategic ambitions. Resource use and circular economy also score very high, which is well-aligned with Kemira's strategy to grow in renewable and recycled solutions and to provide solutions that improve resource efficiency to our customer segments. Climate change also scores high since Kemira's use of materials and energy results in identified and value-chain-widely measured climate impacts. Thus Kemira has committed to the Science-Based Targets initiative in 2022 to mitigate climate impacts throughout the value chain.

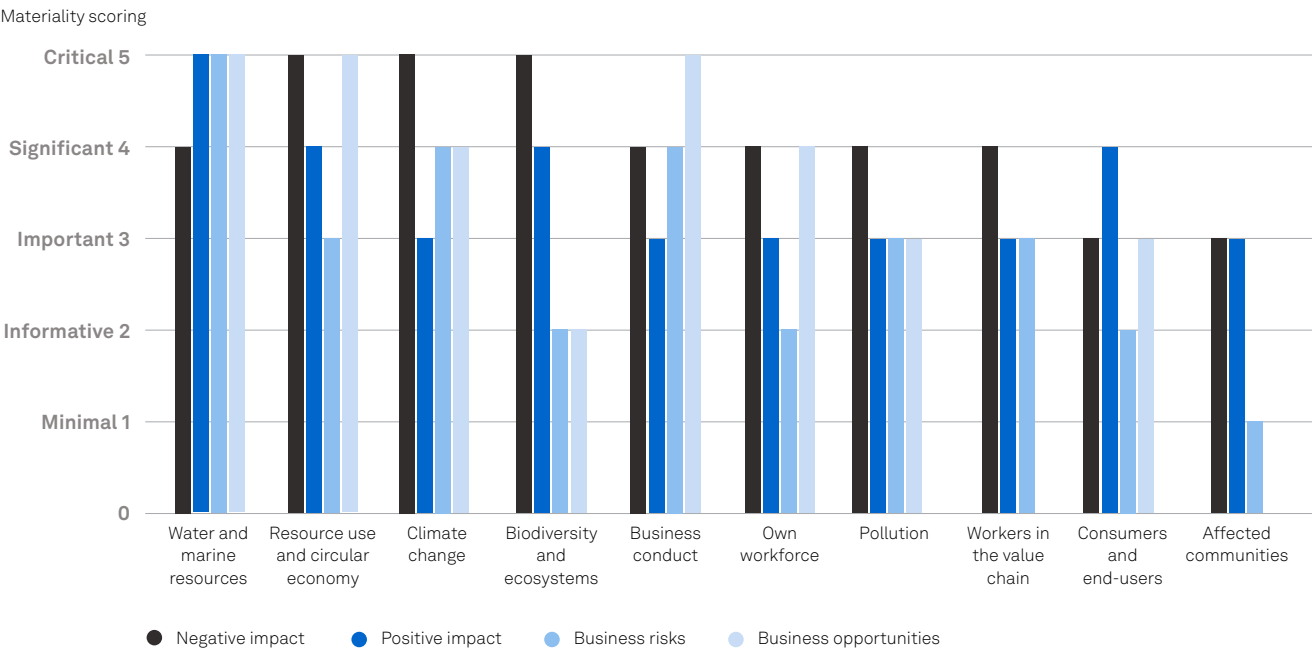
Biodiversity and ecosystems is not a new topic to Kemira, but the importance of the topic is growing as our maturity and understanding of the topic grows. Business conduct and

own workforce are important topics that Kemira has been focusing on already for years. Kemira is a global company with a wide range of stakeholders and a workforce of around 5,000 people, thus these topics become significant for Kemira.

The results reflect well Kemira's existing sustainability program, but also highlight topics that could be considered

to be emphasized more going forward. These are clearly topics where Kemira can have a significant impact towards which Kemira has developed already long-term targets. The result of the analysis reflects Kemira's business operations and strategic ambitions well. The results will contribute to a sustainability program update during 2024.

DOUBLE MATERIALITY SCORING  
NEGATIVE AND POSITIVE IMPACTS, BUSINESS RISKS AND OPPORTUNITIES



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Strategy, Governance and Policies

WHAT SUSTAINABILITY MEANS TO US

Sustainability is a key driver of our strategy and a requirement for our long-term success. It is present in how we manage our own operations and create value for our customers. We also expect our partners to commit to sustainable operations. We want to use our chemistry expertise to find solutions and contribute to a sustainable and prosperous society.

Sustainability is a broad topic and work is done throughout the organization to improve the company sustainability performance and become better every day, as we state in our purpose. Everything starts with responsible business practices, which are the fundament for all sustainability work. Through the double-materiality process, and mirroring with our strategic ambitions, we choose focus areas that are the spearheads of Kemira sustainability and build the corporate sustainability program around those. We also link these spearheads to the most relevant Sustainable Development Goals, to connect our work with global sustainability ambitions. Ambitious targets and KPIs have been created to support our work and set the level we want to achieve.

Chemistry with a purpose. Better every day.											
PURPOSE AND STRATEGY		Become the leading provider of sustainable chemical solutions for water-intensive industries.									
		Our own sustainability fundamentals and strategy			What we can do for our customers		Our own product portfolio				
FOCUS AREAS		<div><div>8 DECENT WORK AND ECONOMIC GROWTH</div></div> <div><b>Safety</b></div> <div>TRIF 1.5 by the end of 2025 and 1.1 by the end of 2030</div>		<div><div>8 DECENT WORK AND ECONOMIC GROWTH</div></div> <div><b>People</b></div> <div>Inclusion index industry top 10% by the end of 2025</div>		<div><div>6 CLEAN WATER AND SANITATION</div></div> <div><b>Water</b></div> <div>Water Management target to Leadership level by the end of 2025 (CDP)</div>		<div><div>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</div></div> <div><b>Circularity</b></div> <div>Disposed production waste intensity reduction by 15% by the end of 2030</div> <div>Renewable solutions revenue growth to 500 M€ by the end of 2030</div>		<div><div>13 CLIMATE ACTION</div></div> <div><b>Climate</b></div> <div>Scope 1&amp;2 emissions reduction by 50% by the end of 2030</div>	
KPIs AND TARGETS											
PROGRAMS		<b>Safety</b>		<b>Diversity, Equity &amp; Inclusion</b>		<b>Nature stewardship</b>		<b>Climate action</b>			
						<b>Positive impact portfolio, Strategic priorities</b>					
RESPONSIBLE BUSINESS PRACTICES		Health & Safety	Employees	Kemira Values	Water & Wastewater	Materials	GHG emissions	Digital & analytics technology			
		Critical incident risk management		Diversity, Equity & Inclusion	Pollution prevention	Leadership Principles	Circular economy	Energy	Waste		
		Supporting customers to become more sustainable			Human rights	Water handprint	Carbon handprint	R&D			
					Environmental compliance	Product design for sustainability	Innovation & Partnerships				
		Product stewardship		Sustainable supply chain & sourcing		Biodiversity		Business ethics			

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SDGS, FOCUS AREAS AND PERFORMANCE INDICATORS

Our sustainability priorities are based on the most material impacts of our business model, on the increasing expectations of our customers, investors and other stakeholders, and on our commitment to the Kemira Code of Conduct and internationally defined sustainability principles.

The global shared ambition to build a sustainable world is articulated in the UN Sustainable Development Goals (SDGs). These offer us a common framework through which to evaluate how Kemira currently contributes to these goals and how we can further develop to make an even bigger impact in the future. We have chosen four SDGs to focus on. SDG number 8; Decent Work and Economic Growth, represents our focus on social and economic sustainability. Three of the SDGs describe our focus on important environmental sustainability topics, these are SDG number 6; Clean Water and Sanitation, SDG number 12; Responsible Consumption and Production and SDG number 13; Climate Action. The chosen SDGs best reflect our most material topics.

We have chosen to build our corporate sustainability program around the prioritization of five sustainability themes that best match our businesses and customer segments. These are also the five themes where we can make the biggest difference: by reducing our negative impacts and increasing our positive impacts, by mitigating our main risks and taking advantage of our biggest opportunities. In this way we can contribute the most to achieving the UN SDGs. These five themes are: Safety, People, Circularity, Water and Climate.

TOP MATERIAL TOPICS ALLOCATED TO MANAGEMENT BOARD MEMBERS

Our priority focus areas	Top material topics identified in the double-materiality assessment (ESRS standards)	Management Board Champion
SAFETY	<ul style="list-style-type: none"><li>Working conditions for own workforce.</li><li>Working conditions for workers in the value chain.</li><li>Substances of very high concern.</li><li>Personal safety of consumers and-/or end-users.</li></ul>	EVP, Operational Excellence & Sustainability
PEOPLE	<ul style="list-style-type: none"><li>Working conditions for own workforce.</li><li>Equal treatment and opportunities for all.</li><li>Work-life balance.</li><li>Corporate culture.</li></ul>	EVP, Human Resources
WATER	<ul style="list-style-type: none"><li>Water consumption.</li><li>Water withdrawals.</li><li>Water discharges.</li><li>Water discharges in the ocean.</li></ul>	Segment Presidents EVP, Operational Excellence & Sustainability Chief Technology Officer
CIRCULARITY	<ul style="list-style-type: none"><li>Resource inflows, including resource use.</li><li>Resource outflows related to products and services.</li><li>Waste.</li></ul>	Segment Presidents EVP, Operational Excellence & Sustainability Chief Technology Officer
CLIMATE	<ul style="list-style-type: none"><li>Climate change adaptation.</li><li>Climate change mitigation.</li><li>Energy.</li></ul>	Segment Presidents EVP, Operational Excellence & Sustainability Chief Technology Officer
OTHER	<ul style="list-style-type: none"><li>Political engagement.</li><li>Management of relationships with suppliers including payment practices.</li><li>Direct impact drivers of biodiversity loss.</li><li>Impacts and dependencies on ecosystem services.</li></ul>	Chief Communications Officer* EVP, Operational Excellence & Sustainability

\* Not a member of Management Board, but responsible for Political engagement and reports directly to CEO.

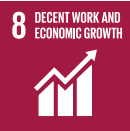
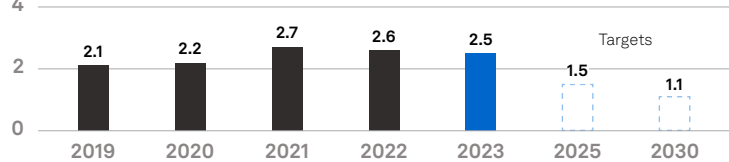
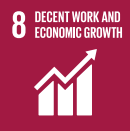
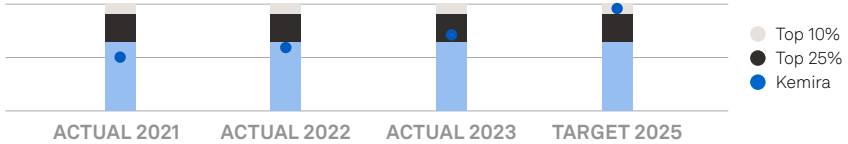

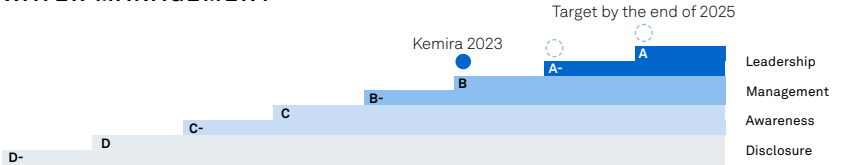

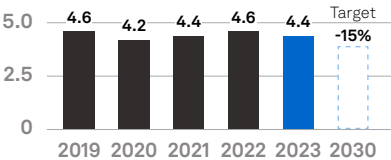
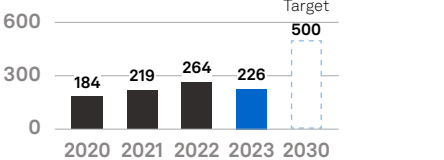

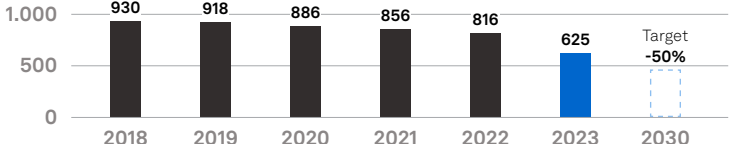


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FOCUS AREAS AND PERFORMANCE INDICATORS

SDG	FOCUS AREA	KPIS AND TARGETS	PERFORMANCE
	<b>SAFETY</b> We prove that a safe business is a sustainable business. Safety of people, products, processes and environment is the foundation of everything we do.	<b>KPI:</b> TRIF = total recordable injury frequency per million hours, covers both Kemira employees and contractors working at Kemira owned and customer sites. <b>Target:</b> TRIF 1.5 by 2025 and 1.1 by the end of 2030.	<b>TRIF</b> 
	<b>PEOPLE</b> Our employees drive our sustainability transformation. A diverse and inclusive culture enables us all to bring our best selves to work every day.	<b>KPI:</b> Kemira Inclusion index to Glint top 10% cross industry norm. <b>Target:</b> Reach Glint top 10% cross industry norm by the end of 2025. In 2023, Kemira reached top 25% and gap to top 10% cross industry is 2 points.	<b>INCLUSION INDEX</b> 
	<b>WATER</b> We believe in clean water and sanitation for all. Our actions set the example for world-class water management.	<b>KPI:</b> Improve water management. <b>Target:</b> Improve water management to Leadership level based on CDP Water Security scoring methodology by the end of 2025.	<b>WATER MANAGEMENT</b> 
	<b>CIRCULARITY</b> We set sustainability at the center of every design. Our sustainable chemistry and digital solutions accelerate the circular- and bio-economies.	<b>KPI:</b> Disposed production waste intensity. <b>Target:</b> Reduce disposed production waste intensity by 15% by the end of 2030. Baseline is 2019 at 4.6 metric tons of waste per thousand metric tons of production and target is 3.9 by the end of 2030. <b>KPI:</b> Renewable solutions revenue <b>Target:</b> Revenue from renewable solutions >500 million EUR by the end of 2030. 2020* baseline is 184 million EUR.	<b>WASTE INTENSITY</b>  <b>RENEWABLE SOLUTIONS REVENUE</b> 
	<b>CLIMATE</b> We reduce our climate impact throughout our value chain. Clean energy and processes will support our ambition to be carbon neutral by the end of 2045.	<b>KPI:</b> Scopes 1 and 2 emissions. <b>Target:</b> -50% from 2018 Scope 1 and Scope 2 emissions by the end of 2030. 2018 baseline 930 kt CO <sub>2</sub> equivalents (CO <sub>2</sub> e) <b>Ambition:</b> to become carbon neutral in Scope 1 and 2 emissions by the end of 2045. Kemira committed to the Science-Based Targets initiatives in 2022 and the target are sent for validation in June of 2024.	<b>GHG EMISSIONS</b> 

\* Re-baselining of renewable solutions revenue target done due to improvement of data and update of calculation methodology.

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GOVERNANCE

The Shareholders’ General Meeting, the Board of Directors and the Managing Director (President & CEO) are responsible for Kemira’s management and operations. Their tasks are defined based on the Finnish Companies Act and Kemira’s Articles of Association. The President & CEO is assisted by the Management Board, which is a non-statutory management body. More detailed information on Kemira's governance can be found in the [Corporate Governance Statement](#).

The Board of Directors’ key duties include establishing Kemira’s long-term goals and the main strategies for achieving them, and are described in detail in the [Corporate Governance Statement](#). Sustainability being a key driver of Kemira’s strategy also brings many sustainability-related topics to the Board of Directors’ decision making, with the Board of Directors being responsible for approving Kemira's values, the sustainability targets and the Sustainability Report. The Board of Directors has appointed two Committees to assist in fulfilling its responsibilities: 1) The Audit Committee assists in oversight responsibilities for e.g., non-financial (including economic, environmental and social topics) reporting process. 2) The Personnel and Remuneration Committee assists in preparation of matters related to for example compensation linked with sustainability KPI elements.

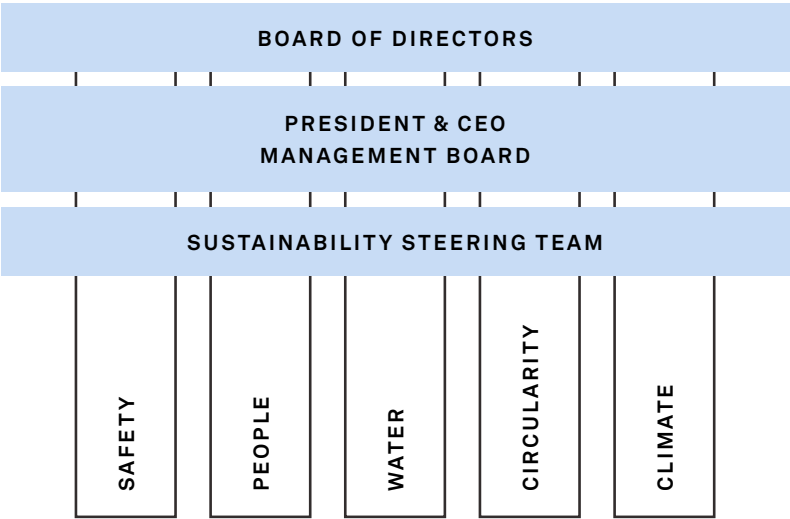
The President & CEO is responsible for managing and developing Kemira in accordance with the instructions and guidance given by the Board of Directors and for implementing its decisions. The President & CEO reports to the Board of Directors on financial and non-financial matters, the business environment, and other significant topics, including environmental and social topics.

The Management Board is an operative management body that is responsible for securing the long-term strategic development of the company. Kemira measures progress in the sustainability priority areas through group-level key performance indicators (KPI) and targets that are approved by the Board of Directors. Responsibility for individual corporate sustainability targets is shared between the members of the Management Board.

The Sustainability Steering Team is a senior management level team under the Management Board, which steers a variety of sustainability-linked programs, that are dedicated to the most material sustainability topics of the corporate sustainability program. The main tasks of the Sustainability Steering Team is to prepare proposals to the Management Board about developing Kemira corporate sustainability strategy, vision and ambition, to steer chosen corporate sustainability-related programs, which includes follow-up of near- and long-term plans and roadmaps, and to report annually on the development of corporate sustainability

to the Management Board and Board of Directors. The Sustainability Steering Team ensures the development, implementation and follow-up of sustainability as part of daily business operations. Active programs steered by the Sustainability Steering Team are Climate Action (climate target), Nature Stewardship (water and waste targets, biodiversity development), Positive Impact Portfolio (supporting the renewable solutions revenue target) and Diversity, Equity & Inclusion (inclusion index target). The Safety program and Strategic Priorities are steered by the Management Board.

The Director of Corporate Sustainability is responsible for the corporate-level sustainability program and its development, for coordinating related reporting activities, assisting the organization and its leadership to stay ahead of most recent sustainability-related trends, supporting the company to identify and build relevant competences and ensuring that relevant management processes relating to material corporate sustainability topics are being developed and implemented as part of Kemira strategy and integrated management system. The Director, Corporate Sustainability also facilitates the collaboration of the Sustainability Steering Team.



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**Remuneration and sustainability:** To keep sustainability transformation high on the agenda and drive profitable growth, the key priorities are reflected in the incentive programs. Kemira has both a long- and short-term incentive plan for selected individuals of the company management. Safety has been a KPI of the short-term incentive plan for several years. Renewable solutions revenue and the climate target for Scope 1 and 2 have been included in the long-term incentive plan since the beginning of 2023.

The aim of the long-term incentive plan is to combine the objectives of the shareholders and the persons participating in the plan to increase the value of Kemira, to commit the participants to Kemira, and to offer them a competitive reward plan. In 2024, Kemira will continue to execute its growth strategy.

In addition to financial targets, sustainability targets are incorporated in the two latest performance periods (2023–2025 and 2024–2026) of the long-term incentive program, and the short-term incentive program 2024 includes a new target on strategic revenue growth. More information on remuneration can be found in the [Remuneration Report](#).

Diversity of governance bodies is reported in the Diversity, Equal Opportunity and Inclusion section in the Sustainability Report and in the [Corporate Governance Statement](#).

POLICIES

The Code of Conduct is the foundation for doing business in the right way and functions as an umbrella commitment for the entire company. The Kemira Code of Conduct is approved by the Auditing Committee of the Board of Directors. Global policies are in many cases extensions of the Code of Conduct commitments, where we elaborate further on those and make them more understandable for the organization and stakeholders. All policies are approved by the Management Board and have a dedicated owner. Policies are prepared in respective functions within the company.

The segments are guided by policies and standards defined by global functions. Global functions are responsible for developing policies, standards and tools related to their respective functional areas on a global basis. Such policies and processes are complied with throughout the company. Functions also have representatives in each geographic region. Regional organizations ensure that the global policies and standards are implemented and adhered to in the regions. They are also responsible for supporting the business locally in the region.

The policy commitments become visible in the organization through e.g., strategic target setting, like the sustainability-related targets covering safety, people, water, circularity and climate topics. The enterprise strategy and risk management processes identify risks and opportunities in relation to the policy statements and specific impact assessments are made for example for human rights issues. Our commitments are also visible through our management processes in terms of for example, our carbon pricing and sustainability criteria for CapEx investments, the sustainability due diligence assessment in mergers and acquisitions documents, sustainable sourcing programs, product safety work and the research and development stage gate process with sustainability checkpoints. Besides these, we create task groups for specific topics, like the focus area-based sustainability programs or the Human Rights Council, which is a cross-functional group developing and discussing Kemira human rights practices.

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Kemira maintains internal control systems to ensure the effectiveness and efficiency of its operations, including the reliability of financial and operational reporting and compliance with the applicable regulations, policies and practices. More details on this can be found in the [Corporate Governance Statement](#).

**Grievance mechanisms:** It is our intention to promote and maintain the best possible relationship with our stakeholders and we regard it as essential to provide effective procedures for the rapid resolution of differences and disagreements. Kemira offers various channels to report grievances and is committed to dealing with such reports promptly and fairly. Some of the channels and mechanisms are local, varying from country to country, some are regional or global. Examples of these mechanisms are:

- Employee-related complaints and appeal procedures vary from country to country depending on the local employment law and practices, such as the structure of employee representation through unions and collective bargaining agreements. Kemira has employees in nearly 40 countries, across which a wide variety of mechanisms are in place.
- Our global Ethics and Compliance hotline (whistleblower mechanism) which is available both internally and externally for our business partners.
- Global customer service and customer complaint process directed to customers.
- Internal SNOW portal for reporting GDPR-related breaches.
- Cooperation with local authorities in cases of breaches of environmental permits.
- Regional and country-specific grievance tools.
- Global vendor complaint system.

**Precautionary principle:** In Kemira we have different mechanisms, processes and procedures to identify, prevent and mitigate negative impacts.

Precautionary actions:

- Existing regulations create the basis for this principle (e.g., within the EU Green Deal soil regulations and SEVESO and other comparable regulations in other regions where we operate).
- Risk assessment processes comprise basic precautionary actions across all Kemira activities.
- The principle in question is applied to site-level projects, for example by utilizing Best Available Technology principle and Capital Project Management guidance. Regarding prevention we pursue the identification of critical equipment and active precautionary maintenance among others.

- In addition to other guidance, we also have sustainability related assessments and carbon price for capital expenditure projects.
- The principle is used in the New Product Development process where product properties are secured, product sustainability is considered from many different angles, and chemical safety is evaluated.
- In people safety, the principle is taken into action through operative risk assessments, safety standards and instructions. Risk assessment of chemical exposure, needed protective measures, and medical evaluations of personnel are also concrete measures.
- Concerning the environment, the principle is most visible through manufacturing sites' guidance on spill prevention and other process precautionary measures.
- Internal and external audits and authority controls ensure that the precautionary measures are in place.

Mitigation:

- Corporate risk assessment processes identify high/medium risk items to be mitigated and controlled via the risk assessment review process.
- Emergency response and crisis management processes are first response activities in case of incident and accidents, but also in case of business interruptions. To ensure continuous improvements, we conduct a root cause analysis to identify improvement and corrective actions.
- Liability site management is one critical mitigation measure for soil contamination in both existing and closed manufacturing sites.



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			Level of approval and publicity				
Key policies	Policy owner	Description of main policy commitments	Board of Directors	Management Board	Publicly available	For internal use	Application to company activities and communication
Code of Conduct	Group General Counsel	Kemira Group Code of Conduct is the foundation for doing business the right way. The Code reflects Kemira's values and the principles set out in the OECD Guidelines for Multinational Enterprises. The Code of Conduct includes 19 statements covering commitments to work community, customers, suppliers, markets, society and investors. Commitments relate to economic, environmental, people and human rights topics. More information on the specific human rights commitments can be found in the human rights section in the Sustainability Report. Available in 19 languages.	x		x		1) 2) 3)
Code of Conduct for Business Partners	Head of Global Sourcing	Document reflects Kemira's values and the principles set out in the Kemira Group Code of Conduct. Available in 19 languages.		x	x		2) 7)
Product stewardship policy	Head of Product Stewardship and Regulatory Affairs	Compliance with chemical regulatory requirements, to assess human health and safety and environmental protection aspects, identify and manage chemical risks and to share information about the above mentioned themes. To protect human health and safety with different measures. Main stakeholders considered are employees and customers. Compliance with laws and regulations regarding exporting and importing of products; compliance with international trade sanctions.		x		x	1) 4)
Trade Compliance policy							
Sustainability Policy	EVP, Operational Excellence & Sustainability	Safe working conditions, preventing incidents, respecting human rights in operations, diversity, equity and inclusion, protecting the environment, enabling circular economy and protecting biodiversity. Main stakeholders are our employees and value chain partners. Available in several languages.		x	x		1) 3)
Sourcing and Procurement Policy	EVP, Operational Excellence & Sustainability	All activities being aligned with Kemira CoC, company values and sustainability goals, key supplier selection and supplier risk assessment criteria including sustainability performance both in social and environmental topics. Social sustainability performance expectations mainly regarding our upstream value chain partners.		x		x	1) 4)
Logistics and Transportation Policy	Head of Global Supply Chain Management	Transportation and chemical safety, minimization of environmental impacts on transportation operations and sustainable logistics. To provide safe working conditions in supply chain and reduce environmental impacts. Main stakeholders are suppliers, employees and customers.		x		x	1) 5)
Recruitment Policy	EVP, Human Resources	In all recruitments respect of diversity, equal opportunity, and treatment regardless of race, color, gender, sexual orientation, creed, political persuasion, age, social status, origin or any status protected under the laws, respect of fundamental human rights and no use of any form of forced or child labor. Particular attention is given to own employees and subjects of recruitment, which are also the main stakeholders.		x		x	1) 6)
Global Competition Law Compliance Policy	Group General Counsel	Fair and ethical competition, within framework of applicable laws. No anti-competitive activities. Zero tolerance towards bribery and corruption.		x		x	1) 4)
Gifts, Entertainment and Anti-Bribery Policy							
Tax Policy	Chief Finance Officer	Conducting our business in compliance with all applicable tax, customs and transfer pricing laws and regulations and according to high ethical standards.		x		x	1) 4)
Sponsorship and Donation Policy	Chief Communications Officer	Securing that our sponsorship activities are aligned with Kemira strategy. Supporting initiatives to innovate sustainable solutions that create a better everyday for us all and support initiatives for building good relationship with communities in which we operate.		x		x	1) 4)

1) This policy applies to all organization activities.

2) This policy applies to business partners.

3) Mandatory training for all employees.

4) Mandatory training for selected employees.

5) Optional training for selected employees.

6) Training for employees responsible of recruitment and for hiring managers.

7) Mandatory approval of business partners.

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Integrated Management System

Globally, we aim to bring together all of our operations under the Kemira Integrated Management System. The Kemira Integrated Management System defines the way our organization is working through the set of policies, standards, procedures and processes. It also defines the requirements and accountabilities at each level of the organization.

Conformance to the Integrated Management System and compliance to regulatory requirements are ensured by regularly monitoring the performance indicators and by conducting internal and external audits and management reviews. In 2023, all internal and external audits were completed fully and in a timely manner.

The management reviews are performed at all levels of the organization, from manufacturing to regional management and the Management Board.

Kemira has a principle that all operations under our Integrated Management System meet the international standards ISO 9001:2015 for Quality, ISO 14001:2015 for Environment, and ISO 45001:2018 for Occupational Health and Safety. All three R&D sites (Atlanta, Espoo and Shanghai) are ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018 certified. Our share of certified sites has improved from 90% to 94% from 2022, due to three manufacturing sites receiving their first ISO certification. Kemira's Energy Management System is certified according to ISO 50001:2018 for selected EMEA sites. Our Integrated Management System is externally audited through a three-year audit cycle. In 2023, 73 internal and external audits (Management Systems, Process Safety, Energy, Transportation, EHS Legal Compliance, Sustainability) were conducted, including manufacturing sites, major office locations and R&D centers.

NUMBER OF LOCATIONS (MANUFACTURING SITES, MAIN OFFICES AND R&D) CERTIFIED IN 2023

	EMEA	Americas	APAC	Total*
ISO 9001:2015	36	21	10	67 (94%)
ISO 14001:2015	36	21	10	67 (94%)
ISO 45001:2018	36	21	10	67 (94%)
ISO 50001:2018**	6			

\*Kemira has a total of 71 locations including: 60 manufacturing sites, 3 main offices and 3 R&D centers.  
\*\*ISO 50001 certification is only for selected EMEA sites.

INTEGRATED MANAGEMENT SYSTEM



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KEMIRA'S MANAGEMENT APPROACH TO SUSTAINABILITY (NON-FINANCIAL) MATTERS

	Environmental and climate-related matters	Social and employment-related matters	Respect for human rights	Anti-corruption and bribery
International frameworks covering all topics	United Nations Sustainable Development Goals (SDGs) United Nations Global Compact United Nations Guiding Principles on Business and Human Rights Responsible Care®			
Code of conduct	Code of Conduct Code of Conduct for Business Partners			
Policies and standards	Sustainability policy EHSQ standards and processes Logistics and transportation policy and processes Sourcing and procurement policy			<ul style="list-style-type: none"><li>Global competition law compliance policy.</li><li>Gifts, entertainment and anti-bribery policy.</li><li>Trade compliance policy.</li><li>Investigation procedure.</li><li>Audit Committee Charter.</li></ul>
	<ul style="list-style-type: none"><li>Product stewardship policy.</li></ul>	<ul style="list-style-type: none"><li>Product stewardship policy.</li><li>Trade compliance policy.</li><li>Recruitment and compensation policy.</li><li>People and HR processes.</li><li>Sponsorship and Donation Policy</li></ul>	<ul style="list-style-type: none"><li>Recruitment and compensation policy.</li><li>Statement for slavery and human trafficking.</li><li>Statement on conflict minerals.</li><li>Investigation procedure.</li><li>Audit Committee charter.</li></ul>	
Hazards and Risks	<ul style="list-style-type: none"><li>GHG emissions (Scopes 1, 2 and 3), water withdrawal, disposed waste, and spills and chemical releases.</li><li>Climate change adaptation related operational risks throughout the value chain.</li><li>Non-compliance with legislation and regulations may result in fines, creating reputational and business risks.</li><li>Reputational or financial risk if products are not proven to be safe, guidance for safe use is not communicated or if employment and engagement are poorly managed.</li><li>Ability to meet new environmental expectations with products and services.</li><li>People related health and safety hazards and work related incidents, illnesses and well-being.</li><li>Competences related to chemical risks (physical and chemical), own work processes.</li><li>Risk of not being able to attract talented people to the company.</li></ul>		<ul style="list-style-type: none"><li>Potential violations of human and labor rights and unethical business practices can impact Kemira's reputation and thus financial position.</li><li>Main human rights risks relate to production and raw material sourcing of suppliers and supply chain partners, health and safety at own sites, and the impacts of utilizing fossil fuels.</li></ul>	<ul style="list-style-type: none"><li>Risk that Kemira internal organization engages in bribery or other forms of corruption.</li><li>Risk that third-parties acting on behalf of Kemira engage in bribery or other forms of corruption. A third-party is anyone with whom Kemira interacts and who sells, resells, or assists Kemira in selling Kemira's products to customers.</li></ul>
Risk / hazard management	<ul style="list-style-type: none"><li>Risk are effectively managed through the existing integrated management system and continuous risk identification and mitigation processes.</li><li>Environmental, health and safety and quality activities are documented and managed in line with ISO 9001, 14001 and 45001 standards including certification of majority of the activities. Incident and crises management – systems.</li><li>Carbon price and sustainability criteria included in CapEx investments, sustainability due diligence assessment in mergers and acquisitions process.</li><li>Compliance with the chemical regulations is ensured by complying with Product Stewardship and Regulatory Affairs processes incl. priority substance management.</li><li>Performance and development process (PDD) conducted and documented for all employees. Learning solutions and development paths available. Talent management activities targeted to specific job roles and positions.</li><li>Continuous listening and employee feedback with MyVoices Pulse surveys in place.</li><li>Kemira's New Product Development (NPD) and product lifecycle management processes are followed.</li><li>Ethics and compliance Hotline (whistleblower mechanism) for raising a concern or reporting potential misconduct.</li><li>Supplier sustainability assessment and audits globally. Mandatory Code of Conduct and Human Rights for Business trainings and anti-corruption training. Supplier segmentation and prioritization by value/criticality/risk.</li><li>Behavior-based safety program.</li><li>Reporting system in place for violations of Code of Conduct.</li><li>Human Rights impact assessment carried out, latest in 2021.</li><li>Identity and age checks during hiring process and annual internal country level verification of compliance.</li></ul>			<ul style="list-style-type: none"><li>Continuous communication and training on Kemira's policies.</li><li>Due diligence in reviewing and selecting third-parties who act on behalf Kemira.</li><li>Requirement that third parties commit to Kemira's Business Partner Code of Conduct.</li><li>Screening of all business partners to identify denied and blocked persons.</li><li>Ethics &amp; Compliance Hotline and email for reporting suspected breaches of law or Kemira's Code of Conduct internally or externally. Reported allegations are subject to confidential and impartial internal investigation.</li></ul>

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	Environmental and climate-related matters	Social and employment-related matters	Respect for human rights	Anti-corruption and bribery
Due diligence processes	<ul style="list-style-type: none"><li>• Compliance verification against existing Kemira, legal and other EHSQ requirements and talent development are managed through Global internal and external auditing and annual Global reporting processes. Audits and identified non-conformities are registered, assessed and managed in a global system ensuring Global visibility and compliance assurance.</li><li>• Compliance with the chemical regulations followed / audited by external authorities and audited internally and externally by Kemira.</li><li>• Sustainability assessment in mergers and acquisitions process to identify risks and opportunities.</li><li>• Sustainability criteria in CapEx investment projects, included with internal carbon price.</li><li>• Kemira’s New Product Development (NPD) process and individual NPD projects as well as short-term technical assistance request (TAR) process are managed by global internal and external auditing.</li><li>• Audits and identified non-conformities are registered and managed in a global system.</li><li>• In human rights issues, reporting to Audit Committee of Board of Directors.</li><li>• Suppliers are required to accept Kemira’s Code of Conduct for business partners. Kemira also constantly monitors, assesses and audits its supplier base by performing periodic checks either through routine processes or annual internal audits by competent sourcing members. Based on conducted assessments prioritized suppliers are invited to take a more detailed assessment or audit.</li></ul>			<ul style="list-style-type: none"><li>• We review and vet all new agents and distributors who will act as third-parties for Kemira. The review and vetting are based on a risk level assessment which determines which diligence activities are required when selecting and onboarding a new third-party. After the due diligence activities, new third-parties are subject to approval according to a risk level-based approval matrix.</li><li>• Kemira’s Ethics &amp; Compliance Committee coordinates investigations of internally or externally reported alleged violations of anti-bribery and anti-corruption laws. The Committee may escalate a matter to the President &amp; CEO, and the Committee reports to the Audit Committee of the Board of Directors.</li></ul>
Outcomes of policies and due diligence processes	<ul style="list-style-type: none"><li>• Operations meet legal requirements. Kemira is ready to meet global existing and foreseen challenges.</li><li>• New products with smaller environmental footprint, better chemical safety profile and providing customers with resource efficiency-improving properties and circular solutions.</li><li>• Sustainability long-term targets to 2025-2030 relating to water, waste, emissions, energy, diversity and inclusion and growing the renewable raw materials-based products portfolio.</li><li>• Health and safety program to reach zero harm to people. Reduced risks on human health and environment.</li><li>• Competences Development Program for key target groups and statutory and role-based on-the-job learning for employees on professional and leadership development.</li><li>• Human rights issues identified and mitigated in own operations and value chain.</li><li>• Group-level meeting on EU Taxonomy minimum safeguards of most recognized human rights guidelines and guiding principles.</li><li>• Sourcing &amp; Procurement policy, processes and procedures mitigate and prevent supplier’s violations related to any type of non-legal practices and also ensure that suppliers are operating at or above the levels required by Kemira from the economic, environmental, social and human rights point of view.</li></ul>			<ul style="list-style-type: none"><li>• There have been no confirmed cases of bribery or corruption involving Kemira or its third-parties.</li><li>• Kemira is compliant with all anti-bribery and anti-corruption laws applicable to it.</li></ul>



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Product Development

Kemira’s New Product Development (NPD) process follows a stage-gate model. Successful projects must demonstrate both improved sustainability and business benefits at each decision gate to justify the project’s continuation, and ultimately the product launch.

Our NPD sustainability assessments evaluate economic, environmental, and social impacts across six key areas aligned with Kemira’s sustainability goals: safety, people, water, circularity, climate, and profitable growth. These assessments occur at each NPD project stage, comparing new offerings against benchmarks and existing solutions from both Kemira’s and customers’ perspectives. In the projects’ early stages (from technology evaluation to development and piloting), we evaluate Kemira’s operations, including used raw materials, and customers’ operations. Towards the project’s completion (from scale-up to commercialization), we assess the effects of raw material production operations (upstream), Kemira’s operations, and customer/end use operations (downstream) as separate categories.

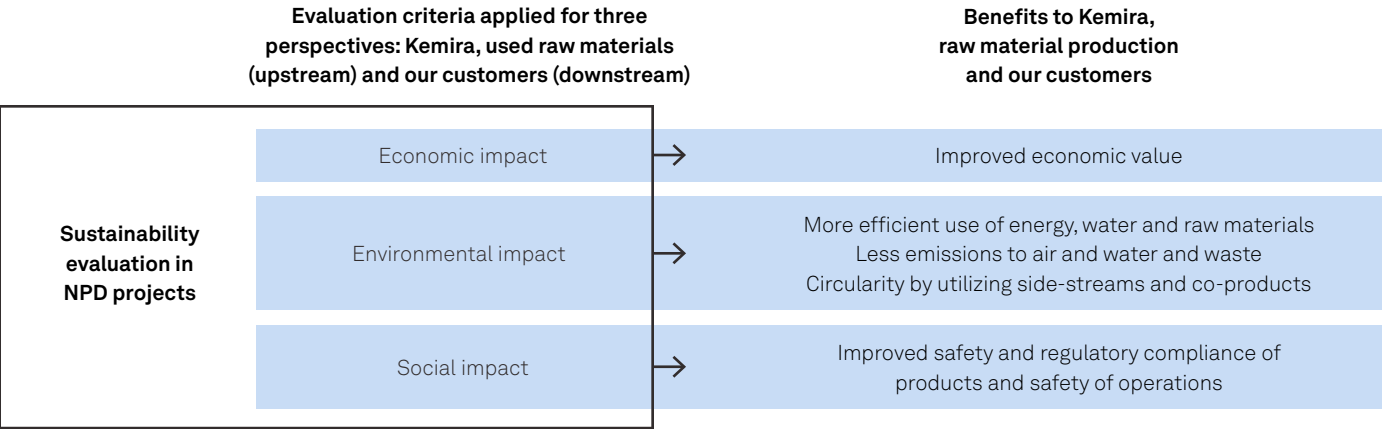
Sustainability is one of Kemira R&D’s internal key performance indicators and is determined as the average sustainability index of NPD projects approved for development. In 2023, the average score of the assessments across our portfolio was 7.7 (in 2022 we reported 8.0). The assessments

rate sustainability performance on a scale (-1 for decreased, 0 for no change, +1 for improved performance) across six categories: safety, people, water, circularity, climate, and profitable growth. Both Kemira’s (including raw materials) and customer impacts are considered. The maximum score is +12 if all categories show improvement, while the minimum score is -12 if all aspects decline. The average sustainability index has been followed since 2019, when scoring was 5.3.

Beyond safety considerations in the sustainability assessment, we actively avoid using hazardous substances when choosing raw materials for new product development. In each NPD project, raw materials and end-products undergo evaluation in collaboration with the Product Stewardship and Regulatory Affairs function. Additionally, R&D devises strategies to replace raw materials with concerns or risks in product recipes. These actions improve safety in transportation, storing, usage and disposal of materials in our manufacturing processes as well as in our customers’ processes and products.

In 2023, Life Cycle Assessments (LCAs) have been actively employed within NPD projects to assess environmental impacts more precisely from the entire life cycle perspective. This has guided decisions in, for example, conversion technologies, renewable feedstock selections and other strategic initiatives. Looking ahead, LCAs will become an even more integral part of our approach, as we continue to enhance our in-house capabilities for conducting LCAs.

SUSTAINABILITY EVALUATION IN THE NEW PRODUCT DEVELOPMENT PROJECTS



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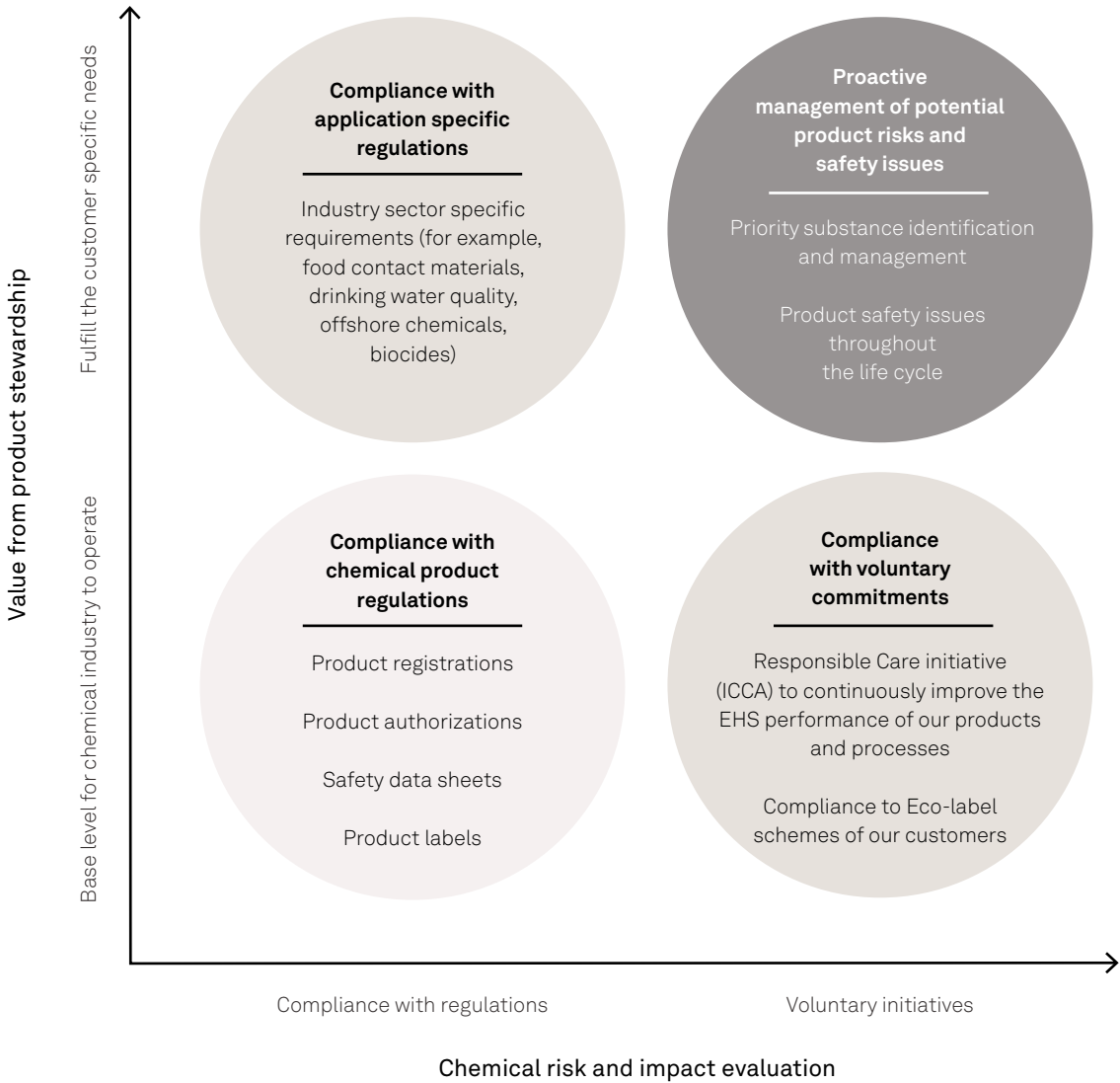
Product Stewardship

Kemira’s Product Stewardship Policy defines the minimum requirements for our operations to ensure that our products can be safely used by our stakeholders and that chemical risks and their impacts are incorporated into decision-making relating to our business. Our customers have their own health, safety and environmental requirements for their input materials and they typically follow several voluntary certification schemes, including eco-labeling schemes, which set further expectations on our product offerings. Chemical hazard assessments are not only prepared for products but also for raw materials, process aids and intermediates; and are incorporated into the change management process during their full lifecycle. Product stewardship is the key pillar in the Responsible Care® program and involves the proactive management of the health, safety and environmental aspects of a product throughout its lifecycle. Product stewardship provides a platform that helps us to identify concerns relating to specific chemicals and their hazards at an early stage and manage those risks along the value chain to fulfill the expectations of different stakeholders.

PRODUCT REGULATORY COMPLIANCE

The manufacturing and sale of chemicals are widely regulated around the world. Continuous follow-up of regulatory development activities is the prerequisite for business compliance and plays a key role in ensuring product safety for customers, value chain and stakeholders.

PRODUCT STEWARDSHIP MANAGEMENT APPROACH



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PRODUCT LIFECYCLE MANAGEMENT

All of our products, handled raw materials and intermediates need to comply with all applicable chemical regulatory requirements in the countries where we manufacture and/or sell chemicals. Assessments examining regulatory compliance, human health impact, safety issues and environmental protection aspects all form part of our Product Lifecycle Management process from conception and development to manufacturing and sales, and finally to product elimination. All data related to chemical products and substances including raw materials is managed in Enterprise Resource Planning system and is linked to Product Lifecycle Management tool/process.

PRIORITY SUBSTANCE MANAGEMENT

We actively monitor our portfolio for substances of concern, in accordance with our priority substance management process. Those substances are subject to future regulatory restrictions or associated with particular concerns for human health, safety or environment. As a part of this process priority substance list includes substances found in Kemira's portfolio either in raw materials or product compositions in >0.1% concentrations. It includes listed substances in SVHC, REACH annex XVII, CoRAP, California Proposition 65, SIN, OSPAR, ECHA and EPA endocrine disruptors, TSCA 2014 work plan and conflict minerals. We prepare management plans for these priority substances aimed to define the specific risks associated

with each substance, examine options for managing these specific risks, and formulate action plans for the preferred options. These options to mitigate risks may include, for example, substitution, phase-out or limiting exposure.

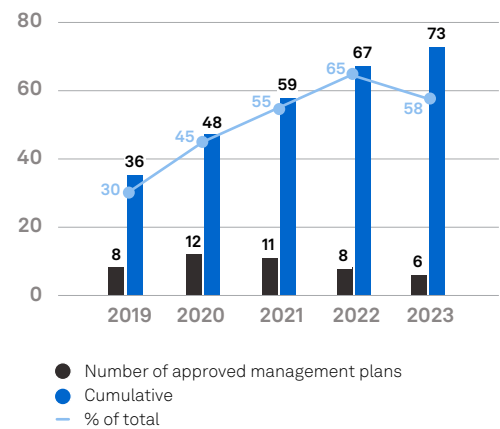
Management plans for substances of concern have been prepared for 6 substances during 2023 and in total 73 approved plans are now available. Nine SVHC (Substances of Very High Concern) substances have been removed from the portfolio during the period in which said processes have been in place. During 2023, some new substance additions have been made to the regulatory lists which are followed by Kemira. These additions are reflecting to Kemira priority substance list, but the management plans for these changes have not been done. The followed percentage in the figure (Management plan / Kemira priority list substances \*100) is thus decreased in 2023.

COMMITMENT TO ANIMAL WELFARE AND SUSTAINABLE PALM OIL SUPPLY

Kemira is committed to reducing, refining and replacing animal testing wherever possible. Kemira does not itself perform any animal experimentation in-house. All animal testing commissioned by Kemira is done to the highest of animal welfare standards following national and international legislation on the protection of animals and only if specifically required by legislation or for product safety purposes.

Kemira is a member of the Roundtable on Sustainable Palm Oil (RSPO) supply chain standard and has RSPO certified manufacturing operations with the capability to provide the market with 100% certified palm oil derivative products.

NUMBER OF PRIORITY SUBSTANCES HAVING APPROVED MANAGEMENT PLAN



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Supplier Management

Our Sourcing function is globally responsible for strategic spend management, while our Supply Chain Management function provides supply chain-related services on a regional level to our business segments.

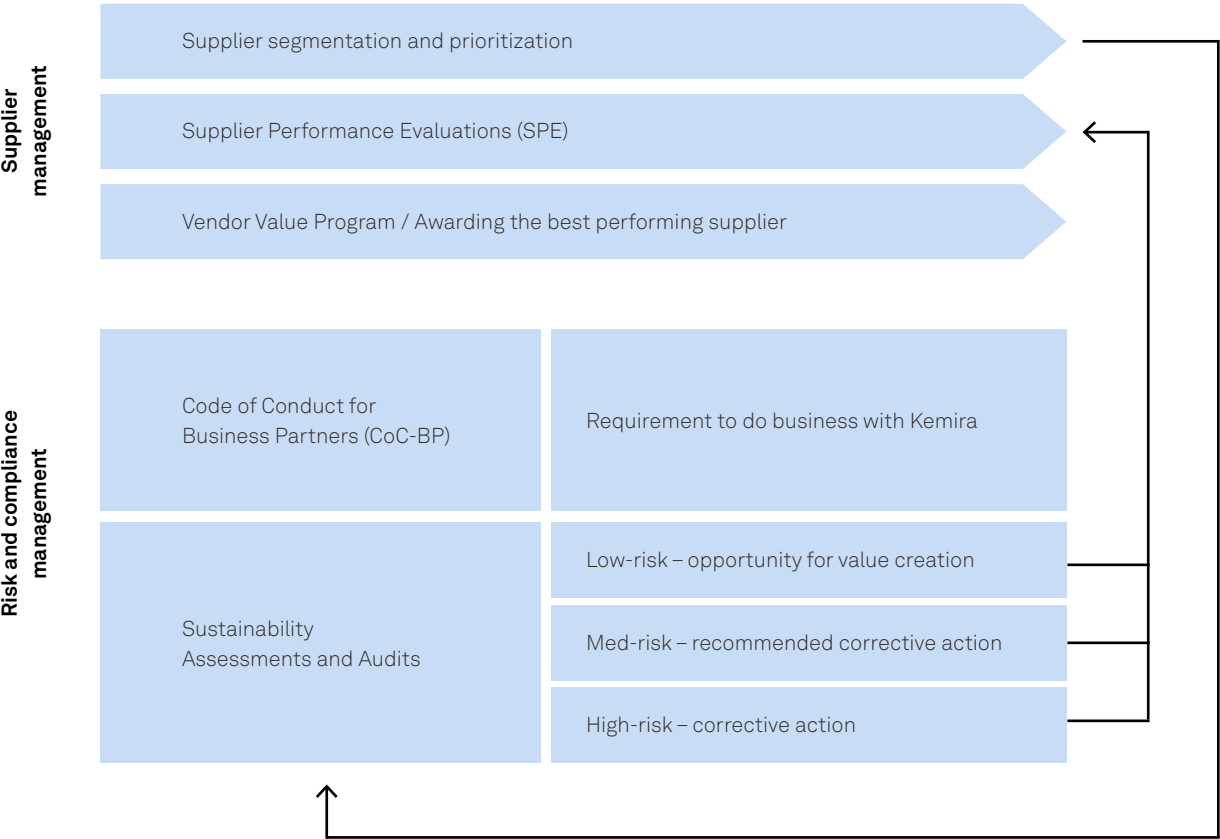
Our Sourcing activities cover the identification and selection of suppliers, the consequent negotiations and contract management, and the management of supplier relationships. Our supplier selection criteria are based on cost competitiveness, short-term operational excellence, long-term business stability and sustainability performance.

Our Supply Chain Management activities cover all supply chain-related services to our business segments once the supplier relationship has been established by our Sourcing function. Supply Chain Management services include Customer Service, Logistics, Supply Chain Planning, and Procurement. The Supply Chain Management function has regional units that each provide all the services needed within their respective regions.

The total spend of the Sourcing categories "direct materials" and "indirect goods and services", amounted to about 2.35 billion EUR in 2023. The direct materials cover all raw materials, packaging and energy, while indirect goods and services include all non-raw material-related spending, for example, on equipment, services and logistics.

Supplier management, supplier risk and compliance management are cornerstones of our sustainable sourcing roadmap that ensure responsibility in our supply chain. Our Supplier Management focus is on improving economic performance, anticipating risk and initiating approaches with suppliers that are responsible and innovative. It is described

SUPPLIER RISK AND COMPLIANCE MANAGEMENT





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in three main processes: Supplier Segmentation, Supplier Performance Evaluations (SPE) and Vendor Value Program.

Our suppliers are segmented into four categories: strategic, critical, volume and base suppliers, and prioritized based on multi-factor risk criteria to help us better manage our suppliers and plan actions for necessary risk mitigation.

The SPE program collects and provides regular feedback to our suppliers both on their operational and sustainability performance. The majority of our strategic, critical and volume suppliers are part of regular supplier reviews.

Our Vendor Value Program is aimed at developing capabilities that will enable us to identify, partner with, and manage those suppliers, along the various value chains associated with Kemira’s product lines.

Our supplier risk and compliance management define the requirements for suppliers to do business with Kemira, as well as provide tools and processes for mitigating sustainability risk with our suppliers (sustainability assessments and audits).

CODE OF CONDUCT FOR BUSINESS PARTNERS

All of our suppliers must follow our Code of Conduct for Business Partners (CoC-BP) in relation to all of their dealings with Kemira. Our CoC-BP is communicated to all suppliers through the ordering process as part of Kemira's terms and conditions.

Supplier adherence to these principles is controlled in different stages of our Sourcing processes starting from the new supplier screening/new vendor creation process, to contracting where the commitment to our CoC-BP is integrated in the contract templates. Finally, we have continuous monitoring in place for those contracts exceeding certain spend thresholds to make sure we are reasonably covered.

SUSTAINABILITY ASSESSMENT AND AUDITS OF SUPPLIERS

We continued enrolling new suppliers into our Sustainability program by assessing them through EcoVadis, conducting Corporate Social Responsibility audits and Quality audits.

**EcoVadis assessment:** In 2023, 81 new suppliers were assessed and a total of 477 suppliers have now gone through the assessment and have recorded an average score of 59, which is higher than the industry average assessed on the platform. Results with low scores were reviewed together with suppliers and improvement plans were made accordingly. In most cases, low scores were due to lack of supporting documentation provided by the vendor to the assessment company. Around 57% of the 242 suppliers reassessed in 2023 were able to improve their score.

**Corporate Social Responsibility** audits of direct material suppliers: In 2023, we conducted one Corporate Social Responsibility audit with no results leading to a halt in operations. Audit results are being reviewed together with suppliers and improvement plans created and followed up accordingly as part of our supplier management practices.

**Quality audits of suppliers:** Direct material large spend suppliers also undergo quality audits, which include management systems, workplace health and safety standards, production quality and supply security. In 2023, 22 quality audits were conducted for direct material suppliers.

Supplier assessments and audits are part of sourcing processes and Sourcing function target setting and are monitored on a monthly basis. Audit results are being reviewed together with the supplier and improvement plans created and followed up accordingly as part of our supplier management practices.

SUPPLIER SUSTAINABILITY ASSESSMENTS AND AUDITS

	2023	2022	2021
EcoVadis assessment, cumulative	477	396	348
Corporate Social Responsibility audit	1	1	1
Quality audit	22	11	14

STRUCTURE OF KEMIRA'S SUPPLIER BASE

	Direct materials	Indirect goods and services
Number of suppliers, approximately	1,700	11,700
EMEA	800	6,600
Americas	600	3,500
APAC	300	1,600
Percentage of suppliers that form 80% of the category spend	9%	8%

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Integrity

OUR VALUES AND CODE OF CONDUCT

Our management approach to integrity and responsible business practices is based on our corporate values and our Code of Conduct. Our values are:

- We are dedicated to customer success.
- We care for people and the environment.
- We drive performance and innovation.
- We succeed together.

These principles demonstrate our commitment to conduct our business in compliance with all applicable laws and regulations and according to high ethical standards.

Our Code of Conduct sets the minimum standards of expected behavior for our employees and business partners. Our internal policies and procedures provide more detailed guidance to steer our daily work and decision-making.

Kemira’s Code of Conduct was reviewed, updated and approved by the Board of Directors in 2017 and thereafter reviewed biannually for validity, with the latest revision taking place in 2023, with no major updates. Every employee is expected to comply with Kemira’s Code of Conduct. All people managers and leaders are responsible for implementing the Code within their teams. Since 2013, we have required all of our employees to regularly complete the Code of Conduct online training, which was revised and updated in 2022 and is currently available in 19 languages. We also train selected employee groups on more specific compliance matters, such as anti-bribery, human rights, competition compliance and insider information.

We expect our business partners to follow our Code of Conduct for Business Partners (CoC-BP) in their business activities. Both of these Code of Conduct documents, as well as our corporate values can be found at [www.kemira.com](http://www.kemira.com).

OUR ETHICS AND COMPLIANCE PROGRAM

Our Ethics and Compliance Program aims to enhance compliance management at Kemira on a continuous basis. The program addresses all of the following measures taken to manage ethics and compliance risks:

- Prevention: measures that help us proactively prevent ethics and compliance risks from materializing.
- Detection: measures that help us detect where ethics and compliance risks have materialized or may arise.
- Responding: measures that help us investigate and respond to potential ethics and compliance breaches.

ORGANIZATIONAL STRUCTURE FOR ETHICS AND COMPLIANCE

Our Ethics and Compliance function is responsible for overseeing the effective implementation of Kemira’s Ethics and Compliance program. The status of the program is also reported directly to the Audit Committee on a regular basis.

The Compliance Committee oversees the management of compliance allegations to ensure fair and sufficient investigation, remediation, and consistent disciplinary action across our organization. The committee consists of Group General Counsel, EVP Human Resources, Head of Internal Audit, and Director, Ethics and Compliance.

Our Local Ethics and Compliance Officer Network consists of employees across the organization based in all regions, who support our regional ethics and compliance communication, activities, and overall awareness as part of their work.

INTEGRITY INDEX AND ETHICS & COMPLIANCE SURVEY

Integrity Index has been measured based on employee perception of integrity using the internal MyVoice Pulse survey. We use the question ‘Speak My Mind’ phrased as ‘I can report unethical behavior or practices without fear of retaliation at Kemira as a single-item index.

In 2023, the Integrity Index was 81 points, 11 points above the manufacturing industry benchmark (1 points above 2022) and the participation rate in the survey 80%. It has been consistently above the benchmark, being considered a company strength, with high level of engagement.

In addition, a specific Ethics & Compliance (Risk Clarity) Survey, hosted by Gartner, was conducted in 2022 and sent to all employees, with specific questions to measure the culture of integrity, Kemira’s culture scores (77% favorable) were 3% above Gartner’s benchmark.

MECHANISMS FOR REPORTING CONCERNS

We promote a culture that encourages our employees to speak freely. We actively encourage our employees to contact their managers, local HR, Legal or Ethics and Compliance function to express their concerns and ask questions.

All of our employees also have access to an externally hosted Ethics and Compliance hotline (whistleblower mechanism), which is a 24/7 service enabling them to report potential violations of our Code of Conduct or other ethical concerns. All employees can anonymously submit such reports in their own languages, by phone or through a web form, which can be accessed through Kemira’s intranet, wherever such channels are not restricted by local legislation. Information on the availability of the

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Ethics and Compliance hotline is shared to all employees on Kemira’s intranet. We provide regular mandatory training program to all employees. In 2021, the Speak Up! campaign was launched, including an online training program available in 18 languages and active communications to our employees on all of our available channels to report concerns and to assure the anonymity of the report, as well as no retaliation. The campaign is on-going since 2021 and continuous to be active. The hotline system and the process of handling the reports are managed by the Ethics & Compliance function.

There is an e-mail address that can be used by third-parties to report cases of potential misconduct relating to Kemira or our business partners. This information is available on our website and in Kemira’s Code of Conduct for Business Partners.

All allegations of potential violations of our Code of Conduct made in good faith will receive a fair and comprehensive investigation utilizing internal and/or external assistance. Any reports of potential Code violations is treated as strictly confidential and anonymous to the fullest extent and without fear of retaliation.

CONCERNS OF ALLEGATIONS OF POTENTIAL CODE OF CONDUCT VIOLATION REPORTED IN 2023

	Number of cases	Cases closed with merit	Cases closed without merit	Open cases as at Dec 31, 2023
Cases reported via hotline	38	15	17	6
Cases reported via other channels	14	8	2	4
Total number of cases	52	23	19	10

REPORTED CASES BY CATEGORY

	Number of cases in 2023	Number of cases in 2022	Number of cases in 2021
Corruption and bribery	0	0	0
Code of Conduct (incl. Conflict of Interest / Safety)	17	4	10
Employee relations fair treatment	20	9	1
Harassment	6	9	8
Transactions and company records	9	7	0
GRAND TOTAL	52	29	19

INCIDENTS OF DISCRIMINATION AND CORRECTIVE ACTIONS TAKEN

During 2023, 52 incidents were reported to the Ethics & Compliance function alleging potential violations to the Code of Conduct. All cases were investigated (10 of them are still under investigation), 23 of the cases were closed with merit and remediated during 2023. No incident was concluded as being a case of discrimination. The increase in the number of the reported cases compared to the previous years (29 total cases reported in 2022) was supported by the on-going Speak Up! campaign, disclosing the reporting channels, as well as clarifying which situations should be reported.

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## Climate Change

### CLIMATE RISK SCENARIO ANALYSIS

In 2023, Kemira expanded the geographical and business function coverage of the climate risk scenario analysis work that began in 2022. As with the 2022 work, the 2023 analysis was conducted in accordance with the Task Force on Climate-related Financial Disclosures (TCFD) framework. The 2023 analysis evaluated Kemira's climate risk from a global company perspective, as well as a sampling of risks from a local perspective using 8 (3 in 2022) manufacturing sites (3 sites in Europe; 2 sites in China; and 1 site each in Brazil, Canada, and the USA) and 4 (4 in 2022) business functions (Commercial; Corporate Strategy; Growth Accelerator; and Research & Development). In 2024, Kemira expects to supplement this work by evaluating the physical risks at all manufacturing sites with the assistance of Group Insurance and a third-party risk consultant. The third-party risk consultant will be able to provide initial financial impacts related to the identified risks in terms of "climate estimated loss."

Kemira evaluated the climate-related transition and physical risks and opportunities that are most relevant to Kemira and its value chain in the short-term (until 2030); medium-term (2030-2050), and long-term (2050 and beyond). The most material risks considering both likelihood and financial impacts on a company basis are summarized in the following table:

Risk or opportunity		Description
Transition risk	<ul style="list-style-type: none"><li>Energy availability</li><li>Legislation</li><li>Larger adoption of carbon pricing</li></ul>	<ul style="list-style-type: none"><li>In North America and China the availability of renewable energy is low due to missing infrastructure and lack of incentives compared to EMEA where the infrastructure for renewable energy is much more developed.</li><li>In China, regulation on a national and local level is very strict considering carbon and other emissions affecting the sites' operations through permit limits and pollution limits. In North America, the permits on emissions are permissive and the future outlook depends heavily on the political climate. Significant changes are not to be expected in short-term.</li></ul>
Physical risk	<ul style="list-style-type: none"><li>Extreme weather events</li><li>Precipitation patterns</li><li>Increase in global temperature</li></ul>	<ul style="list-style-type: none"><li>Sites located near coast lines are more vulnerable to storms such as hurricanes in the USA.</li><li>More frequent or most significant flash flooding events from severe storms impact the site as well as transportation routes for raw materials and deliveries to customers.</li></ul>
Opportunity	<ul style="list-style-type: none"><li>Development of low emission products</li><li>Access to new markets</li><li>Resource efficiency</li><li>Use of lower emission sources of energy</li></ul>	<ul style="list-style-type: none"><li>Innovations in renewable products.</li><li>Increased demand for water treatment chemicals due to changes in legislation and markets.</li><li>Investments in automation technology to optimize processes and improve efficiencies.</li><li>Additional opportunities for recycled raw materials and markets for manufacturing by-products (e.g., hydrogen).</li></ul>

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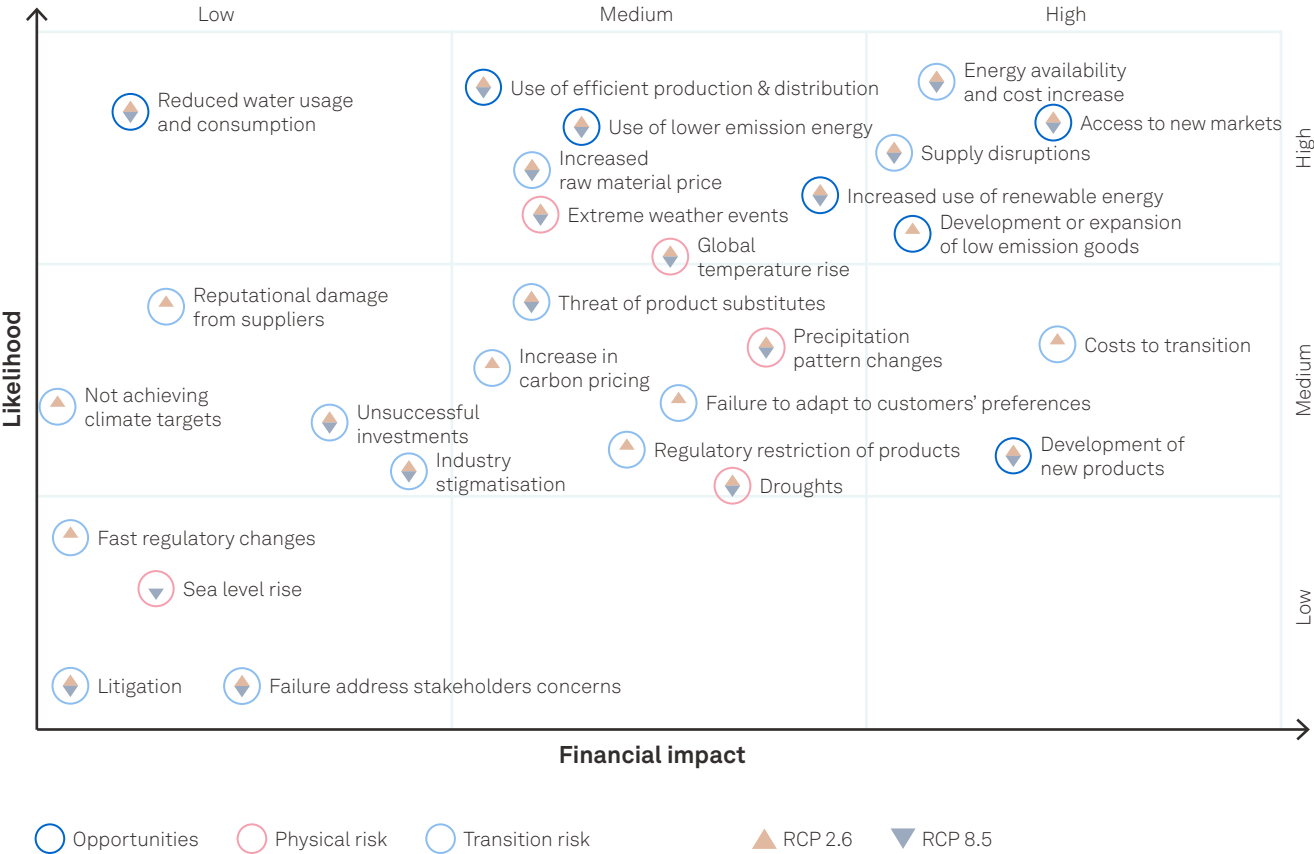
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The following figure provides a view of Kemira's climate-related risks and opportunities in the short-term (until 2030). The figure is a 3x3 matrix based on the financial impact and likelihood of the risk or opportunity. The matrix ranks both the financial impact and likelihood as low, medium, or high. The most impactful risks or opportunities are in the upper right and the least impactful risks or opportunities are in the lower left. Transition risks are in light blue; physical risks are in red; and opportunities are in dark blue. Each risk and opportunity was evaluated using climate change scenarios [Representative Concentration Pathways (RCPs)] established by the Intergovernmental Panel on Climate Change (IPCC). RCPs represent different projections leading to a range of global warming levels depending on the amount of GHGs emitted in the years to come. RCP 2.6 (orange triangle) is the scenario where global temperature rise below 2 °C by 2100. RCP 8.5 (gray triangle), is generally taken as the worst-case climate change scenario (emissions continue to increase through 2100).

CLIMATE TARGET

In 2023, Kemira continued its progress toward our combined Scope 1 and Scope 2 market-based emissions reduction target established as part of our updated climate commitment published in June 2022. The Scope 1 and 2 emissions target is aligned with the SBTi absolute contraction approach, which requires an annual linear reduction rate of 4.2% from the selected base year to the target year. For Kemira, our base year is 2018 and our target year is 2030, which results in a 50% reduction requirement (930 thousand metric tons CO<sub>2</sub>e in base year 2018 to 461 thousand metric tons by the target year 2030). Kemira committed to the SBTi in June 2022, and our Scope 1 and 2 target will be submitted to SBTi for validation by June 2024. Our current long-term ambition remains to be carbon

CLIMATE-RELATED RISK AND OPPORTUNITY MATRIX FOR SHORT-TERM (UNTIL 2030)





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neutral by 2045 for combined Scope 1 and Scope 2 market-based GHG emissions. However, our long-term ambition will continue to be evaluated in response to global legislation, corporate strategy and changes to climate science.

Kemira is currently evaluating a quantitative reduction target for our Scope 3 emissions as part of our submission to SBTi in June 2024. Scope 3 emissions, and in particular, emissions from purchased goods and services, are the majority of Kemira's GHG emissions. Therefore, engagement with our value chain partners is one of the primary actions taken to reduce our Scope 3 emissions. Kemira uses resources such as the EcoVadis platform to assess the overall sustainability programs (including GHG emissions) of its suppliers. In 2023, Kemira implemented a formal Supplier Engagement Program to improve the quality of our emissions data associated with our raw materials. This effort supports Kemira's programs, as well as our value chain partners' own sustainability programs, which can generate emission reduction opportunities within the chemical industrial sector as a whole and at a local level for our customers and communities.

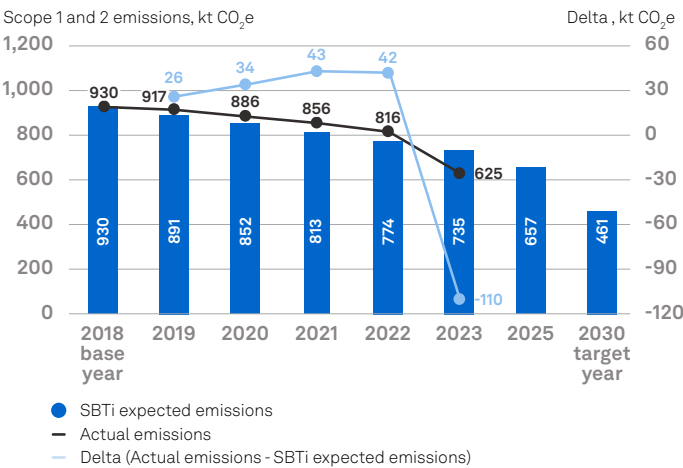
As shown in the following figure, Kemira's Scope 1 and 2 market-based emissions in 2023 were 625 (816 in 2022) thousand metric tons CO<sub>2</sub>e. The emissions expected in 2023 according to the SBTi absolute contraction approach are 735 thousand metric tons CO<sub>2</sub>e. Therefore, the Scope 1 and 2 emissions through 2023 are meeting the SBTi commitment, and have decreased approximately 33% since the 2018 base year.

- The emissions reductions in 2023 were related to:
- Lower production and energy consumption at our most emissions and energy intensive facilities and product lines.
    - Two fewer manufacturing sites in Kemira as of 31 December 2023, compared to 31 December 2022.
  - An increase in emission-free sourced electricity through sourcing agreements [power purchase agreements (PPAs) and guarantees of origin (GoOs)] and the increasing global decarbonization trends of the electricity mix.
    - In particular, the percentage of Nord Pool residual mix (fossil-based) electricity for our sites in Finland decreased from approximately 46% in 2022 to approximately 16% in 2023.

- Our largest manufacturing site (located in Helsingborg, Sweden) renewed an electricity sourcing contract (October 2022 through December 2023) that includes GoOs from wind power for 50% of the site's sourced electricity consumption. This will reduce Scope 2 emissions from the site by approximately 13 thousand metric tons CO<sub>2</sub>e per year, and the site will have 75% of its electricity consumption demand from emission-free sources.
- The on-going implementation of energy efficiency programs at our most energy intensive manufacturing sites.

Kemira implemented an internal carbon pricing sensitivity analysis procedure in 2019 for investments exceeding 500,000 EUR as part of its process to identify and minimize risk. The procedure was updated in 2022 to adjust the internal carbon price in response to the increase of EU Emissions Trading System (ETS) prices. Kemira's current internal carbon price is 100 EUR per metric ton CO<sub>2</sub>e.

KEMIRA SCOPE 1 AND 2 EMISSIONS CLIMATE TARGET



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- The key initiatives for future emission reductions in the short-term (until 2030) are:
- Capital expenditure (CapEx) and operational expenditure (OpEx) investments to replace fossil-based energy processes with emission-free processes at our most energy and emissions intensive sites. For example:
    - Kemira continues to evaluate biogas and emission-free fuels (e.g., hydrogen) and feedstock projects for our largest natural gas consuming sites. Our Helsingborg, Sweden site is evaluating the supply and economic feasibility of replacing natural gas with biogas for its fuel and/or process feedstock needs.
    - Kemira and Ålandsbanken Wind Power Fund Non-UCITS entered into a long-term PPA for a share of the electricity production of the Murtomäki wind farm located in Pyhäjärvi, Finland. The term of the PPA is 8 years and it enters into force in the beginning of 2025. Kemira will also purchase the GoOs related to the production.
    - In the USA, Kemira signed a letter of intent with a privately-held supplier of gaseous hydrogen solutions to explore opportunities for creating hydrogen hub networks near our sodium chlorate manufacturing plants.
  - Implementation of a newly created sustainability impact assessment process as part of CapEx projects of at least 100,000 EUR to identify opportunities for additional reductions not already considered in the project design.
  - An energy steering team was created in 2023 to evaluate potential on-site solar installations, particularly in countries that provide tax incentives and government subsidies for eligible projects. Kemira is also preparing a Request for Proposal (RFP) for energy consulting services in the USA to evaluate opportunities related to PPAs, virtual PPAs (VPPAs), and RECs and asset purchase agreements (similar to the GoO process in the EU), in particular for our energy and emissions intensive sodium chlorate plants.
  - Implementation of a global company car policy that prohibits new company cars to exceed the combined CO<sub>2</sub> emission limit of 155 g/km (Worldwide Harmonized Light Vehicles Test Procedure, WLTP). To encourage employees to choose a company car with CO<sub>2</sub> emission significantly lower than the set limits, Kemira may offer a CO<sub>2</sub> incentive based on local needs, accordingly.

Lastly, our portfolio of product carbon footprints (PCFs) continues to expand, allowing us to support the sustainability ambitions of our global customers and to assess our downstream value chain impacts. In our ongoing commitment to PCFs, we have updated calculations according to the latest industry best practices and expanded the scope of the PCF portfolio to encompass high volume bulk and specialty chemistries produced globally. Looking ahead to 2024, we are dedicated to advancing our PCF initiatives. This involves continuing the work with

PCFs for bulk and specialty chemicals across all regions. We are initiating efforts towards the automation of PCFs. This automation will significantly increase our capacity to calculate PCFs, streamlining the process, ensuring efficiency, and ultimately extending the scope to cover PCFs for all Kemira products.

DIRECT AND INDIRECT GHG EMISSIONS SOURCES

- Direct (Scope 1) GHG emissions from Kemira’s manufacturing sites are from the following sources:
- Emissions from the combustion of fuels such as natural gas and fuel oil used by boilers, dryers, and internal combustion engines to generate on-site steam, heat and electricity.
    - Our sodium chlorate sites use by-product hydrogen gas in their boilers to offset the use of fossil fuels. Scope 1 emissions from hydrogen combustion are reported as 0.
    - Our Helsingborg, Sweden site operates a sulfur boiler to generate steam and electricity for the site. Scope 1 emissions from sulfur combustion are reported as 0.
  - Emissions from fuels such as propane, diesel, and gasoline used by mobile sources such as forklifts and company vehicles
  - Emissions from physical or chemical processing of carbon-containing feedstock, raw materials and chemicals such as natural gas, sodium and calcium carbonate, and coke.
  - Emissions from our transportation fleet in North America.

Indirect (Scope 2) GHG emissions consist of the CO<sub>2</sub>e emissions associated with the off-site generation of purchased or acquired electricity, heat, and steam that is consumed by Kemira. Our sites purchase or acquire electricity, heat, and steam resources from either the local municipal authority or a private company, or from a separate manufacturing facility located within the same industrial complex. Scope 2 emissions from renewable and nuclear energy sources are reported as 0.

Other indirect (Scope 3) GHG emissions are a consequence of Kemira’s business activities, but occur from sources not owned or controlled by our company.

Kemira’s GHG emissions are primarily CO<sub>2</sub>, and negligible emissions of methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O). Kemira estimates GHG emissions using factors in terms of CO<sub>2</sub>e and does not specifically estimate and report mass emissions of CH<sub>4</sub> and N<sub>2</sub>O, since CO<sub>2</sub> comprises over 99% of CO<sub>2</sub>e emissions.

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GHG EMISSIONS (KT CO2E) FROM MANUFACTURING SITES

	GRI disclosure	2023	2022	2021
TOTAL GHG EMISSIONS¹		3,602	4,108	4,267
Direct (Scope 1) GHG emissions²ᵃ	305-1	137	139	160
Biogenic Direct (Scope 1) GHG emissions²ᵇ	305-1c	0	0	0
Energy indirect (Scope 2) emissions: market-based³	305-2	488	677	696
Energy indirect (Scope 2) emissions: location-based		643	732*	809*
Other indirect emissions: Scope 3⁴	305-3a	2,977	3,292*	3,411*
Other indirect emissions: Scope 3 Biogenic emissions	305-3c	0	0	0
CHANGE IN TOTAL GHG EMISSIONS	305-5	-506	-159*	-61*
Production volume, thousand metric tons		4,856	5,197*	5,382*
GHG EMISSIONS INTENSITY, tCO₂e per metric tons of production⁵	305-4	0.74	0.79*	0.79*

\* Updates to data were provided by sites during 2023 data collection.

1. Scope 1 and Scope 2 market-based and Scope 3 emissions.

2a. GHG emissions from sources that are owned or controlled by Kemira (Scope 1 of the WRI/WBCSD GHG Protocol). GHG emissions are calculated as CO₂e which includes CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, NF₃.

2b. GRI Standard specifies reporting of biogenic emissions reported starting in 2017.

3. GHG emissions from the generation of purchased electricity, heat, and steam that is consumed by Kemira (revised Scope 2 of the WRI/WBCSD GHG Protocol). Market-based emissions are used for target setting and following progress. Location-based emissions are also shown, but these are not used for other indicators. The sources for the emission factors used are the IEA, the UK government's Department for Environment, Food and Rural Affairs (DEFRA), Motiva Ltd. and energy utility companies.

4. GHG emissions from Kemira's value chain (Scope 3 of WRI/WBCSD GHG Protocol). Scope 3 emissions have changed due to an improvement in the calculation method for purchased goods and services, and sea transport emissions. Kemira has implemented a volume-based approach for Categories 1 and 2 where factors are available.

5. Kemira has calculated the GHG emissions intensity as the ratio of total GHG emissions per production volume. Direct GHG emissions (Scope 1), indirect GHG emissions from energy consumption (Scope 2 market-based) and other indirect GHG emissions (Scope 3) are included.

Our coagulants business unit in North America operates a transportation fleet to deliver raw materials to our manufacturing sites and products to our customers. The GHG emissions associated with the fleet are not included in the table above or in our climate target for our manufacturing sites. However, Kemira reports these Scope 1 emissions in addition to the Scope 1 emissions from our manufacturing operations.

GHG EMISSIONS FROM NORTH AMERICAN TRANSPORTATION FLEET

	2023	2022	2021
Thousand metric tons CO₂e	17.2	10.3	11.5

In early 2023, the North American coagulants business unit was awarded a grant from the state of California (USA) in the amount of 400,000 USD to lease and operate two battery electric trucks and charging infrastructure. The introduction of zero-emission vehicles into Kemira's logistics fleet is one step to reduce our transportation-related carbon footprint, and additional opportunities related to hydrogen and other alternative energy sources for fleet vehicles are expected in the next decade.

Other indirect (Scope 3) GHG emissions

Kemira uses a hybrid approach of volume-based and spend-based data and emission factors to estimate emissions associated with purchased goods and services. Approximately three quarters of our total Scope 3 data is volume-based. This hybrid approach is considered to be more representative of our emissions profile because the influence of raw material

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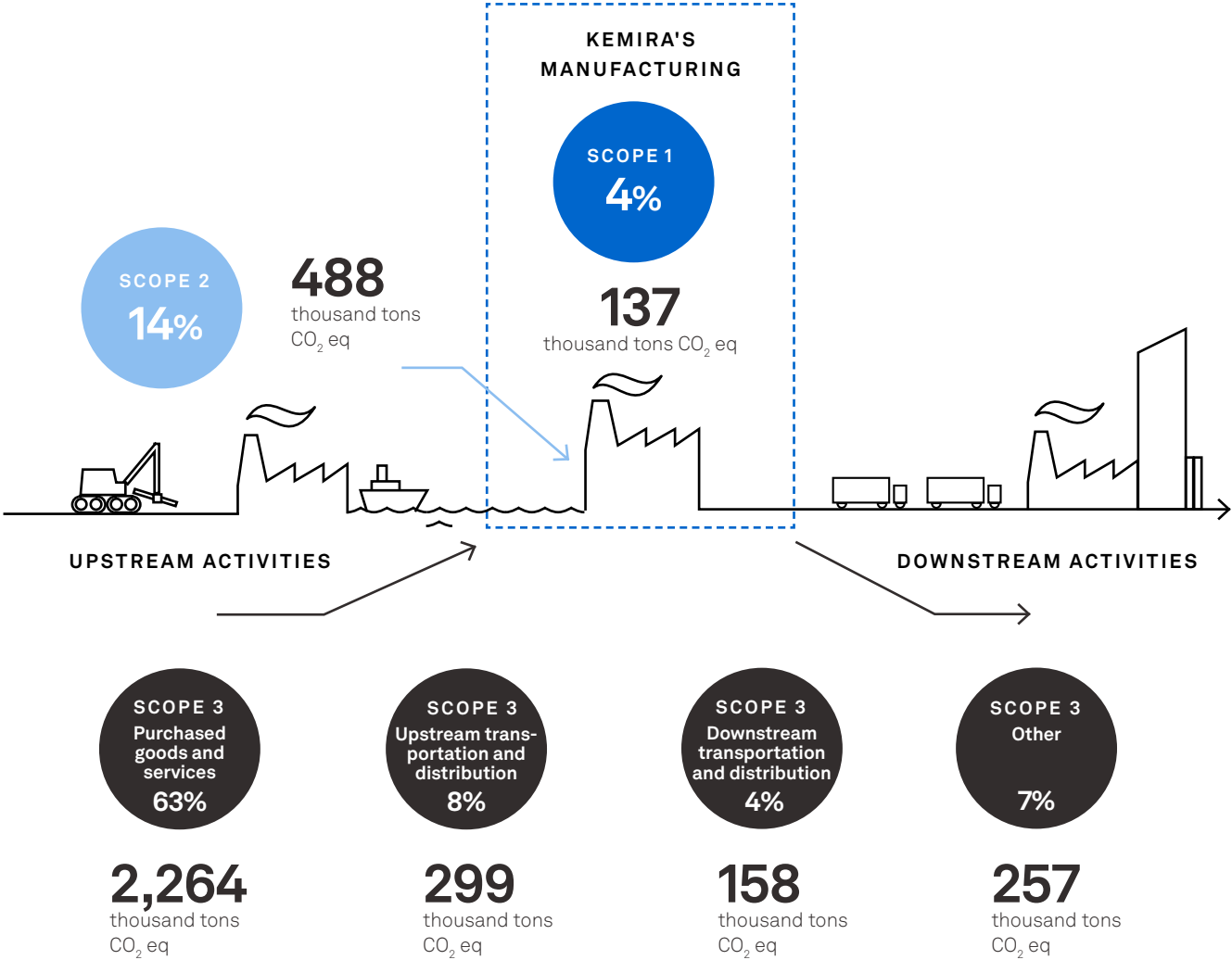
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cost fluctuations is eliminated and Scope 3 emissions are associated with the actual amounts of goods and services used in our production processes. Furthermore, this approach aligns with our ongoing collaboration with our value chain partners to obtain product-specific carbon footprints and life cycle assessments that are based on material consumption. In 2023, Kemira launched a supplier-engagement program to collect PCF data ("primary data") from our suppliers to improve our Scope 3 emissions process. The transition from general data published in global databases ("secondary data") to supplier-provided "primary data" will identify opportunities to reduce our Scope 3 emissions, and support our strategies to decarbonize the lifecycle of our products. For 2023, approximately 11% (approximately 0% in 2022) of the emissions data used to calculate emissions from our purchased goods (raw materials) was obtained directly from our supply chain partners.

Kemira continues to improve our transportation and distribution data collection and emissions methodologies, and has increased our collaboration with our business partners across our entire value chain to improve the quality of the Scope 3 emissions estimates.

Purchased goods and services (including capital goods) cover 76% (77% in 2022), and transportation and distribution emissions (upstream and downstream) 15% (14% in 2022) of our Scope 3 emissions. Fuel and energy related activities are 7% (7% in 2022) of overall Scope 3 emissions.

GREENHOUSE GAS EMISSIONS



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OTHER INDIRECT (SCOPE 3) GHG EMISSIONS BY CATEGORIES (KT CO2E)

	GRI disclosure	2023	2022	2021
TOTAL SCOPE 3 EMISSIONS	305-3d	2,977	3292^^	3,411^^
1. Purchased goods and services		2,264	2,543^^	2,621^^
2. Capital goods*		*	*	*
3. Fuel and energy related activities		216	244	268
4. Upstream transportation and distribution^		299	294^	312
5. Waste generated in operations		15	20	24
6. Business travel**		5	5	5
7. Employee commuting**		10	10	10
8. Upstream leased assets (leased offices)**		10	10	10
9. Downstream transportation and distribution^		158	164^	161
11. Use of sold products		0	0	0
12. End-of-life treatment of sold products		1	1	1

\* Emissions of Category 2: Capital goods are included in Category 1: Purchased goods and services.

\*\* Categories 6–8 historically contribute less than 2% each year. 2021 emissions were assumed to be at the same level as historical years despite actual emissions likely to be lower due to changes in work practices related to the COVID-19 pandemic.

^ Calculation methodology is based on the GLEC framework methodology for downstream and internal movements paid by Kemira. Other logistics scenarios are calculated using the prior methodology. 2022 emissions were updated to reflect a change in the calculation methodology for sea transport emissions.

^^ Calculation methodology for Categories 1 and 2 changed as described above, which results in changes to the total emissions. Specifically, Kemira updated the emissions factors used in its calculation to account for the location of the activity and adjustments to the published factors to account for physical properties of its materials such as concentration. For example, if the published factor is based on 100% concentration of a material, Kemira adjusted the factor to account for different concentrations used (such as a 50% concentration).

Category 11 emissions were estimated to be zero or close to zero, as Kemira does not sell combustible fuels, products that form GHG emissions during use, or products that contain GHG. The hydrogen provided to third-parties is zero-carbon fuel.

Category 12 covers all products sold. If a product is not known to have a new lifecycle, it is classified as waste.

The calculation is based on the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard and a supporting guidance document Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain. Scope 3 emissions have been calculated since 2012. GHG emission are calculated as CO<sub>2</sub>e. The sources for the emission factors used include the guidance document for the Chemical Sector, the DEFRA, the IEA, Ecoinvent, CEFIC and ECTA. Data covers all of Kemira's production sites according to Kemira consolidation rules. The margin of error for Scope 3 calculations is +/- 20%.

NOTE: Category 10 Processing of sold products is not calculated because it cannot be reasonably tracked; Category 13 Downstream leased assets is not relevant to chemical sector; Category 14 Franchises is not relevant to chemical sector; Category 15 Investments: No information available.

Energy

ENERGY CONSUMPTION AND MANAGEMENT

As an energy-intensive company, we strive to reduce our environmental impact through energy efficiency and sourcing strategies. A substantial portion of our energy management activities is focused on the most energy-intensive sites, which include seven sodium chlorate manufacturing plants in Finland, USA, Uruguay and Brazil Kemira has its most significant energy consuming European sites certified [Äetsä and Joutseno (Finland) and Helsingborg (Sweden)] according to the ISO 50001:2018 standard. Additionally the sites in San Giorgio (Italy) and Fredrikstad (Norway) also are ISO 50001:2018 certified.

Electricity is our most important energy source, accounting for 70% (70% in 2022) of the total energy (fuels plus purchased electricity, heat and steam) input. Sodium chlorate plants purchased 90% (90% in 2022) of the electricity, which is the main raw material in the electrolysis process. In 2023, our operations in Finland accounted for 43% (41% in 2022) of our purchased energy (electricity, heat, and steam) consumption. Operations in the USA accounted for 28% (31% in 2022), and operations in the rest of world accounted for the remaining 28% (28% in 2022).

Energy costs amount to approximately 8% (12% in 2022) of our total sourcing spend. By continually improving energy efficiency at manufacturing sites, we are consistently reducing our energy usage, emissions and associated costs.

Sources of energy

Kemira collects data on the sources of the energy provided to our sites for regulatory reporting requirements, to monitor internal energy performance indicators, and to support our climate action programs. The energy is classified as either non-renewable energy or renewable energy as defined by recognized reporting standards and frameworks.

- In 2023, 100% of the fuels consumed at our manufacturing sites, including hydrogen, were classified as non-renewable fuel.
- Nuclear energy is reported as non-renewable energy. However, since Scope 2 emissions from nuclear energy are reported as 0, Kemira reports nuclear energy as a separate energy source to calculate the emission-free sources.



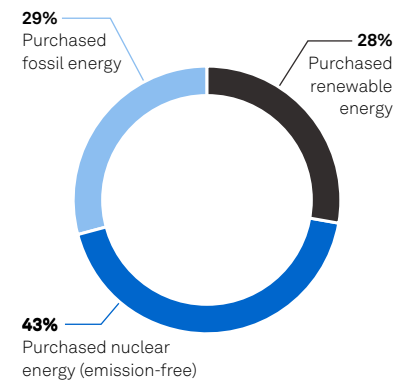
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In 2023, the amount of purchased energy classified as renewable energy and nuclear energy (emission-free) was 71%, which is an increase of 3% from 2022 (68%). The breakdown of the purchased energy sources for 2023 (2022) is provided below:

- Emission-free purchased energy: 71% (68%).
  - Purchased renewable energy: 28% (32%).
  - Purchased nuclear energy: 43% (36%).
- Purchased non-renewable energy (excluding nuclear energy): 29% (32%).

SOURCES OF PURCHASING ENERGY



A summary of Kemira's energy consumption within and outside of the organization is in the following table.

ENERGY BALANCE, GWH

	GRI disclosure	2023	2022	2021
TOTAL FUEL AND PURCHASED ENERGY INPUT				
Consumed fuel as energy source		760	792	831
Non-renewable	302-1a	760	792	831
Renewable	302-1b	0	0	0
Purchased electricity	302-1c	2,854	3,157	3,517
Non-renewable		2,059	2,198	2,502
Renewable		795	959	1,014
Purchased heat and steam	302-1c	468	543	584
Non-renewable		335	330	310
Renewable		133	212	274
TOTAL FUEL AND PURCHASED ENERGY INPUT BY SOURCE				
Non-renewable	302-1a, b	4,082	4,491	4,932
Renewable		928	1,171	1,288
TOTAL ENERGY SOLD/DELIVERED OFF-SITE				
Heat¹ sold/delivered off-site	302-1d	371	426	453
Electricity sold/delivered off-site	302-1d	30	80	82
TOTAL ENERGY CONSUMPTION²				
CHANGE IN TOTAL ENERGY CONSUMPTION³	302-4	-306	-411	176
Production volume, thousand metric tons		4,856	5,197*	5,382*
ENERGY INTENSITY, GWh per thousand metric tons of production⁴				
	302-3	0.76	0.77	0.82

1. Sum of steam, district heat, condensate, and other heat delivered off-site.  
2. The amount of fuel consumed plus purchased electricity and heat minus heat and electricity sold.  
3. Comparison of total energy consumption to the previous year.  
4. Kemira has calculated the energy intensity by dividing total energy consumption with the annual production volume. Energy intensity is strongly dependent on the types of production mix.  
\* Updates to data were provided by sites during 2023 data collection.

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ENERGY EFFICIENCY ENHANCEMENT PROGRAM

During 2023, we continued implementing our E3plus (Energy Efficiency Enhancement) program established in 2010. The E3plus program aims to reduce the overall specific energy consumption, measured as kWh per metric ton of product, at each of our manufacturing sites. The key focus areas of the E3plus program are:

- Continuing the global alignment of energy efficiency management across all Kemira sites.
- Focused and thorough E3 Energy Reviews to identify improvement projects and support their implementation at our manufacturing sites.
- Technical and economic evaluation of investment projects to improve energy efficiency.
- Further development of the Kemira energy efficiency management system, improving energy management, and obtaining and maintaining ISO 50001:2018 certification in 5 selected manufacturing sites.

Our global Energy Management Team (EMT) coordinates, steers and supports energy management activities across all regions. Members of the EMT represent the top management of our manufacturing sites, as well as our global energy sourcing management.

Our energy efficiency measures and activities focus on sites that have the highest energy consumption. There are 15 sites that consume approximately 91% (90% in 2022) of the energy used by Kemira, and contribute approximately 81% (85% in 2022) of the company's Scope 1 and Scope 2 emissions. Site-specific energy efficiency targets are defined for the largest energy consuming sites, based on energy consumption baseline data, the findings of E3 Energy Reviews, and the availability of resources.

Kemira participates in the voluntary national Energy Efficiency Agreement in Finland ("[Energiatehokkuussopimus](#)") for the period 2017–2025. This Agreement is a part of Finland's national ratification of the EU's response to the Paris Climate Agreement. The total savings reported to the National Energy Authority in Finland ("[Energiavirasto](#)") since 2017 are 125 GWh/a, equivalent to approximately 3.8 million EUR/a.

During 2023, energy savings were additionally achieved through the implementation of 60 (61 in 2022) projects across Kemira's operations, saving a total of 11,106 (12,478 in 2022) MWh/a of energy, equivalent to 0.9 (0.8 in 2022) million EUR savings. The cumulative cost savings of more than 670 (610 through 2022) projects implemented since the start of the E3plus program in 2010, now totals 14.9 (14.0 in 2022) million EUR.

ENERGY REDUCTION 5% (ENRE5) PROGRAM

In 2023, an energy reduction program was launched specifically for the coagulant and polymer manufacturing sites in Kemira. The purpose of the program is to achieve an energy consumption reduction of 5% (on a kWh per metric ton production basis) in the next 3 years. During 2023, approximately 80 projects were identified, which are associated with approximately 67 GWh of energy savings. This corresponds to a reduction of approximately 11% compared to the target of 5%.

ENERGY CONSUMPTION OUTSIDE OF THE ORGANIZATION

Some of our sodium chlorate manufacturing sites provide energy in the form of by-product fuel (hydrogen) to third-party organizations that use the fuel for manufacturing processes and energy generation activities. The downstream hydrogen consumption by the organizations outside of Kemira offsets the use of fossil-based fuels for their industrial and energy generating activities, and therefore, offers potential for CO<sub>2</sub>e emissions reductions for those organizations. Since the use of the hydrogen by the organizations does not result in CO<sub>2</sub>e emissions, Kemira reports 0 for its Scope 3, Category 11 emissions. A summary of the energy consumed outside of Kemira is provided below.

HYDROGEN CONSUMPTION OUTSIDE OF KEMIRA, GWH

	2023	2022	2021
Hydrogen consumption outside of Kemira, GWh	273	262	189

KEMIRA ENERGY EFFICIENCY INDEX

The Kemira Energy Efficiency Index measures the ratio of energy use to production volumes normalized to a 2012 base year for our 15 large manufacturing sites covering approximately 90% of energy consumption. The index for the 2012 base year was defined as 100.0; and values lower than 100.0 indicate improvements to the index. The Energy Efficiency Index value for 2023 is 96.9.

KEMIRA ENERGY EFFICIENCY INDEX PERFORMANCE

2023	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
96.9	95.6	96.7	97.2	96.5	97.1	97.4	96.9	97.7	99.1	98.9

Value for 2012 base year defined as 100.0.

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Pollution (and Other Emissions to Air)

Kemira's sources of air emissions (pollutants other than GHGs) are associated with the following:

- Combustion of fuels in boilers, dryers, heaters, and emergency generators.
- Combustion of fuels in mobile equipment such as forklifts, railcar movers, and company vehicles.
- Natural gas, sulfur, and coke feedstocks used in power-generation and manufacturing process operations.
- Manufacturing processes such as reactors and vessels.
- Raw material and product handling, transfer, and storage operations.

Natural gas and hydrogen are the primary fuels used on-site to generate steam and heat. Mobile equipment are either electric-powered vehicles or use fuels such as natural gas, propane, and low-sulfur diesel fuel. Based on the quantities consumed and the types of fuels used, air emissions of products of combustion such as nitrogen oxides (NO<sub>x</sub>), carbon monoxide, and sulfur oxides (SO<sub>x</sub>) from low-emission fuels are not considered to be material topics for Kemira.

Kemira's emissions of particulate matter (dust), hazardous air pollutants, acid gases, and volatile organic compounds (VOC) are primarily associated with material handling and manufacturing processes. Kemira's manufacturing processes use air pollution control devices and best management practices to minimize air emissions and to comply with legislation. Therefore, these emissions are also not considered to be material topics for Kemira.

Kemira does not produce, import, or export ozone depleting substances (ODS). The use of ODS at Kemira sites (where they have not already been replaced by approved substitutes due to local regulations) is limited to comfort or process cooling applications. Since these applications use closed loop systems, emissions from ODS would only result from leaks. Kemira's preventive maintenance programs minimize the potential for leaks and implement corrective actions in the event a leak is discovered.

In 2023, Kemira began reporting emissions of three additional pollutants in preparation for future regulatory disclosures:

- Elemental chlorine (Cl<sub>2</sub>)
- Gaseous fluorides, expressed as hydrogen fluoride (HF)
- Ammonia (NH<sub>3</sub>).

Pollutants reported by Kemira that are not required to be disclosed by GRI and that are not identified in relevant regulations are reported as "Other air emissions."

Though Kemira does not consider air emissions of pollutants other than GHGs to be a material topic, the table below provides the air emissions for reference.

POLLUTION AND OTHER EMISSIONS TO AIR (t)				
	GRI Disclosure	2023	2022	2021
NOx	305-7a.i	160	170	168
SOx	305-7a.ii	39	51	60
Persistent organic compounds (POP)	305-7a.iii	1	0	0
VOC	305-7a.iv	570	785	1,020
Hazardous air pollutants	305-7-a.v	91	135	114
Particulate matter (dust)	305-7a.vi	72	79	62
Carbon monoxide	305-7a.vii	217	187	224*
Hydrochloric acid	305-7a.vii	8	116	144
Ammonia	306-7a.vii	13		
Elemental chlorine	306-7a.vii	1		
Gaseous fluoride, expressed as HF	306-7a.vii	0		

\* Data correction was made during 2023 data collection. Emissions are estimated based on direct measurements, published emissions factors, mass balance, or estimates based on engineering calculations. Separate data collection of Ammonia, Elemental chlorine and Gaseous fluoride started in 2023.

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Water and Marine Resources

WATER MANAGEMENT

Through our Sustainability Policy and Nature Stewardship program, we strive to minimize water consumption and minimize the negative impact of water discharge activities on the quality of receiving water bodies. Kemira’s manufacturing processes require water primarily for use as cooling water and process water.

We are continuously evaluating opportunities to decrease water withdrawal, consumption, discharge, and associated impacts through water recycling and reuse, and process redesign and optimization. Where possible, water is recycled and/or reused at our sites to reduce water withdrawal, consumption, and discharge. Our product portfolio is regularly assessed to identify opportunities to reduce freshwater use in products. Kemira ensures that all its employees at all manufacturing sites have access to Water, Sanitation and Hygiene (WASH).

Wastewater and cooling water discharges at the manufacturing sites including the profile of the receiving waterbody are regulated by environmental permits of the manufacturing sites and associated Environmental Impact Assessments (EIA) at sites where EIA is required. Wastewater generated from Kemira’s manufacturing processes are primarily treated in third-party wastewater treatment plants prior to discharge to a waterbody. Cooling water does not usually require treatment prior to discharge.

Kemira uses the EcoVadis platform to assess sustainability of its suppliers. Water management is included as one criteria in the EcoVadis platform. In EcoVadis, suppliers are requested to meet certain standards and continuously improve in the area of environment including environmental compliance, waste, air emissions, climate change, water and groundwater, wastewater, energy, nuisance (noise and odor), land use and biodiversity, soil and hazardous chemicals. The scope and results of the 2023 EcoVadis assessment are presented in the chapter Sustainability Assessments and Audits of Suppliers earlier in this report.

WATER TARGET

In 2021, Kemira introduced a new water target to improve our water management to Leadership level based on CDP Water Security scoring methodology by the end of 2025 (score A/A-). Kemira answered to CDP’s Water Security full questionnaire for the first time in 2021 and achieved score B (Management level). The 2023 score remained as B (Management level) even if the scoring criteria was stringent. Based on scoring report Kemira’s overall water management improved compared to 2022.

WATER RISK ASSESSMENT AND WATER SCARCITY RISK SCENARIO ANALYSIS

Kemira updated its water risk assessment in 2023. At the site level, identification, assessment and responding to water related risks is included in the sites’ EHSQ Risk Assessment process. Site-specific EHSQ Risk Assessments are audited on a regular basis internally by Kemira’s Global EHSQ function and externally by accredited ISO 14001 auditors, and results are reported in Kemira’s sustainability reporting system. Environmental impacts and risks, including water related impacts and risks, are initially assessed as part of the environmental permitting process of the sites and Environmental Impacts Assessments (EIA) at the sites where EIA is required. At the global level, water scarcity risks are assessed using scenario analysis as described below and other water related risks such as river floods, flash floods and tsunamis are included in climate risk scenario analysis.

Water stress and scarcity risks are assessed by the Global EHSQ function annually using WRI’s Aqueduct tool to identify sites in water stress areas, and the WWF Risk Filter for water scarcity and basin physical risk. In addition, operational risk is assessed using the WWF Risk Filter’s operational risk assessment tool. Kemira has 8 sites (13 % of the sites) located within water stressed areas (areas of “High” or “Extremely High” water stress - that is, areas in which more than 40% of available water is used by industry, household and agriculture) as indicated in the Water scarcity risk areas table. The table also shows the number of Kemira’s manufacturing sites in water scarcity areas and basin physical risk areas and the corresponding percentage compared to the total number of manufacturing sites.

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NUMBER OF SITES LOCATED IN WATER SCARCITY RISK AREAS

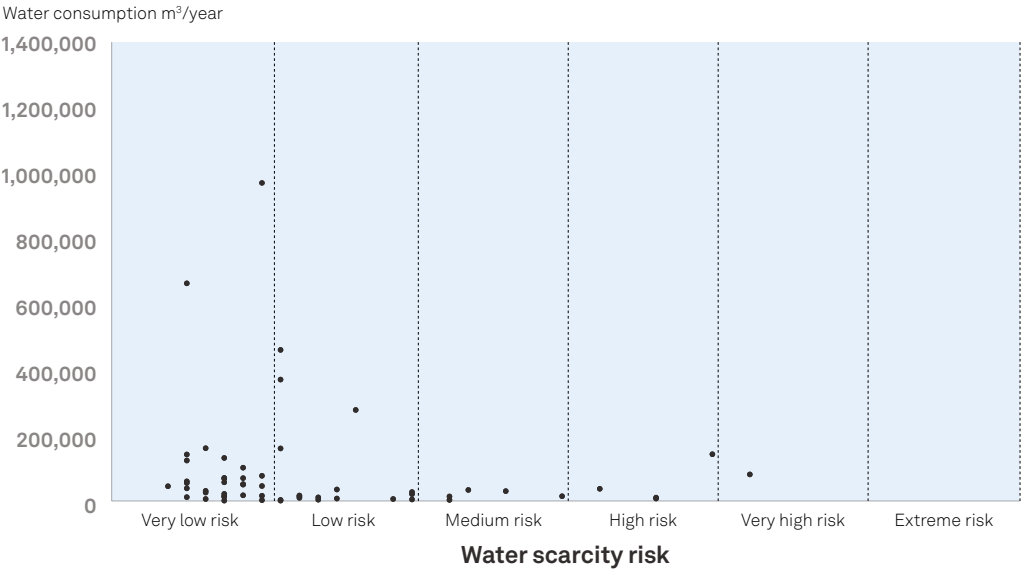
Scenarios	WRI Aqueduct		WWF Water Risk Filter					
	Water Stress Area		Water Scarcity Area			Basin Physical Risk Area		
	High	Extremely high	High risk	Very high risk	Extreme risk	High risk	Very high risk	Extreme risk
2023 baseline	3 (5%)	5 (8%)	4 (7%)	1 (2%)	0 (0%)	12 (20%)	0 (0%)	0 (0%)
2030 scenario	8 (13%)	6 (10%)	3 (5%)	3 (5%)	1 (2%)	12 (20%)	2 (3%)	0 (0%)
2040 scenario	7 (12%)	6 (10%)	N/A	N/A	N/A	N/A	N/A	N/A
2050 scenario	N/A	N/A	3 (5%)	2 (3%)	2 (3%)	12 (20%)	4 (7%)	0 (0%)

Water stress - the ratio of total water withdrawals to available renewable surface and groundwater resources  
Water stress area - areas in which more than 40% of available water is used by industry, household and agriculture, i.e. areas of "High" or "Extremely High" water stress, based on WRI's Aqueduct tool  
Water scarcity - Water scarcity refers to the physical abundance or lack of freshwater resources, which can significantly impact business such as production/supply chain disruption, higher operating costs, and growth constraints.  
Water scarcity area - areas of "High", "Very high" or "Extreme" water scarcity risk, based on WWF's Water Risk Filter  
Basin physical risk - Comprises four risk categories covering different aspects of physical risks: water scarcity, flooding, water quality, and ecosystem services status negatively impacting water ecosystem services, based on WWF's Water Risk Filter  
Basin physical risk - C- areas of "High", "Very high" or "Extreme" basin physical risk, based on WWF's Water Risk Filter  
2030 scenario - assessed based on "business as usual" (WRI Aqueduct) and "current trend" (WWF Risk Filter) scenario  
2040 scenario - assessed based on "business as usual" (WRI Aqueduct) scenario  
2050 scenario - assessed based on "current trend" (WWF Risk Filter) scenario

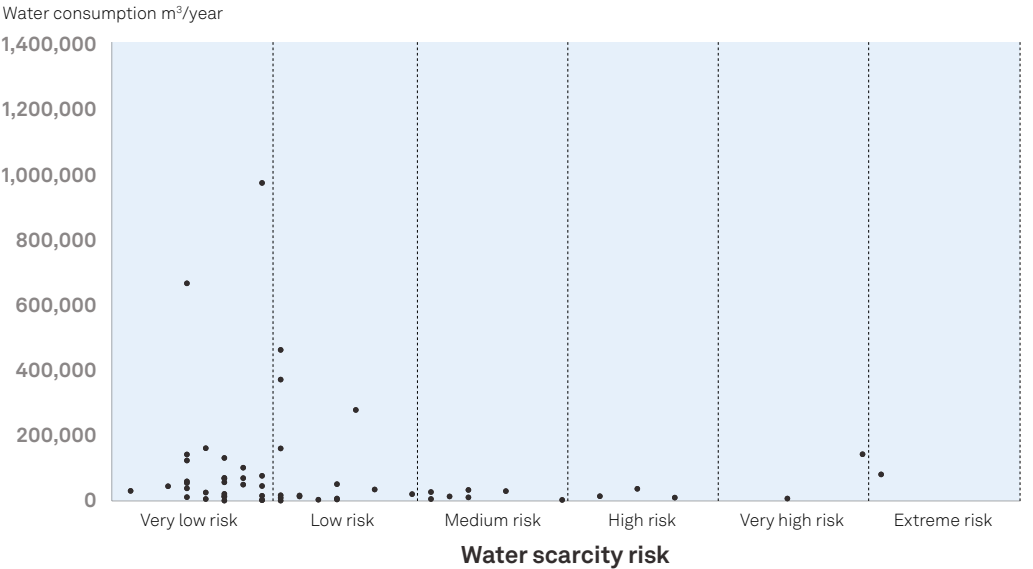
As illustrated in the figures below, most of Kemira's sites are located and most of the water consumption takes place in very low or low water scarcity risk locations. Kemira aims to reduce freshwater consumption and wastewater impacts across the company with its main focus at sites located now or in the future in high water stress and high water scarcity risk areas.

Water-related risks with potential to have significant (>1 million EUR) financial or strategic impact on the site's business (3 to 6 years into the future) have been identified at some manufacturing sites. Considering the scenario analysis and based on water-related risks identified at the sites, 23 sites were selected for a more detailed water risk assessment including interviews and/or operational risk assessments using the WWF Water Risk Filter. No site-specific substantive risks were identified within the timeframe of 3 to 6 years into the future considering mitigation measures at the sites. The substantive financial or strategic impact on Kemira's business is defined as financial implications above 10 million EUR per site.

WATER SCARCITY BY SITE LOCATIONS (BASELINE 2023)



WATER SCARCITY BY SITE LOCATIONS (2030 CURRENT TREND SCENARIO)





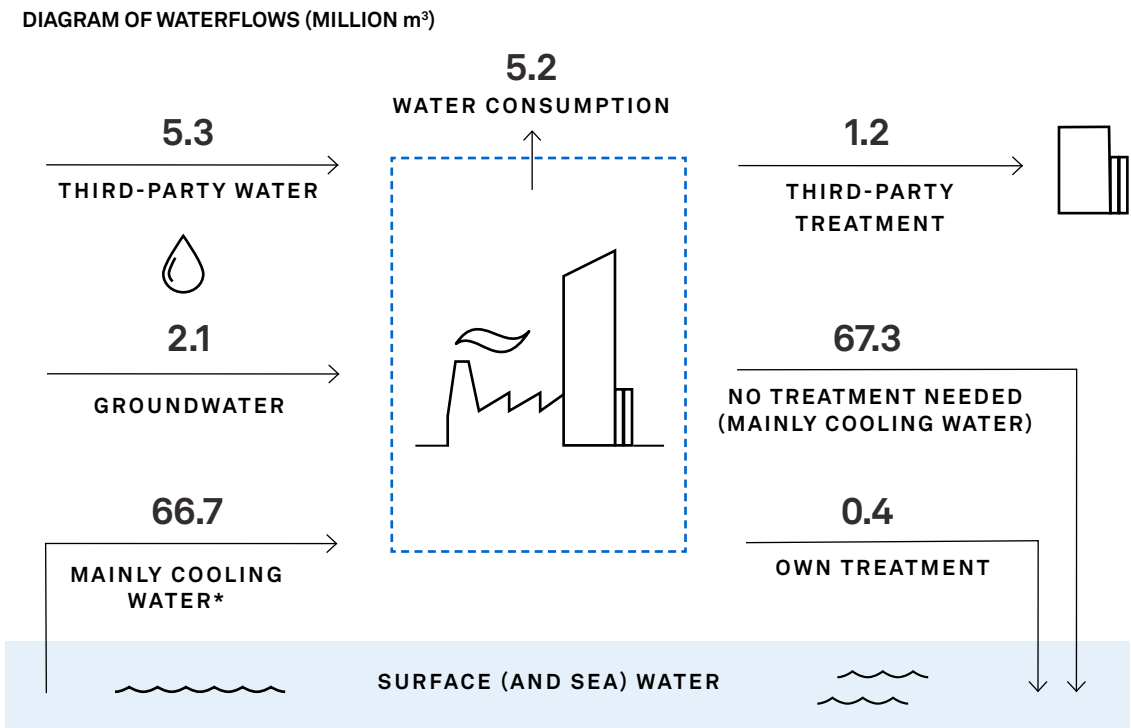
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As part of Kemira's climate risk scenario analysis, risks in the value chain such as potential supply shortages and associated production losses, for example due to heavy rains in parts of Europe and China have been identified. However, the impact of the identified value chain risks have so far been assessed not to exceed the threshold for substantive risk of 10 million EUR per event considering our mitigation

measures within the timeframe of 3 to 6 years into the future. Kemira has suffered materialized supply shortages due to extreme weather events, but associated costs per event have not exceeded the threshold of substantive risk. Kemira's logistics are not assessed to be dependent on vulnerable waterways such as rivers potentially impacted by drought and no substantive risks associated with

waterway logistics have been identified. Kemira also uses Sphera Supply Chain Risk Management (SCRM) to monitor and mitigate key suppliers' supply chain risk. Key supplier locations are inserted, and the tool alerts different risk event types (natural disasters including water related events, pandemics, local events). Kemira has 1,360 supplier locations in Sphera SCRM.



\* 99% cooling water and 1% process water

**WATER WITHDRAWAL, CONSUMPTION AND DISCHARGE**

Total water withdrawal decreased 11% compared to 2022 and 19% compared to 2021. Total water consumption decreased 15% compared to 2022 and 19% compared to 2021. The water withdrawal intensity (m³ per metric tons of production) decreased 5% from 2022 and 10% from 2021. Most of the water withdrawal is used for cooling water purposes (93%). The total water discharges decreased 11% compared to 2022 and 18% compared to 2021. Most of the water discharge is cooling water and other water that requires no treatment (98%). Water withdrawal and discharges decreased mostly due to a decrease in production and in particular a decrease in the production of water intensive products.

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OVERVIEW OF WATER FLOWS (MEGALITERS)

GRI disclosure		2023		2022		2021	
		All areas	Areas with water stress	All areas	Areas with water stress	All areas	Areas with water stress
Water withdrawal by source, total	303-3	74,056	519	82,973	489	90,875	514
Surface water		51,171	0	55,902	1	61,693	0
Ground water		2,117	133	2,326	147	2,573	228
Seawater		15,211	0	18,060	0	19,113	0
Produced water		274	71	166	73	160	85
Total third-party water		5,285	315	6,518	268	7,336	201
Third-party water by source	Surface water	N/A	230	N/A	196	N/A	139
	Groundwater	N/A	85	N/A	72	N/A	62
	Seawater	N/A	0	N/A	0	N/A	0
Water discharges by destination, total	303-4	68,885	175	76,939	207	84,360	294
Surface water		52,295	N/A	57,006	N/A	62,869	N/A
Ground water		0	N/A	0	N/A	0	N/A
Seawater		15,369	N/A	18,088	N/A	19,296	N/A
Total third-party water		1,221	N/A	1,845	N/A	2,194	N/A
Third-party water sent for use to other organizations		38	N/A	2	N/A	3	N/A
Water discharge by treatment	No treatment (mainly cooling water)	67,310	N/A	74,678	N/A	81,688	N/A
	Own treatment	354	N/A	416	N/A	478	N/A
Water consumption	303-5	5,171	344	6,035*	282	6,515	221

\*Update to data was provided during 2023 data collection.

A breakdown of volumes by freshwater (<1,000 mg/L Total Dissolved Solids) and seawater (>1,000 mg/L Total Dissolved Solids) is not provided since only one site uses seawater as cooling water and discharges the cooling water back to seawater after cooling.

Produced water as defined in GRI 303 is generated in Kemira's two tall oil plants in which water is extracted from raw material in process and water as steam condensate for steam from off-site source is categorized as produced water.

Water consumption consists of the water withdrawn and incorporated into products, evaporated, consumed by humans, or otherwise unusable by others such that it is not released back to surface water, groundwater, seawater, or a third-party.

Water storage is not a significant water-related impact at our manufacturing sites and therefore, is not reported in our disclosure.

Water consumption is calculated as Total water withdrawal minus Total water discharge.

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WATER WITHDRAWAL AND FRESHWATER USE (MEGALITERS)

	2023	2022	2021
Process water withdrawal, total	4,611	6,365	7,001
Surface water withdrawal - Process	430	587	644
Groundwater withdrawal - Process	269	279	273
Seawater withdrawal - Process	0	0	0
Produced water - Process	170	69	75
Third-party water withdrawal - Process	3,716	5,411	5,987
Rain water - Process	27	18	22
Cooling water withdrawal, total	69,191	76,376	83,454
Surface water withdrawal - Cooling	50,714	55,297	61,006
Groundwater withdrawal - Cooling	1,801	1,988	2,193
Seawater withdrawal - Cooling	15,211	18,060	19,113
Produced water - Cooling	104	97	85
Third-party water withdrawal - Cooling	1,363	934	1,058
Rainwater - Cooling	0	0	0
Other water, total	254	232	420
Surface water withdrawal - Other	0	0	12
Groundwater withdrawal - Other	48	59	108
Seawater withdrawal - Other	0	0	0
Produced water - Other	0	0	0
Third-party water withdrawal - Other	206	173	291
Rainwater - Other	0	1	9
Water withdrawal intensity, m³ per metric ton of production	15	16	17
Freshwater use, m³	6,473	8,130*	9,027*
Freshwater use intensity, m³ per metric ton of production	1.3	1.6*	1.7*
Production volumes, thousands of metric tons	4,856	5,197*	5,382*

\* Updates to data were provided by sites during 2023 data collection.  
Kemira calculates freshwater use as the m³ of total freshwater withdrawal minus the m³ of cooling water associated with once-through cooling water system and produced water. The freshwater use intensity is calculated as the freshwater use per metric ton of production.  
Other water includes water used in ancillary operations such as water used as potable water, sanitary water and cleaning and washing of premises used for ancillary operations such as outdoor areas outside of production, workshops, offices and toilets.

Kemira's goal is to continuously decrease freshwater use intensity. Freshwater use intensity has decreased by approximately 15% from 2022 and 26% from the baseline year 2019 mostly due to decrease in the proportion of water-intensive products. Kemira calculates freshwater use as the m³ of total freshwater withdrawal minus cooling water withdrawal associated with once-through cooling water systems and produced water. The freshwater use intensity is calculated as the freshwater use per metric ton of production with the baseline in 2019 at 1.8.

Wastewater generated from Kemira's manufacturing processes are primarily treated in third-party wastewater treatment plants. 78% of Kemira's wastewater that is required to be treated is treated at third-party wastewater treatment plants with no data available on direct effluent to water bodies. 22% of treated water is treated at own treatment plants. Kemira's most significant direct emissions to waterbodies include BOD, COD, TDS and TSS discharges. COD and TSS emissions are primarily associated with two manufacturing sites that have on-site wastewater treatment plants, while TDS emissions mostly originate from one site with cooling water discharge to surface water. The overall direct effluent emissions at Kemira are therefore minor.

TOTAL DIRECT EFFLUENT EMISSIONS BY QUALITY (METRIC TONS)

	2023	2022	2021
Biochemical oxygen demand (BOD)	0.3	0.2	0.2
Chemical oxygen demand (COD) <sup>1)</sup>	6.8	8.6	8.1
Total dissolved solids (TDS) <sup>2)</sup>	82.6	15.1	14.8
Total suspended solids (TSS) <sup>3)</sup>	3.2	9.8	16.7

1) Discharges from one biological wastewater treatment plant account for about 80% of the total COD discharges.  
2) TDS effluent emissions originate mostly from one site with cooling water discharge to surface water. The increase in discharge is due to a reduced requirement for frequent cleaning operations of the on-site sump.  
3) TSS effluent emissions originate mostly from one site with on-site wastewater treatment.

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Biodiversity and Ecosystems

Biodiversity for Kemira means developing and providing renewable solutions to customers, while reducing pressures on biodiversity and ecosystems, promoting the responsible use of natural resources through circularity in the whole value chain and in supporting our customers to move away from fossil-based raw materials. With the increased focus on water treatment solutions, we enable the availability of clean and high-quality water to nature and people.

In 2023, we expanded our biodiversity assessment to our Tier 1 suppliers. A consultancy-led, pilot-scale project was conducted to identify major indirect nature impacts and dependencies in our Pulp & Paper, Polymers and Coagulants segments. The work was carried out in accordance with the Step 1a&b guidelines of the Science Based Targets Network's (SBTN) Science-Based-Targets for nature, and both primary and secondary data sources were utilized. The results identified that the main indirect biodiversity impacts in the upstream value chain are caused through terrestrial ecosystem use, water use, GHG emissions and pollution. Supplier biodiversity assessments will continue in 2024.

Kemira continued its work as part of the Biodiversity ad hoc group organized and led by the Chemical Industry Federation of Finland. In 2023, we joined the SBTN framework training program launched by the UN Global Compact Finland with the aim to learn about the five-step process for identifying the most significant impacts on nature in the direct operations and upstream value chain. The program will continue until the spring of 2024.

The Integrated Biodiversity Assessment Tool (IBAT) and WWF Risk Filter Suite (Water Risk Filter and Biodiversity Risk Filter) are used to monitor priority areas in own operations. The priority sites in proximity to protected areas or areas of high biodiversity value are presented in the following table. Kemira's manufacturing sites (60) have environmental permits and are located on industrial land and utilize already existing infrastructure. Based on the environmental impact assessments conducted as part of the environmental permitting of the sites, Kemira's manufacturing sites do not have a direct substantial impact on biodiversity that adversely affect the integrity of a geographic area or change its ecological features and functions, and are not considered to have a direct material impact on the IUCN Red List of Threatened Species.

MANUFACTURING SITES IN RELATION TO PROTECTED AREAS OR AREAS OF HIGH BIODIVERSITY VALUE

Geographic location	Type of operation	Position in relation to the protected area or area of high biodiversity value	Size of operational site, ha	Biodiversity value of the protected area or area of high biodiversity value
Fray Bentos, Uruguay	Manufacturing	In the area <sup>1)</sup>	7.0	Important Bird and Biodiversity Area - Terrestrial, Freshwater
Vancouver, Canada	Manufacturing	In the area	0.5	Important Bird and Biodiversity Area - Terrestrial, Marine
Helsingborg, Sweden	Manufacturing	Adjacent	116.2	Nature Reserve - Marine
Pori, Finland	Manufacturing	1) Contains portions <sup>2)</sup> 2) Adjacent <sup>3)</sup>	54.9	1) Important Bird and Biodiversity Area - Terrestrial, Marine 2) Special Protection Area (Birds Directive) - Marine
Krems, Austria	Manufacturing	Adjacent	2.2	1) Important Bird and Biodiversity Area -Terrestrial 2) Special Protection Area (Birds Directive) - Terrestrial
Ostroleka, Poland	Manufacturing	Adjacent	0.4	1) Important Bird and Biodiversity Area - Terrestrial 2) Special Protection Area (Birds Directive) - Terrestrial
Police, Poland	Manufacturing	Adjacent	3.0	Site of Community Importance (Habitats Directive) - Terrestrial
Teesport, UK	Manufacturing	Adjacent	8.1	1) Special Protection Area (Birds Directive) - Marine 2) Site Of Special Scientific Interest (Gb) - Marine
Washougal, USA	Manufacturing	Adjacent	4.5	National Wildlife Refuge - Terrestrial
Wroclaw, Poland	Manufacturing	Adjacent	4.7	Site of Community Importance (Habitats Directive) - Terrestrial

1) "In the area" means the entire area of the manufacturing site is within the protected area or area of high biodiversity value.  
2) "Contains portions" means some part of the protected area or area of high biodiversity value lies in the area of the manufacturing site.  
3) "Adjacent" is defined by Kemira as a maximum distance of 300 meters from the manufacturing site. The definition is subject to modification in accordance with the updated GRI guidelines.

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Environmental Compliance

Kemira’s integrated management system is a set of standards, procedures, and practices to achieve environmental goals through continual planning, implementation, evaluation, and review of environmental performance. One of the primary environmental goals of Kemira’s management system is compliance with legal requirements. Kemira has identified its legal compliance obligations and implements an Auditing Standard to verify conformance. Kemira regularly conducts EHSQ compliance audits at manufacturing sites, research and development laboratories, and offices. Management system audits are performed on a periodic cycle (typically every 3 years) by Kemira’s independent internal auditing team and external bodies. The audits focus on certain elements within the management system based on the risks and opportunities impacting the site, business segment, or Kemira as a whole at the time of the audit. To supplement this internal audit sampling approach, third-party legal compliance audits are conducted annually at a sampling of sites. Verification of legal compliance is also provided annually by all sites as part of the environmental performance data collection and reporting processes. Kemira’s robust integrated management system requires all sites to report non-compliance to the group’s Global EHSQ Team using our incident reporting program (Synergi Life).

Kemira received 6 (5 in 2022) fines or financial penalties related to one-time non-compliance incidents with environmental, health, and safety laws and/or regulations in 2023. The 6 fines (4 in the USA; 1 in Spain, and 1 in China) totaled approximately 18,000 (11,000 in 2022) EUR (ranging from approximately 1,000 EUR to approximately 5,000 EUR). Corrective actions required by the authorities were completed. Kemira does not consider these fines or penalties to be significant based on the criteria used in other sustainability reporting platforms (e.g., fines of at least 10,000 EUR) or based on disclosures of other companies in the chemical industry.

Kemira documented 15 (15 in 2022) non-compliance incidents (in addition to those associated with the fines or financial penalties described above) as part of its management system processes. These isolated incidents did not result in a significant impact on the environment, employees, or community, nor did they result in a sanction or other action from an environmental authority that would be considered significant. Corrective actions required from these incidents are completed according to the schedule established by the site. Corrective actions that require CapEx investments may require additional time to complete and may still be in progress as of 31 December 2023.



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Materials

The renewable materials used include mainly starches, tall oil, and fatty acid derivatives.

The recycled input materials are industrial by-products and recycled materials from external partners. These materials include mainly inorganic materials such as scrap iron, ferrous sulfate and spent pickling liquor bath. Industrial by-products are mainly from smelters, as well as steel and metal manufacturing. Inorganic by-products and recycled materials are mainly used in the production of inorganic coagulants, which are used in water treatment.

Materials	GRI disclosure	2023	2022	2021
Total raw materials used, million metric tons	301-1	2.52	2.48	2.51
Renewable raw materials, %	301-1	2.8	3.3	3.6
Renewable raw materials as a share of carbon-containing raw materials, %	301-1	18.4	19.7	21.3
Recycled raw materials, %	301-2	44.3**	37.9*	37.7
Carbon-containing raw materials, %		15.2	16.6	17.0

\* 2022 recycled raw materials figures revised downwards 0,3pp from 2022 sustainability report due to incorrect assumptions used for certain raw materials in South America region.

\*\* The increase in recycled raw materials in 2023 is mainly due to including ferrous sulphate from Pori landfill in reporting.

Products and Solutions

Kemira offers sustainable chemical solutions for water intensive industries and provides the best suited products, services and expertise to improve our customers' end-product quality, process and resource efficiency. Kemira's products can help reduce the need of energy and water, cut the amount of waste and emissions and optimize raw material use in customers' processes and end-products. Besides increasing resource efficiency, Kemira is actively developing novel renewable products and solutions that improve recyclability and biodegradability and decrease end-of-life emissions, to help customers accelerate circularity and meet their sustainability targets. In 2023, we continued to focus on product sustainability-related topics through our Positive Impact Portfolio sustainability program, where we systematically build further and empower our product sustainability evaluation capabilities, external certifications and communication. Carbon footprint data is already available for various products and product groups and LCA capabilities are further strengthened.

To better understand the impact of our customer offering, we calculate how large part of our product revenue is improving resource efficiency in our customers' applications. Our KPI is described as the share of revenue from products sold for use-phase resource efficiency. For example when a product is used to change the properties of customer's end-product it is defined as not improving the resource efficiency. The calculation and scoring logic has been the same since 2016, when the calculation was started. Each product line has been qualitatively scored (yes-high, yes-medium, yes-low, no, not applicable) and weighted for 34 different customer applications (both Pulp & Paper and Industry & Water segments). If the share of 'Yes' scoring is higher than the share of 'No' scoring, the product belongs to customer resource efficiency category. The target is to ensure that at least 50% of our revenue is generated through products that improve customers' resource efficiency. We have been able to improve the target from a baseline of 49% in 2016 to 59% in 2023. The increase of the figure is mainly due to portfolio changes.

	2023	2022	2021	2020	2019	2018	2017
Share of revenue from products sold improving customer resource efficiency	59%	53%	54%	52%	53%	51%	50%

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Kemira's New Product Development (NPD) process, described in the Product Development section, is also a significant contributor in development of the sustainable products and solutions portfolio. During 2023, we initiated 11 (2022: 14) new product development projects, 82% of them aiming to improve customers' resource efficiency. At the same time, Kemira started commercialization for four new product development projects all contributing to improved resource efficiency for our customers. At the end of 2023, Kemira had 419 (2022: 401) patent families, including 2,041 (2022: 2,101) granted patents and 963 (2022: 1,026) pending applications. During 2023, Kemira applied for 55 (2022: 34) new patents.

The transition to renewable resources is one core element in Kemira's product portfolio strategy. This is advanced through our focus on renewable raw materials innovation and our public target of increasing our renewable products' revenue by 2030. 31% of our research and development efforts relate to renewable solutions. Replacing fossil raw materials with more sustainable alternatives is advanced in many ways. The mass balance concept, which enables quick expansion towards more sustainable products, having significantly lower end-of-life emissions compared to traditional products, is one of our approaches. This means that raw materials originating from renewable and circular feedstocks can be utilized in existing production infrastructures, creating identical product quality and performance to that of conventional products. Kemira uses the ISCC PLUS\* certification system for the mass-balance accreditation because it is a globally widely recognized system and is also adopted by our suppliers and specific customers. Kemira produces certified biomass balance products in ISCC-accredited manufacturing facilities in multiple EMEA locations, and globally supplies them to customers in water-intensive industries. In 2022, Kemira was the first company in the world to sell ISCC PLUS-certified polyacrylamide (PAM) polymers and since then we have constantly grown our biomass balance business and expanded our portfolio offering to include various other product groups.

\*ISCC PLUS is a sustainability certification program for renewable raw materials for all markets and sectors without regulation.

Waste

WASTE MANAGEMENT

Through our Sustainability Policy and Nature Stewardship program, Kemira strives to minimize the amount of industrial and municipal waste generated through consistent material flow management and drive improvements to the efficiency of manufacturing processes. Waste in Kemira is disposed of or recovered in compliance with statutory requirements.

Kemira is continuously working internally and together with its waste handling companies to decrease the amount of disposed waste through process optimization and by finding recovery options for waste streams. Wastewater classified as waste is mostly recovered by a combination of wastewater treatment and incineration with energy recovery. Kemira's manufacturing sites have no own waste disposal, e.g., own active landfills. Waste from manufacturing sites is collected by third-party waste handling companies that have permits to receive and manage waste. All waste is managed by third-party companies in compliance with local regulations. This is ensured as part of sourcing of waste management services.

Waste generated upstream in Kemira's value chain mostly includes waste generated by raw material suppliers. Kemira uses the EcoVadis platform to assess the sustainability of its suppliers. Waste management is included as one criteria in the EcoVadis platform. The scope and results of the 2022 EcoVadis assessment are presented in the chapter Sustainability Assessments and Audits of Supplier earlier in this report.

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Waste generated downstream in Kemira's value chain mostly include products disposed of by Kemira's customers and packaging waste. Kemira operates in a B2B business environment. In the I&W sector, Kemira's water treatment products are disposed of or recovered after use depending on the client's application. In the P&P sector, Kemira's products are mostly used in paper and cardboard products. Paper and cardboard waste is generally mostly recovered, either recycled or incinerated with energy recovery. Approximately 92% of Kemira's product transportation to customers is bulk transportation with no packaging waste generated in practice. Approximately 4% of products are transported to customers in Intermediate Bulk Containers (IBCs) that are mostly recycled. Approximately 4% of products are transported to customers in other packaging such as drums, bags and other packaging that are assumed to be mostly recovered, either recycled or incinerated with energy recovery, but no data on packaging waste recovery and disposal methods at the customer end is available.

TOTAL WASTE GENERATION AND DISPOSAL

Waste data is collected by seven composition categories including chemical waste (filter cake, disposed products, and other chemical waste), sludge, metallic waste, mineral waste from construction and demolition and other mineral waste, soils, wastewater and other waste. Kemira follows local environmental permits in waste reporting and recovery and disposal method definitions. The most significant waste categories include chemical waste and wastewater. Some wastewater streams are defined as waste in local environmental permits and reported as waste to local environmental authorities, and therefore also reported as waste as part of Kemira's sustainability reporting.

Total waste generated by Kemira in 2023 was 90.6 thousand metric tons that is 16% less than in 2022 (107.7 thousand metric tons) and 23% less than in 2021 (117.0 thousand metric tons).

HAZARDOUS WASTE

Total hazardous waste generated by Kemira in 2023 was 17.3 thousand metric tons. Approximately 19% of Kemira's waste is hazardous waste. The volume of hazardous waste reduced by approximately 30% compared to 2022, and by approximately 33% compared to 2021. The main reason for the significant reduction from 2023 to 2022 was the disposal of a significant amount of contaminated soil as hazardous waste in 2022 at one site and the ceasing of the washing of tanks of tanker trucks at the end of 2022 at another site. Approximately 41% of Kemira's total hazardous waste is diverted from disposal and approximately 59% is directed to disposal.

NON-HAZARDOUS WASTE

Total non-hazardous waste generated by Kemira in 2023 was 73.3 thousand metric tons. Approximately 81% of Kemira's waste is non-hazardous waste. The total amount of non-hazardous waste decreased by approximately 12% compared to 2022. This is mostly due to disposal of accumulated non-hazardous waste at one site in 2022, a reduction of production at Kemira's most waste intensive site, general reduction in production and less non-production-related demolition and soil waste. Approximately 15% of Kemira's non-hazardous waste is diverted from disposal and approximately 85% is directed to disposal.

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WASTE COMPOSITION (THOUSAND METRIC TONS)

GRI disclosure		2023			2022			2021		
		Waste generated	Waste diverted from disposal	Waste directed to disposal	Waste generated	Waste diverted from disposal	Waste directed to disposal	Waste generated	Waste diverted from disposal	Waste directed to disposal
WEIGHT OF WASTE, TOTAL	306-3	90.6	17.8	72.7	107.7	21.5	86.2	117.1	40.5	76.5
Chemical waste		29.3	7.6	21.6	32.5	6.8	25.8	33.6	8.8	24.9
Filter cake		14.3	3.5	10.8	15.8*	2.8	13.1*	16.9*	5.2	11.7*
Disposed products		1.5	0.9	0.6	0.7	0.2	0.4	0.8	0.2	0.6
Other chemical waste		13.4	3.2	10.2	16.0*	3.8	12.3*	15.9*	3.3	12.6*
Sludges		4.8	3.6	1.2	5.0	3.2	1.8	5.7	4.0	1.6
Metallic waste		0.4	0.4	0.0	0.5	0.5	0.0	0.4	0.4	0.0
Mineral waste from construction and demolition		1.0	1.0	0.0	1.5	1.5	0.0	1.6	1.6	0.0
Soils		2.0	1.9	0.1	6.6	6.5	0.1	5.9	1.1	4.7
Wastewater		46.7	0.6	46.1	55.2	0.6	54.7	62.4	21.8	40.6
Other waste		6.3	2.6	3.6	6.3	2.5	3.9	7.4	2.7	4.6

\* Updates to data were provided by sites during 2023 data collection. Correction of systematic error in historical data reporting.

WASTE DIVERTED FROM DISPOSAL BY RECOVERY OPERATION (THOUSAND METRIC TONS)

	GRI disclosure	2023	2022	2021
WEIGHT OF WASTE DIVERTED FROM DISPOSAL, TOTAL	306-4c	17.8	21.5	40.5
Hazardous waste	306-4b	7.1	10.0	8.3
Preparation for reuse		0.0	0.0	0.0
Recycling		5.4	5.1	7.2
Other recovery operations		1.6	4.9	1.0
Non-hazardous waste	306-4d	10.8	11.5	32.3
Preparation for reuse		0.3	0.1	0.2
Recycling		8.7	7.6	27.7
Other recovery operations		1.9	3.8	4.3

WASTE DIRECTED TO DISPOSAL BY DISPOSAL OPERATION (THOUSAND METRIC TONS)

	GRI disclosure	2023	2022	2021
WEIGHT OF WASTE DIRECTED TO DISPOSAL, TOTAL	306-5c	72.8	86.2	76.5
Hazardous waste	306-4b	10.2	14.7	17.5
Incineration (with energy recovery)		4.0	5.1	4.9
Incineration (without energy recovery)		0.6	0.4	0.8
Landfilling		3.0	1.6	1.6
Other disposal operations		2.7	7.6	10.3
Non-hazardous waste	306-4d	62.5	71.5	59.0
Incineration (with energy recovery)		46.6	53.2	41.4
Incineration (without energy recovery)		0.3	0.2	0.2
Landfilling		11.4	14.4	13.4
Other disposal operations		4.2	3.7	4.1

Waste disposal method was determined based on information in environmental permits and provided by waste disposal contractors.  
All waste presented in tables above is either diverted from disposal or directed to disposal off-site. There was no on-site disposal in Kemira in 2023.

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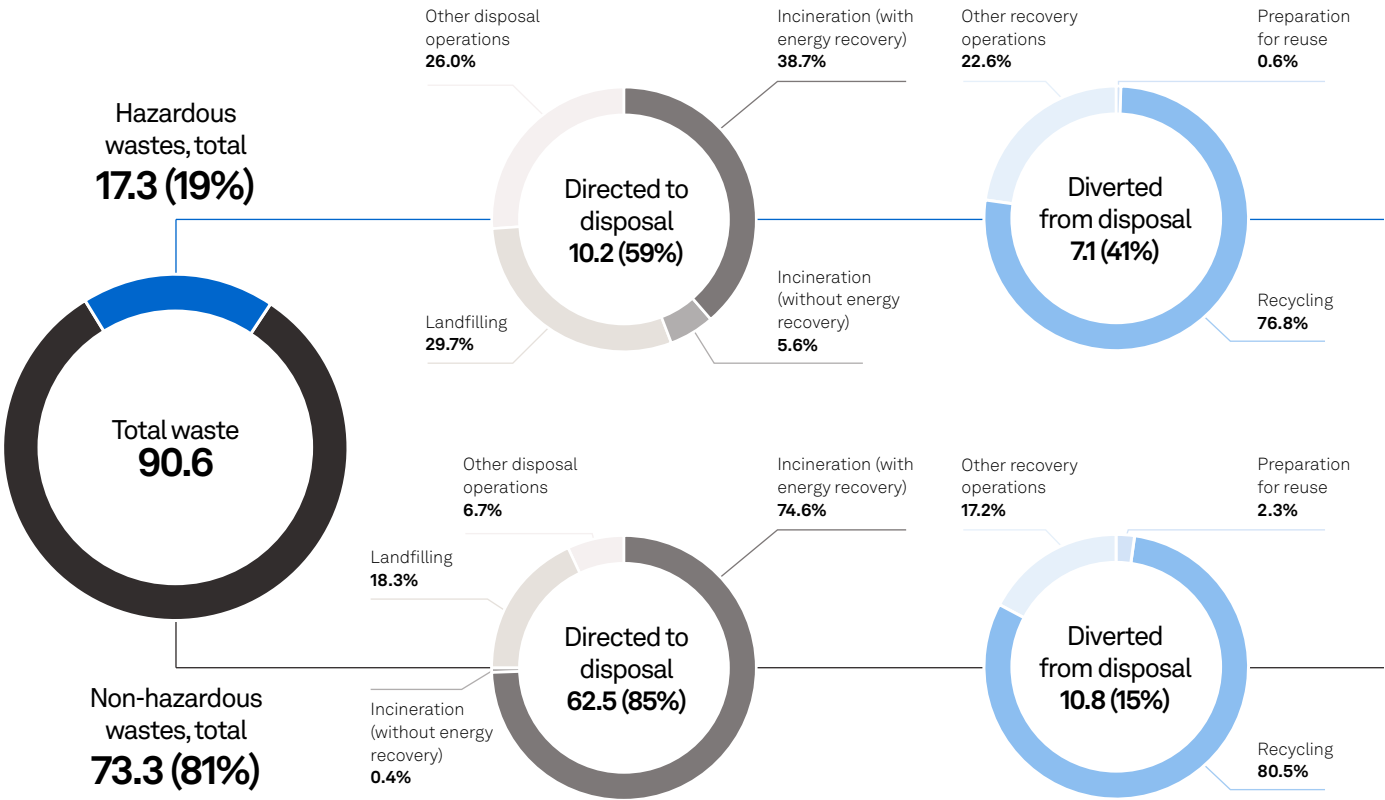
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PRODUCTION WASTE, WASTE TARGET AND RECOVERY RATE

Most of Kemira’s waste is production waste. Other waste categories are non-production waste and disposed products that are defined as follows:

- Non-production waste:
  - Expired or outdated raw materials.
  - Contaminated soil or debris from a spill.
  - Construction and demolition waste, including waste (reusable and non-reusable) associated with plant or site closures.
  - Biomass from gardening and pruning activities.
  - Laboratory/warehouse cleanouts.
  - Non-routine tank/railcar cleaning waste.
- Disposed products:
  - Kemira's products that have been disposed of or recovered by a third-party disposal company.

TOTAL WASTE BY TYPE AND DISPOSAL METHOD (OFFSITE)  
1,000 TONS



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WASTE CATEGORIES (THOUSAND METRIC TONS)

	2023	2022	2021
Production waste	84.3 (93%)	94.6 (88%)	103.1 (88%)
Non-production waste	4.7 (5%)	12.4 (11%)	13.1 (11%)
Disposed products	1.5 (2%)	0.7 (1%)	0.8 (1%)

Kemira’s target is to reduce disposed production waste intensity by 15% by 2030. For this target, we measure disposed production waste. This includes both hazardous and non-hazardous waste. It excludes waste that is recovered, e.g., via recycling, reuse and incineration with energy recovery. It is expressed as an intensity; metric tons of waste per thousand metric tons of production. The baseline is 2019 at 4.6 and target is 3.9 by 2030. The intensity in 2023 was 4.4, which is less than the 4.6 recorded in 2022 and the baseline of 4.6. The 2022 figure includes some accumulated production waste from previous years at one site. Kemira continues to identify opportunities and takes actions to decrease disposed waste generation in cooperation with waste handling companies and by using product line-specific data. Calculation of the target is presented in the next table.

Kemira follows the recovery rate of production waste. The recovery rate of production waste remained at the same level as in 2022. The calculation of the recovery rate of production waste is presented in the following table.

PRODUCTION WASTE BY TYPE AND DISPOSAL METHOD (THOUSAND METRIC TONS), WASTE TARGET AND RECOVERY RATE

	2023	2022	2021
<b>Hazardous waste</b>	15.0	16.9	20.7
Preparation for reuse	0.0	0.0	0.0
Recycling	4.7	5.0	6.9
Other recovery operations	0.9	0.9	1.0
Incineration (with energy recovery)	3.4	4.9	4.8
Incineration (without energy recovery)	0.4	0.3	0.7
Landfilling	3.0	1.5	1.5
Other disposal operations	2.5	4.4	5.8
<b>Non-hazardous waste</b>	69.3	77.7	82.4
Preparation for reuse	0.2	0.1	0.2
Recycling	5.5	4.4	26.4
Other recovery operations	1.6	2.4	2.8
Incineration (with energy recovery)	46.5	53.2	37.4
Incineration (without energy recovery)	0.2	0.1	0.1
Landfilling	11.2	13.8	11.5
Other disposal operations	4.1	3.7	3.9
<b>Grand Total</b>	84.3	94.6	103.1
<b>Total disposed production waste</b>	21.4	23.7	23.6
<b>Recovery rate of production waste, %<sup>2)</sup></b>	75	75	77
<b>Disposed production waste intensity (Kemira waste target) metric tons per metric tons of production<sup>1)</sup></b>	4.4	4.6*	4.4*
<b>Production volumes, thousand metric tons</b>	4,856	5,197*	5,382*

\* Updates to data were provided by sites during 2023 data collection.  
1) Incineration (without energy recovery), Landfilling and Other disposal operations are included in calculation of the waste target (disposed production waste intensity). Incineration (with energy recovery) is considered as recovery operation in the target calculation.  
2) Preparation for reuse, Recycling, Other recovery operations and Incineration (with energy recovery) are considered as recovery operations in calculation of recovery rate of production waste.



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WASTE RECOVERED FROM LANDFILL

Kemira continues to recover raw material from landfill at the manufacturing site of water treatment chemicals in Pori, Finland. The primary raw material of Kemira's process (ferrous sulphate) was supplied by a titanium dioxide plant in the same industrial park. However, the supplier's operations were discontinued following a fire in 2017. In response to the raw material supply interruption, Kemira identified a closed, on-site landfill as an alternate supply of ferrous sulphate. The end-of-waste criteria of the EU Waste Framework Directive was applied in the environmental permitting process to facilitate the reuse of former waste. Since the landfill mining began, Kemira has utilized approximately 960,000 metric tons of ferric sulphate from the landfill as raw material and there is additional capacity available for use, putting some 30 years of accumulated industrial by-product back into our circular economy. In 2023, a total of 166,066 metric tons of ferrous sulphate was recovered from the landfill.

WASTE RECOVERY IN SITE CLOSURE PROJECTS

In accordance with GRI standards, Kemira's sustainability reporting is limited to currently operating manufacturing sites. Kemira supports waste recovery and the circular economy in all its operations. In addition to manufacturing sites, waste is generated in site closure projects. In 2023, Kemira continued site closure activities at a site closed in 2013 in Vaasa, Finland, with soil and landfill remediation. In total approximately 66,000 metric tons of excavated soil and 30,300 metric tons of concrete and brick waste from demolition of the on-site industrial buildings have been utilized in reconstruction of the landfill in accordance with acceptance criteria permitted by the authorities to replace virgin materials transported from off-site sources.

SIGNIFICANT SPILLS<sup>1</sup>

Kemira's definition of a significant spill is a spill resulting in either of the following:

- A spill or release of more than 1,000 kg of a hazardous chemical to the air, soil, or water.
  - A hazardous chemical is a chemical identified as hazardous or dangerous by applicable legislation or by internationally-recognized protocols such as the United Nations Dangerous Goods classification.
- An incident that results in substantial negative publicity.

In 2023, there were 3 significant spills compared to 5 in 2022.

All of the significant spills occurred at our manufacturing sites. Two incidents occurred in the USA and one incident took place in Finland. The total volume of the significant spills was approximately 5 metric tons.

The incident in Finland was a spill of 1,075 kg of transformer oil to a lake due to an equipment failure. The plant was shut down and an oil spill response was initiated immediately to minimize environmental impacts. Based on environmental investigations, the environmental impacts were temporary and limited.

The significant spills did not have a permanent or significant impact on the environment beyond the remediated material. The financial impact of all spills has been consolidated in Kemira's **Financial Statements**. These spills were not separately reported in Kemira's Financial Statements.

TRANSPORT OF HAZARDOUS WASTE

In 2023, approximately 30 (27 in 2022) metric tons of hazardous waste were transported by, or on behalf of Kemira, to external suppliers not owned by Kemira. Hazardous waste was not imported or treated by Kemira in 2023.

One of our sites in South America does not have a treatment or disposal option within the country for some of its hazardous wastes. Therefore, it must be shipped to the EU for disposal. In 2023, there were approximately 27 (27 in 2022) metric tons of hazardous waste exported from South America to Europe for disposal. In addition, approximately 3 metric tons of hazardous waste between EU countries was exported. In total, less than 1% of the hazardous waste generated in 2023 (less than 1% in 2022) by Kemira was shipped internationally.

<sup>1</sup> The effluents-related content of the GRI Standard GRI 306: Effluents and Waste 2016 has been superseded by GRI Standard GRI 303: Water and Effluents 2018, and the waste-related content has been superseded by GRI 306: Waste 2020. The spills-related content in GRI 306: Effluents and Waste 2016 remains in effect.

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Own Workforce, Contingent Workers and Contractors

EMPLOYMENT

At the end of 2023, Kemira employed 4,915 people (4,902 in 2022). The employee distribution by region shows that 51% (50%) of Kemira's total workforce were employed in EMEA, and 30% (31%) in the Americas. The number of employees has increased by 13 (compared to a decrease of 24 during 2022). Most employees work with permanent and full-time employment contracts. The share of temporary contracts and part-time workers has been stable. Workers who are legally recognized as self-employed, or individuals other than the ones on Kemira's payroll are not counted in these numbers.

TOTAL NUMBER OF EMPLOYEES

	2023	2022	2021
Total number of employees*	4,915	4,902	4,926
Female, %	27%	27%	26%
Male, %	73%	73%	74%
White collar, %	60%	59%	59%
Blue collar, %	40%	41%	41%

\* At year end. Workers who are legally recognized as self-employed, or individuals other than the ones in Kemira's payroll are not counted on these numbers.

TOTAL NUMBER OF EMPLOYEES BY EMPLOYMENT CONTRACT (PERMANENT AND TEMPORARY), BY GENDER

	2023	2022	2021
Total number of employees	4,915	4,902	4,926
Total permanent	4,839	4,817	4,846
Total fixed-term*	76	85	80
Female total	1,327	1,305	1,291
Permanent	1,303	1,270	1,257
Fixed-terms*	24	35	34
Male total	3,588	3,597	3,635
Permanent	3,536	3,547	3,589
Fixed-terms*	52	50	46

\*Fixed-term meaning temporary employment contract.

TOTAL NUMBER OF EMPLOYEES BY EMPLOYMENT CONTRACT (PERMANENT AND TEMPORARY), BY REGION

	2023	2022	2021	%, 2023	%, 2022	%, 2021
Total number of employees	4,915	4,902	4,926			
Americas	1,484	1,525	1,487	30%	31%	30%
APAC	932	931	923	19%	19%	19%
EMEA	2,499	2,446	2,516	51%	50%	51%
Permanent total	4,839	4,817	4,846	98%	98%	98%
Americas	1,481	1,520	1,486	31%	32%	31%
APAC	932	931	923	19%	19%	19%
EMEA	2,426	2,366	2,437	50%	49%	50%

A temporary (fixed-term) employment contract is a type of employment used mainly in EMEA, atypical for Americas and APAC. In 2023, there were 76 employees (1.5%) with temporary contract (85; 1.7% in 2022).

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TOTAL NUMBER OF EMPLOYEES BY EMPLOYMENT TYPE (FULL-TIME AND PART-TIME), BY GENDER

	2023	2022	2021
Total employees	4,915	4,902	4,926
Total full-time	4,831	4,829	4,845
Total part-time	84	73	81
Female total	1,327	1,305	1,291
Full-time	1,273	1,250	1,230
Part-time	54	55	61
Male total	3,588	3,597	3,635
Full-time	3,558	3,579	3,615
Part-time	30	18	20

The total number of part-time workers is low and for this reason we have not considered it material to report these per regions.

Collective bargaining agreements

The collective bargaining agreements are measured for 'significant locations of operations' referring to countries with 10 or more employees. In Kemira's case, there are 24 such countries and altogether these countries represent 99% of all employees.

In 2023, 2,234 (45%) of Kemira employees globally were covered by collective bargaining agreements (2,329; 48% in 2022). Working conditions and terms of employment of those employees who are not covered by collective agreements, are defined based on company policy, local labor laws and applicable legislation.

TOTAL NUMBER AND RATE OF NEW EMPLOYEE HIRES DURING THE REPORTING PERIOD, BY AGE GROUP, GENDER AND REGION

	Number of new hires			New hires, %		
	2023	2022	2021	2023	2022	2021
Total new hires	610	626	526			
New hires by age group						
<30	247	259	220	40%	41%	42%
30 - 50	287	295	247	47%	47%	47%
>50	76	72	59	12%	12%	11%
New hires by gender	610	626	526			
Females	158	192	146	26%	31%	28%
Males	452	434	380	74%	69%	72%
New hires by regions	610	626	526			
APAC	55	65	56	9%	10%	11%
EMEA	340	312	275	56%	50%	52%
Americas	215	249	195	35%	40%	37%

TOTAL NUMBER AND RATE OF EMPLOYEE TURNOVER DURING THE REPORTING PERIOD, BY AGE GROUP, GENDER AND REGION

	Turnover			Turnover, %		
	2023	2022	2021	2023	2022	2021
Total turnover	480	541	403	10%	11%	8%
Turnover by age group						
<30	70	71	58	14%	14%	12%
30 - 50	234	304	200	8%	11%	7%
>50	176	166	145	11%	11%	9%
Turnover by gender	480	541	403			
Females	93	141	90	7%	11%	7%
Males	387	400	313	11%	11%	9%
Turnover by region	480	541	403			
APAC	54	57	56	6%	6%	6%
EMEA	172	277	173	7%	11%	7%
Americas	254	207	174	17%	14%	12%

The total turnover is based on permanent workforce.

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Workers, who are not employees (Contingent workforce)

The contingent workforce describes non-Kemira employees employed by a third-party partner but perform their work on behalf of Kemira. The proportion of contingent workers in comparison to Kemira's total headcount was 8.7% in 2023 (8.2% in 2022). Typically, contingent workforce provide temporary resourcing with specified skills and competences, substitute others or balance out seasonal workload fluctuations.

In addition, Kemira uses external service providers (contractors) who work at Kemira locations. These services cover, for example, cleaning, maintenance work and consultancy services. We do not record the number of people, but follow the contractor hours as this information is included in the workplace safety indicator TRIF. In 2023, there were approximately 3.35 million hours, equals to around 1,790 FTE (Full Time Equivalents) when assuming 7.5 hours per day and 250 working days per year.

	2023	2022	2021
Total number of contingent workers	428	403	453
Manufacturing	82	88	106
Sales and Field Service	185	151	182
Other professional and office	161	164	165

LABOR-MANAGEMENT RELATIONS

Annual total remuneration development

Kemira is a global company with operations and employees in multiple countries and the market remuneration levels differ significantly between these countries. To ensure alignment with the interests of the CEO and the shareholders, the weighting of variable remuneration, and especially long-term incentive plans, in the CEO's total remuneration opportunity is substantial.

The next table sets out the remuneration paid during the respective year, considering that a portion of that remuneration may have been earned during the previous year.

The total remuneration of the CEO includes the regular base salary, benefits, short and long-term incentive payments for Jari Rosendal until July 31, 2023, and for the Interim CEO, Petri Castrén, starting July 18, 2023. The final salary payment and closing of ongoing short- and long-term incentive programs concerning the President & CEO Jari Rosendal after July 31, 2023 have been excluded from this overview. The details of the payments are being disclosed in the Kemira Remuneration Report 2023.

Annual total remuneration development	2023	2022	2021
CEO total remuneration*	€2,009,668	€1,453,573	€1,537,148
CEO total remuneration development YoY	138	95	90
Average total remuneration for all employees **	€66,527	€65,294	€56,254
Average total remuneration development YoY	102	116	96
Ratio CEO total remuneration vs average total remuneration for all employees	30	22	27
Ratio development YoY	136	82	94

\* Paid base salary, benefits, defined contribution pension, short- and long-term incentives.  
\*\* Employee wages and salaries including accrued short-term incentives, excluding side costs, excluding CEO total remuneration.

Flexible working and other benefits to support engagement and well-being

Kemira's hybrid work philosophy guides our flexible working model to drive engagement and performance while supporting employee well-being. At the same time it establishes Kemira's expectations regarding collaboration and the fostering of our culture and values. Employees, whose job can be performed outside a Kemira office or facility, can work with a hybrid work mode, based on Kemira's hybrid work philosophy and guiding principles. In 2023, 51% of our white collar employees (1,506 employees) worked in the hybrid manner, and 24% (698 employees) are fully remote workers working mainly for commercial units. Our manufacturing and some other operations require physical presence at the sites and that is why we constantly seek additional opportunities to increase flexibility for people working in these units. During 2023, we began extended flexibilities in working hours with pilot with compressed working, and prepared a model for job sharing. Based on our experiences with these pilot initiatives, these and other models offering further flexibilities will be introduced more broadly.

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The benefit programs at Kemira differ depending on regional and country-specific practices, and in recent years in many countries we have further extended the benefits that support overall employee well-being. In most countries, the same benefits are offered to full-time and part-time employees and for temporary employees hired directly by Kemira, if the temporary contract exceeds a certain length.

Benefit practices are country-specific and typically do not vary between locations and operations. Some exceptions apply, for example some countries offer additional insurance and/or retirement benefits for permanent full-time employees.

Minimum notice periods regarding operational changes

As stated in our Code of Conduct, all sites are obliged to follow local legislation, regulations and other agreements regarding labor practices, including notice periods. Minimum notice periods are defined in laws or in collective agreements, and are followed in each country accordingly. The time period for the consultation process relating to operational changes varies by country and region, starting from 14 days for smaller changes to up to six months in some countries and for major changes, varying between one to two months in most countries.

WORKPLACE SAFETY

High-performing Environmental, Health, Safety and Quality (EHSQ) management is crucial to our business. We are committed to ensuring safe and responsible working conditions for everyone working for and with Kemira. Our approach is to manufacture and deliver our products and services safely, and to protect our nearby communities. We are building an interdependent safety culture which is driving us towards zero harm in all of our activities. We are continuously striving to improve our ways of working to ensure the safety of our people and working environments. All our work is guided by regulations and external requirements, our Sustainability policy, respective standards and operating practices.

Safety is the foundation for all our operations, and includes all aspects; people safety, environmental safety, process safety, chemical safety, transportation safety and asset integrity. With competent employees and contractors we take effective measures to eliminate hazards, reduce risks and prevent incidents. We communicate openly and honestly, and promote active participation of employees and key stakeholders.

We understand incidents in our operations may have negative consequences for our people, environment and third-parties working for us at Kemira sites, or locations where Kemira is present if we fail to manage risks linked to our operations.

OCCUPATIONAL HEALTH AND SAFETY

Kemira reports its occupational safety performance indicator as Total Recordable Injuries (TRI), which includes permanent injuries and fatalities, lost time incidents, restricted work cases and medical treatment cases, and covers both Kemira employees and contractors working at Kemira owned and customer sites. TRI Frequency (TRIF) is measured as Total Recordable Injuries per million working hours.

Kemira uses external service providers (contractors) who work at Kemira locations. These services cover maintenance, repair, turnaround, major renovation or specialty work at Kemira sites. Contractor hours are tracked as this information is included in the workplace safety indicator TRIF. Third-party transportation companies, whether on-site or off-site, are excluded and incidental facility services such as janitorial work, food and drink services, laundry, delivery or other supply/resupply services are also excluded. In 2023, there were approximately 3.35 million hours which equals to approximately 1,790 FTE (Full Time Equivalents) when assuming 7.5 hours per day and 250 working days per year.

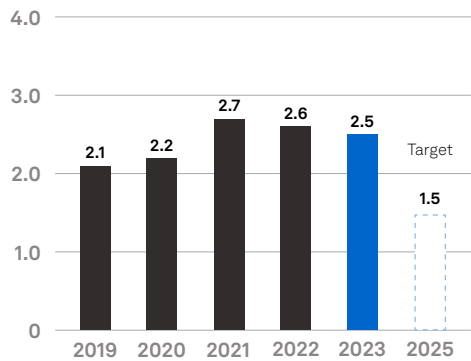
Our safety performance remained at the same level in 2023 compared with our performance in previous two years (2021 and 2022). Forty-two out of sixty manufacturing sites had zero incidents in 2023. The total number of TRIs in 2023 (2022) was 37 (36) and TRIF improved slightly to 2.5 (2.6) due to higher number of contractor working hours. Kemira employee TRIF was at the target level, 1.9 (21 injuries). The number of contractor injuries was 16 (13 in 2022), however the contractor TRIF improved from 5.2 to 4.8. The second and the fourth quarters of 2023 were the most challenging ones, with 11 injuries recorded. In response to increasing incident trends during this period, a global Safety Alert was sent to all of our manufacturing sites and systematic safety communication was continued. In April 2023, we invited all our employees to join the Internal Labor Organization’s (ILO) Safety Day in order to strengthen our safety culture with the themes "Everyone cares for each other and working environment" and "Everyone has the right and duty to call out unsafe behavior." Although we were not able to reach our 2023 TRIF target of 1.9, our safety performance has become steady, and is comparable to equivalent industrial safety performance levels. To achieve a world class target (<2.0) Kemira will continue to focus on safety awareness via training, behavior-based safety, contractor management, and hierarchy of controls. We will put a great effort to achieve our 2024 target of TRIF 1.9.

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There have been no fatalities involving Kemira employees or contractors since 2005. The number of Lost Time Incidents (LTIs) remained at the same level as in 2022 (21). Unfortunately, we had one permanent injury involving a contractor at a manufacturing location. They were carrying out work at height on a scaffold and as part of hoisting task a piece of railing was removed (an unauthorized action). A contractor fell from the scaffold, causing an injury which required a surgical operation. The person has not fully recovered and is continuing rehabilitation. It is unclear how and when the person can return to work. The case was classified as a permanent injury in the Kemira incident recording system, and the case is closed internally. The incident was reported to authorities according to local reporting requirements.

OUR SAFETY PERFORMANCE (TRIF)



TRIF: Total Recordable Injury Frequency per million hours

The number of Near Miss reports (546), which under different circumstances could have resulted in harm to people, were slightly higher compared to the previous year (536). The number of Near Misses may still increase when all Safety Observations and Near Miss cases are reviewed, classified and closed. Based on figures from the previous years, a 5-10 % increase is expected in the final 2023 Near Miss total.

One of our important leading safety indicators is Hazardous Conditions/Activities reporting, which reflects environmental or behavior-related hazards at the workplace. The number of reported Hazardous Conditions/Activities stayed at stable level and the outcome was 21,524 in 2023 which is equal to 4.4 per Kemira employee. The proactive reporting of Hazardous Conditions/Activities helps us to identify possible weaknesses in our safety management system, and is an example how we continuously improve our ways of working and work environment.

The Behavior Based Safety (BBS) program continued in 2023. Kemira employees performed over 15,000 BBS observations in 2023. The employee engagement and proactive identification of safe/at-risk behaviors stayed at the same level as the year before. We continued our project to refresh our BBS program. As part of this project, we arranged refresher trainings for our personnel. During the trainings we shared our experiences, discussed how to carry out observations, and how to give and receive feedback. We also added "positive observation" case as a new observation type in our safety reporting software. Our target is to widen the number of observers, to further develop our safe ways of

working and increase safety awareness in our organization. We believe including employees at all levels of the organization and driving managerial accountability together with understanding human aspects of safety are keys to better safety performance.

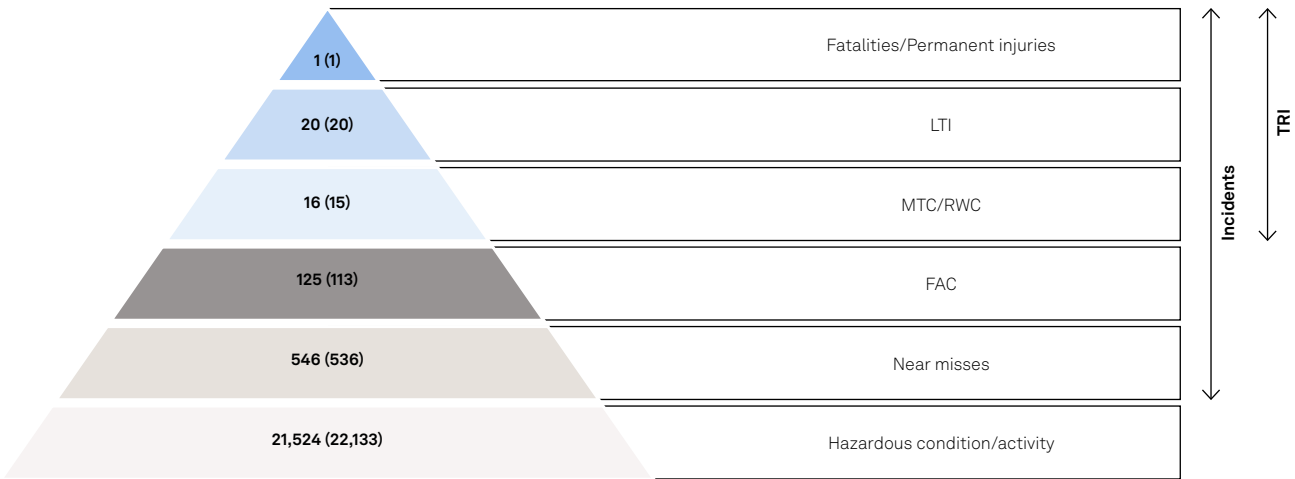
Kemira's Commercial Sales Representatives & Field Customer Service Personnel perform various tasks at customer locations. Depending on the applications and customer requirements they can perform tasks such as equipment installation and maintenance, chemical dosing, test trials, process sampling and analyzing, and inventory management. In 2023, we updated our tools to better identify and document the work-related hazards and their controls. In addition, we continued our work to identify all work scopes at customer location and to develop global Standard Operating Procedures. Commercial Sales Representatives completed more than 1,400 job hazard assessments, equipment inspections, or safety inductions in our online application.



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PERSONAL INJURIES PYRAMID 2023 (2022)



Incident classification	Definition
Permanent injury	A work-related injury leads to damage that will indefinitely restrict the employment or other everyday activities of an individual.
Lost Time Incidents (LTI)	A work-related injury or illness, suffered by a Kemira employee or contractor resulting in at least one full day of time away from work (this does not include the day of the injury), as determined by a physician or other licensed health care professional.
Medical Treatment Case (MTC)	Any work-related injury or illness that requires professional medical treatment or a prescription medication. Medical Treatment means beyond first aid-level medical attention.
Restricted Work Case (RWC)	A work-related injury or illness that requires the employee to have restricted work, or transfer to another job for at least one full day, as determined by a physician or other licensed health care professional.
Total Recordable Injury (TRI)	TRI is the sum of Fatalities, LTI, RWC, and MTC.
First Aid Case (FAC)	First aid refers to a work-related minor injury or illness which can be treated by a first responder or equivalent and does not require a professional physician or paramedic medical attention.
Near Miss	An undesired event in the work environment that under different circumstances could have resulted in harm to people.
Hazardous Condition/Activity	Leading safety indicator reflecting environmental or behavior-related hazards at the workplace.

In autumn 2023, we launched the MySafety Pulse survey (Glint). In this survey we wanted to hear our employees' feedback on safety at Kemira. The response rate was aligned with the manufacturing benchmark (75%). We received the highest scores on the questions; "Ensuring safety is part of the way we do things around here" (score 90), "I can speak up about safety without fear of retaliation" (score 89) and "Safety is a shared responsibility in my team" (score 88). Overall, we saw improvements in twelve out of seventeen questions and only one question decreased one point.

As part of our development program, a Travel Safety Awareness training program was assigned to Kemira personnel engaged in business travel. Training sessions were launched via the Kemira internal learning management system, MyKem, covering medical and security risk awareness and the goal was also to increase awareness of critical services available to employees in the case of emergency while travelling for business.

During 2023, the systematic reporting of process safety incidents (RPSI) based on the International Council of Chemical Associations (ICCA) definition continued throughout the year. The investigation and corrective action effectiveness reviews with senior management were carried out for more significant cases. Other cases were assessed without review for corrective action effectiveness. Under our process safety training initiative, we conducted two training sessions on essential design and project-related topics, Management of Change and Pre-Startup Safety Review. All training involves a competency test to confirm understanding. A review of Kemira's Permit to Work practices at sites were conducted at all EMEA and APAC sites during 2023, and are scheduled to take place at our sites in the Americas in 2024.

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We have continued our development activities with contractor management. For example, Permit to Work reviews directly support contractor safety as permit to work is one of our key controls at our sites. We also focused on contractors working on our behalf at customer locations by improving communication of Kemira safety requirements and customer/ application-specific safety inductions. The periodical contractor performance evaluation process was reviewed, updated, and rolled out with high priority contractors.

Overall transportation safety performance has continued to stay at a low level since the beginning of 2021. We have been able to sustain a Kemira Global transportation incident KPI rate of approximately 1 incident per 10.000 deliveries for the past three years . Proactive communication and excellent co-operation with the manufacturing sites, Logistics and PSRA, together with ongoing transportation safety audits and Job Hazard Analysis (JHA) reviews have contributed to better performance. New safety programs and standardization projects introduced during 2023 and continuing into 2024 will be ongoing. For example, the Transportation Safety Project (EMEA), reviewed existing processes in manufacturing and the supply chain for compliance and identified potential improvements. I&W Americas initiated a standardization project across all plants for safe loading of Kemira products. The new KemScale project was introduced in the Americas for electronic pre-loading / loading / post- loading inspections. Continued support for the sites, Logistics and PSRA regarding transportation-related activities and compliance assurance for implemented standards and procedures will help us achieve our goals for 2024.

TOTAL RECORDABLE INJURIES

	2023	2022	2021
Total TRI	37*	36*	36
Kemira employees	21	23	28
Contractors working at Kemira site	16	13	8
Regional TRI			
APAC	2	1	3
EMEA	14	19	21
Americas	16	15	12
TRI Frequency			
Global TRIF	2.5	2.6	2.7
Kemira employees	1.9	2.0	2.5
Contractors working at Kemira site	4.8	5.2	3.6
Regional TRIF			
APAC	0.6	0.3	1.0
EMEA	2.5	3.5	4.0
Americas	4.3	3.8	3.3

\*2023 Global Functions/Global Engineering & Technology 5 TRIs, 2022 Global Functions 1 TRI.

LOST TIME INCIDENTS

	2023	2022	2021
Total LTI	21*	21	22
Kemira employees	12	15	17
Contractors working at Kemira site	9	6	5
Regional LTI			
APAC	2	1	0
EMEA	9	13	16
Americas	8	7	6
LTI Frequency			
Global LTI	1.4	1.5	1.6
Regional LTI			
APAC	0.6	0.3	0.0
EMEA	1.6	2.4	3.0
Americas	2.1	1.5	1.6

\*2023 Global Functions/Global Engineering & Technology 2 LTIs.

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PERFORMANCE MANAGEMENT AND DEVELOPMENT

Average hours spent on learning and development per year per employee

In 2023, Kemira continued to advance towards its aims to capture all training, education, and employee development related hours in the learning management system (LMS). So far, leadership development activities, regional and global competence development, vocational training programs, and many local programs are recorded in the LMS. However, some remaining training and development activities are still recorded locally and not covered in these numbers.

Learning hours registered in the system for larger countries in 2023 are

Country	2023	2022	2021
Finland	8,010	5,089	6,427
UK	5,615	3,245	4,719
Sweden	5,114	4,685	4,327
USA	6,458	6,936	7,444
Netherlands	3,571	4,014	4,565
China	12,565	18,370	31,578
Poland	2,364	3,684	3,838

There were variations in some of the biggest countries but in general, the total learning hours were on the same level as in 2022.

The globally registered average hours of learning for employees do not differ significantly by gender or white/blue collar distribution in 2023.

Programs for upgrading employee skills and transition assistance programs

Kemira provides each employee with access to the relevant competence development programs and structured learning opportunities to support the upgrading of employee skills through on-the-job learning programs (including generic and job-specific competence development), buddy/coaching/mentoring programs and traditional methods like classroom and digital learning.

The scope includes:

- Competence development programs, sustainability data and analytics, and safety culture.
- Leadership development (internal and external) programs.
- Professional and technical competence development programs covering upskilling and reskilling.
- Statutory or compliance-related programs.

All of these programs are available based on position, skills/competence level and career aspirations. With the exception of leadership development programs and other external cost-based programs (pre-approval required), employees can enroll and complete the self-paced learning programs available through our LMS (Learning Management System).

Examples of global and regional programs offered during 2023 are listed below:

- Code of Conduct, training on Gifts, Entertainment and Anti-Bribery, Speak Up, Information Security Awareness (renewed training launched in November 2023) and other compliance programs delivered mainly as eLearning.
- New training programs on Diversity, Equity and Inclusion offered through eLearning and facilitator-led virtual, face-to-face and hybrid training sessions.
- Sustainability: Introduction to Sustainability at Kemira, Kemira as a Sustainability-Focused Company. New eLearning courses were introduced within the Selling Sustainability training collection in addition to the Introduction to Biobased Products: Footprint, Handprint & Impact, Part 1: Basic Concepts and Kemira Footprint, and Part 2: Kemira Handprint and Impact in Society.
- Learning solutions for Commercial and Manufacturing roles as part of professional competence development included trainings on financial acumen, change management, EHSQ matters and commercial competences. A new virtual facilitator-led program on Communication was launched in 2023.
- EHSQ-related programs including Sustainability and EHSQ Policy, and EHSQ Standards are assigned as mandatory training to relevant employees to ensure safety awareness, understanding, compliance, and the further development of our Safety culture.
- Training on Project Management.
- Leadership training programs covering Kemira's leadership principles including High Impact Virtual Experience leadership development workshops.

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Kemira also provides transition assistance programs where relevant, with bigger changes to facilitate the continued employability and the management of career endings resulting from retirement or termination of employment. These have included:

- Identifying new job opportunities and offering respective training.
- Severance pay.
- Career planning and out-placement/job placement services.

Percentage of employees receiving regular performance and career development reviews

Our global performance and development discussion (PDD) process facilitates meaningful conversations between employees and managers, emphasizing performance, development, and engagement. It is an ongoing process that aims to establish a shared understanding of what needs to be achieved and how to achieve it using 4 core elements:

1. My Performance - setting performance targets and objectives in the beginning of the year and reviewing the progress and achievements regularly.
2. My Development - evaluating competencies, strengths and development areas in the current role, planning actions to support performance objective and career aspirations.
3. My Follow-up and Feedback - having regular discussions, follow-ups and feedback from direct manager, colleagues and stakeholders.
4. Overall Performance and Potential - once a year checkpoint in which managers complete an overall performance evaluation for each white collar employee, and assess the potential of employees in predefined roles. Both are calibrated through the organization in a structured and consistent way. Performance Evaluations for blue collar employees are handled locally when there is such process in place.

The global process covers all permanent employees, both white collar and blue collar employees, for example who are not absent for an extended time period because of leave. Temporary employees may be included based on the length of the contract.

PERCENTAGE OF TOTAL EMPLOYEES BY GENDER AND BY EMPLOYEE CATEGORY WHO RECEIVED A REGULAR PERFORMANCE AND CAREER DEVELOPMENT REVIEW DURING THE REPORTING PERIOD

Performance Development Discussion (PDD)	Number			%		
	2023	2022	2021	2023	2022	2021
Total permanent employees not absent*	4,745	4,820	4,827			
Employees covered in Global PDD process	4,408	4,282	4,567	93%	89%	95%
Female	1,233	1,242	1,189	98%	98%	98%
Male	3,175	3,040	3,378	91%	86%	93%
White collars	2,770	2,822	2,771	98%	99%	98%
Blue collars	1,638	1,460	1,796	85%	74%	90%

\* All permanent employees, who are not absent for an extended time period, because of leaves, for example, are covered by global performance and development discussion process.

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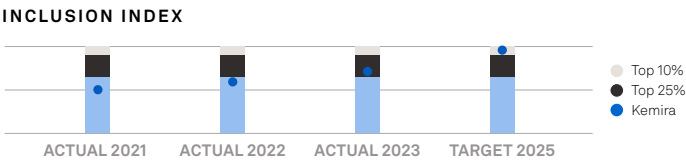
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DIVERSITY, EQUAL OPPORTUNITY AND INCLUSION

At Kemira, embracing diversity and fostering an inclusive environment not only drives innovation and creativity but also enhances employee engagement, well-being and satisfaction, contributing to the overall success of the organization. This is an environment we are continuously developing, one where every individual feels valued, respected and empowered to contribute their unique perspectives and talents and where all have equal opportunities to learn and grow, and the resources to make it happen.

In 2023, we prioritized our diversity and inclusion in our Diversity, Equity & Inclusion program to move us closer to our target – reach the top 10% cross-industry norm for diversity & inclusion by 2025. Our Inclusion Index score of 78 has reached the top 25% of the cross industry benchmark, for which is currently 2 points away from achieving as a result of our sustained improvement of approximately 2 points over the past year. Additionally, there are advancements in specific Index Items since October 2022, with both Belonging and Growth items showing an increase of +1 point each, and Inclusive Leaders showing a significant increase of +5 points.

Inclusion Index trend 2022–2023 vs Top 10% cross industry benchmark.



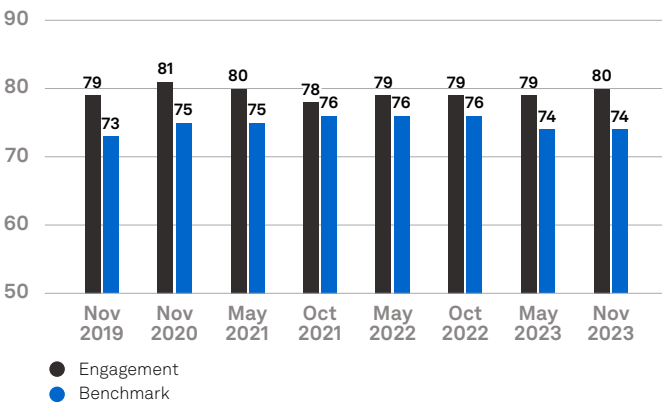
We further developed our concept of diversity and inclusion to support our sustainability goals and extended the program to include equity. We focused on promoting DEI, tailored training and building awareness. We co-created DEI awareness campaigns and learning solutions with employees and our employee resource groups; WomenatKemira network, KemPride and the

Inclusive Leaders project team. Over 400 people managers globally attended DEI training in English and local HR facilitated DEI manufacturing workshops in half of our sites ( 31/60) in local languages, and will reach remaining sites in 2024. Employees reported in their feedback to have been inspired, and that they appreciated the opportunity to connect on these topics and have a renewed commitment to building a more inclusive workplace for all stakeholders. In addition Kemira was recognized by Workplace Pride with an Impact Allyship Award 2023 for executive sponsorship of our LGBTQIA+ network.

Continuous employee listening and feedback

We adopted agile methods of continuous listening and feedback, working with a leading provider administering anonymous online pulse surveys and external benchmarks since 2019. It has been very well received by all our stakeholders and results are made available to employees and managers directly immediately after the processes closes. Participation rates typically ranges from 70–80%. In principle, we use short engagement pulse surveys twice a year to follow our Engagement Index. Based on the survey results we take actions following the ACT principles - Acknowledge where we are, Collaborate to understand the results and Take meaningful action.

MYVOICE TRENDS 2019–2023 COMPARED TO EXTERNAL MANUFACTURING BENCHMARK



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Diversity of governance bodies and employees

As stated in our Code of Conduct, we respect the diversity, talent and abilities of others. We at Kemira define ‘diversity’ as all the unique characteristics that make up each of us: personality, lifestyle, work experience, ethnicity, religion, gender, sexual orientation, age, national origin, ability and other characteristics. We focus our efforts to attract, develop and retain a workforce that is diverse, and to ensure an inclusive work environment that embraces the strength of our differences. We do not discriminate or treat employees or job applicants unfairly in matters that involve recruitment, hiring, training, promoting, compensation or any other term or condition of employment.

PERCENTAGE OF INDIVIDUALS WITHIN THE ORGANIZATION'S GOVERNANCE BODIES IN EACH OF THE FOLLOWING DIVERSITY CATEGORIES: GENDER, AGE GROUP, OTHER INDICATORS OF DIVERSITY WHERE RELEVANT

	Total			%		
	2023	2022	2021	2023	2022	2021
Management Board						
Total	8	8	8			
Female	2	1	1	25%	13%	13%
Male	6	7	7	75%	88%	88%
By age group						
<30	0	0	0	—%	—%	—%
30 - 50	0	0	1	—%	—%	13%
>50	8	8	7	100%	100%	88%
Board of Directors						
Total	8	8	7			
Female	3	3	1	38%	38%	14%
Male	5	5	6	63%	63%	86%
By age group						
<30	0	0	0	—%	—%	—%
30-50	3	2	1	38%	25%	14%
>50	5	6	6	63%	75%	86%

Figures do not match up to 100% due to rounding up of figures. Reference to general reporting practices.

To further demonstrate our commitment to gender equality, we are adopting the Bloomberg Gender Equality Index KPIs from 2023 onwards. This explains some gaps in the historical data, and going forward we will include measures such as % share of promotions that are female. At Kemira, promotions are defined as career progressions to position one job grade higher or beyond.

DIVERSITY AND INCLUSION MEASURES FOR BLOOMBERG GENDER EQUALITY INDEX (GEI)

	2023	2022	2021
Share of women in all people leaders	26%		
Share of women in executives	31%	31%	31%
Share of women in middle management	25%		
Share of women in individual contributors	27%		
Share of women in Technology	49%		
Share of women total promotions	39%		

Reporting of new measures started from 2023.

PERCENTAGE OF EMPLOYEES PER EMPLOYEE CATEGORY IN EACH OF THE FOLLOWING DIVERSITY CATEGORIES: GENDER, AGE GROUP, OTHER INDICATORS OF DIVERSITY WHERE RELEVANT

	Total			%		
	2023	2022	2021	2023	2022	2021
Total employees	4,915	4,902	4,926	100%	100%	100%
<30	484	502	466	10%	10%	9%
30 - 50	2,847	2,842	2,924	58%	58%	59%
>50	1,584	1,558	1,536	32%	32%	31%
Female	1,327	1,305	1,291	27%	27%	26%
<30	150	150	144	11%	11%	11%
30 - 50	859	856	870	65%	66%	67%
>50	318	299	277	24%	23%	21%
Male	3,588	3,597	3,635	73%	73%	74%
<30	334	352	322	9%	10%	9%
30-50	1,988	1,986	2,054	55%	55%	57%
>50	1,266	1,259	1,259	35%	35%	35%



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Equity and remuneration

Pay equity means that our employees are paid and rewarded with fairness and when unjustified pay gaps are found, we take action to address them. Kemira follows a total remuneration approach, which means that our employee remuneration is a mix of base pay and incentives as well as benefits and other non-monetary rewards.

All pay decisions at Kemira are based on position responsibilities and our ‘Pay for Performance’ philosophy. We have established fair and transparent pay practices and processes based on objective criteria:

- Common principles driven by defined job architecture.
- Locally aligned pay tables and globally consistent pay reviews.
- Timely training and education.
- Continuous pay and performance analysis.
- Regular review of market data, trends and regulation updates.

In 2022, Kemira established an objective gender pay equity analysis among white collar employee pay using a statistical model with Kemira specific criteria to identify potential gender related pay differences. Based on the analysis outcomes, actions were taken to close any identified gender related pay differences and concluded during the first half of 2023. In addition, a thorough pay analysis for blue collar employees was conducted in 2023 confirming that we do not have any unjustified pay gaps among the respective employee group.

During 2023, we broadened our pay equity analysis to identify other unjustified reasons for pay differences among white collar employees, such as age, tenure, ethnicity, or nationality of the employee among others. We continue building means and tools to measure pay equity within Kemira, identify potential unjustified pay gaps, and take action to close them without delay.

Ratio of basic salary and remuneration of women to men

The disclosed table describes the ratio of basic salary of our white collar employees when considering country of employment and location, the job grade of the position and working time of the employee. Other remuneration elements are not recorded globally and thus not reported.

RATIO OF BASIC SALARY AND REMUNERATION OF WOMEN TO MEN FOR EACH EMPLOYEE CATEGORY, BY SIGNIFICANT LOCATIONS OF OPERATION				
Country	Women to men pay ratio 2023	Women to men pay ratio 2022	Women to men pay ratio 2021	White collar headcount 2023
Austria	90%	89%	87%	50
Brazil	93%	94%	94%	139
Canada	94%	94%	89%	125
China	87%	86%	90%	289
Finland	93%	91%	91%	571
Germany	96%	94%	96%	80
Italy	96%	95%	92%	64
Korea, Republic of	96%	93%	N/A	50
Netherlands	96%	100%	88%	87
Poland	94%	94%	98%	317
Spain	93%	94%	93%	55
Sweden	98%	98%	100%	145
United Kingdom	96%	96%	95%	91
United States	95%	93%	93%	549
Total for largest countries	94%	93%	93%	2,612

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FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING

**Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk**

Kemira respects freedom of association and collective bargaining as stated in our Code of Conduct, and through our commitment to the United Nations Global Compact. We expect our suppliers to respect these same principles and commit to the Code of Conduct for Business Partners. All of our Suppliers (engaged with an SAP Purchase Order) receive a written reference to CoC-BP as part of the Kemira general terms of purchase on the back of the Purchase Order.

To increase Kemira employees’ awareness of their rights regarding freedom of association and collective bargaining, we provide regular training on our Code of Conduct.

In 2023, Kemira did not identify any violations of freedom of association or collective bargaining in our own operations, and no evidence has been found to indicate that suppliers would be restricting their employees’ opportunities to exercise freedom of association and collective bargaining based on sustainability assessments of our key suppliers, representing approximately 30% of our total spend.

For additional information, see the Integrity section for details of our Code of Conduct training and Ethics and Compliance hotline. Details of the numbers of employees covered by collective bargaining agreements are given in the Employment section.

Workers in the Value Chain

**HUMAN RIGHTS**

Our Code of Conduct and Code of Conduct for Business Partners set the standard for our human rights approach. In our Code, we state that we are committed to the principles of The Universal Declaration of Human Rights and the core conventions of the International Labor Organization (ILO) and the United Nations’ Global Compact, and we expect our suppliers and business partners to share these principles. Further, we work according to the United Nations Guiding Principles, which require companies to conduct due diligence to protect and respect human rights. We have a public statement for slavery and human trafficking, where our approach to human rights issues is outlined more in detail.

We expect ourselves and our business partners to respect fundamental human rights, treat people with dignity, decency and respect, avoid any kind of harassment, discrimination, intimidation, oppression and exploitation, never use any form of forced or child labor, protect employee health and safety, respect freedom of association and collective bargaining, respect the privacy of personal information and pay compensation to employees that complies with applicable wage laws.

A group-level Human Rights Impact Assessment was updated in 2021 to identify human rights impacts throughout Kemira operations and value chain. The assessment methodology was based on the United Nations Guiding Principles on Business and Human Rights and the OECD Due Diligence Guidance. The results of the assessment have been further analyzed during 2023 and implementation of findings will continue going towards 2024. In 2023, Kemira performed a minimum safeguards self-assessment in relation to the EU Taxonomy reporting. The conclusion from this assessment is that Kemira meets at a group level the EU Taxonomy minimum safeguards for the most recognized human rights guidelines and guiding principles. We continue the development of the minimum safeguards management in line with our integrated management system implementation. Kemira also participated in the United Nations Global Compact Business & Human Rights Accelerator, during which an analysis of the most critical human rights risks was performed and for the highest risk, a mitigation plan was created.

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To create room for discussion and improve human rights related processes, Kemira has had a Human Rights Council since 2022. The council consists of representatives from relevant functions in the company, covering Environment, Health, Safety and Quality (EHSQ), Global Sourcing, Human Resources, Ethics and Compliance and Corporate Sustainability.

In previous years, our human rights focus has been on increasing overall awareness of human rights related themes throughout the organization and improving the processes and due diligence based on findings in our latest assessments. The primary means of increasing awareness relate to regular and compulsory training on the Code of Conduct for all employees, and since 2015, basic training on human rights for white collar employees responsible for business relationships. Since 2015 all new hires have participated in this training as part of their induction program. Human rights are evaluated in the scope of supplier ethical audits conducted by external audits (following the SMETA protocol).

KEY ACTIVITIES IN 2023

- Continued the global 90-day onboarding program for new hires (white collars) that automatically assigns online courses on Code of Conduct and Human Rights and Business. By the end of 2023, 85% of white collar new hires have completed the basic training on Human rights and Business as part of their onboarding program.
- All relevant sales team members are trained on third-party due diligence for potential new business partners and a new process is introduced to further develop our third-party risk management.
- In relation to workplace safety, we further developed our safety culture through the Behavior Based Safety Culture program, target-setting, training and communications measure. More information can be found in the Occupational Health and Safety section.
- For product safety, we focus on product lifecycle management. For more information, see the section Product Stewardship.
- More information of supplier assessments and audits. For more can be found in the Supplier Management section.
- Diversity, Equity and Inclusion program program roll-out was active in 2023, there have been two networks established since 2022, the KemPride and the Kemira Women's Network. More information about this topic can be found in the [Kemira Annual Review 2023](#).
- Evaluation of identified high risks during the UNGC Business & Human Rights Accelerator has been done and development items are in place for upcoming years.

CUSTOMER HEALTH AND SAFETY

Assessment of the health and safety impact of product and service categories

According to Kemira's product stewardship policy, we are acting:

- to comply with all applicable chemical regulatory requirements in the countries where we either manufacture and/or sell chemicals covering raw materials, intermediates, processing aids and products
- to make hazard assessments covering regulatory compliance, human health, and safety, as well as environmental protection aspects, as part of the Product Lifecycle Management processes throughout products' lifecycle from development to termination
- to maintain data related to chemical products and substances including raw materials that is managed in ERP and is linked to the Product Lifecycle Management tool/process
- to proactively identify and manage chemical risks and concerns to build management action plans for identified unacceptable risks to human health, safety or environment; covering all substances from raw materials to products
- to share information with our stakeholders about the health and safety aspects of products and to ensure that our customers can safely use our products.

Kemira complies with all laws and regulations relating to chemicals and trade. Kemira does not sell any banned products. We continuously screen substances that are covered by any regulatory restrictions, or subject to substitution requirements imposed by non-regulatory stakeholders. We proactively work to mitigate health, safety, environmental and image-related risks.

Percentage of significant product and service categories for which health and safety impacts are assessed for improvement

At the end of 2023, 100 % (20 out of 20) of the identified 20 SVHC (Substances of Very High Concern) substances had a management plan approved by the Product lifecycle management team.

Incidents of non-compliance concerning the health and safety impact of products and services

We are not aware of any fine, penalty or warning for non-compliance with regulations and voluntary codes regarding our products or services in 2023.

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Consumers and End-Users

MARKETING AND LABELING

Requirements for product and service information and labeling

Kemira’s product portfolio consists of seven major product lines and approximately 1,218 different products. All of these products are duly documented and labeled according to legal requirements, including the identification of their hazardous components and information on their safe use. Kemira provides Safety Data Sheets (SDS) for all products, independent of the product safety classification, even if in most jurisdictions Safety Data Sheets are mandatory only for hazardous products. Our IT system for Product Lifecycle Management enables us to prepare SDSs and labels in alignment with the latest regulatory data requirements and in the official languages of the countries where our products are manufactured, stored or sold. In EU member states, the information requirements are stated under REACH regulations with regard to substance properties, exposure, use and risk management measures, and the chemical safety assessment. Registered uses will also be communicated via the updated extended SDSs for downstream users. In addition to the information provided on product labels and Safety Data Sheets, more detailed information about products and their raw material ingredients can be provided on request.

In 2023, the Kemira Product Stewardship & Regulatory Affairs team responded to 5,550 (4,634 in 2022) requests concerning product safety and/or regulatory questions. The response time for those requests is one of our internal key performance indicators (KPIs).

Incidents of non-compliance concerning product and service information and labeling

Our customer complaints management process handles complaints by recording the complaint, investigation, root cause and corrective action determination, implementation and communication with the customers. During the process complaints are classified with a complaint reason from a predefined list. The process and system in use can exclude those complaints where Kemira has met the agreed requirements with the customers. All complaints are actively monitored, evaluated and corrected as required by the quality management system in use at Kemira.

Non-compliance related to product and service information usually refers to insufficient information on the label.

During 2023, a total of 45 customer complaints were recorded relating to labeling or product information, of which 29 cases were in the EMEA region, 16 in the Americas, and 0 in the APAC region. All cases have been investigated and needed corrective actions have been implemented.

During 2023, no incidents of non-compliance with regulations resulting in any fine, penalty or warning were reported within Kemira’s operations.

SOCIOECONOMIC COMPLIANCE

Non-compliance with laws and regulations in the social and economic area

We are not aware of any significant fine or non-monetary sanction for non-compliance with laws or regulations in the social and economic area in 2023.

PRODUCT AND SERVICE INFORMATION PROVIDED

TOPIC	PRODUCT AND SERVICE INFORMATION PROVIDED BY KEMIRA
The sourcing of components of the product or service	Only if requested by customers.
Content, particularly with regard to substances that might produce an environmental or social impact	As required by law, always in SDS and on the labels. Additional information about chemicals in our products for voluntary certification/compliance schemes such as eco-labeling is also provided to customers upon request and when applicable.
Safe use of the product or service	Safe use of a product or service is communicated in the SDSs and on the labels. Registered uses will be communicated via the extended SDSs. Additional information about the use, dosage and application is provided to customers when applicable.
Disposal of the product and environmental/social impacts	When legally required, disposal of a product and environmental/ social impact are communicated in the SDSs and on the labels.

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Direct Economic Value Generated and Distributed

Kemira generates economic value from products, expertise and sustainable solutions, enabling our customers to improve their resource-efficiency.

Kemira distributes the generated economic value to various stakeholders. This includes suppliers and service providers through payments for raw materials and services, employees through compensation and benefits, capital providers through dividends and interest payments, the public sector through taxes, and society through local community projects, sponsorship and donations. Taxes have a significant impact on our business, financing and growth opportunities.

Kemira’s approach to tax is to support responsible business performance in a sustainable way. A separate tax footprint report is available at [www.kemira.com](http://www.kemira.com) > Company > Investors.

The economic value retained is reinvested in the company for capital investments, R&D and technology development. The economic value retained increased to 442 million EUR in 2023 (304 million EUR in 2022).

ECONOMIC VALUE, CASH FLOW BASED

STAKEHOLDER	ECONOMIC VALUE, EUR million	2023	2022	2021
Direct economic value generated: Revenues				
Customers	Income from customers on the basis of products and services sold, and financial income	3,435	3,478	2,589
Direct economic value distributed				
Suppliers	Payments to suppliers of raw materials, goods and services	2,324	2,626	1,922
Employees	Employee wages and benefits	433	384	371
Investors & Lenders	Dividends, interests paid and financial expenses	145	131	127
Government & Public sector	Corporate income taxes	91	33	44
Economic value retained		442	304	125

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Anti-Competitive Behavior

LEGAL ACTIONS FOR ANTI-COMPETITIVE BEHAVIOR, ANTI-TRUST, AND MONOPOLY PRACTICES

Kemira had no pending or completed legal actions initiated under national or international laws designed for regulating anti-competitive behavior, anti-trust, or monopoly practices in 2023.

Anti-Corruption

OPERATIONS ASSESSED FOR RISKS RELATED TO CORRUPTION

In 2020, Kemira conducted a global ethics and compliance risk assessment, covering key business operations and functions in all regions. Anti-corruption was one of the key focus areas in the assessment. During 2021 and 2022, the assessment results have been utilized in Kemira’s ethics and compliance and internal audits. No significant risks related to corruption have been identified through ethics and compliance activities or internal audits in 2023.

COMMUNICATION AND TRAINING ABOUT ANTI-CORRUPTION POLICIES AND PROCEDURES

Kemira’s principles for anti-corruption are included in the Kemira Code of Conduct and in the Kemira Group Gifts, Entertainment and Anti-Bribery Policy. Both documents are available to all employees on Kemira’s intranet, and the Code of Conduct is also publicly available at [www.kemira.com](http://www.kemira.com).

Kemira’s Code of Conduct has been approved by the Board of Directors, and as part of our mandatory and regular Code of Conduct training, our anti-corruption principles are communicated to all of our employee groups and regions on a regular basis. All members of Kemira’s Board of Directors are aware our anti-corruption principles.

Kemira provides mandatory anti-corruption training to its white-collar employees who need to have a comprehensive understanding of Kemira’s anti-corruption principles. The table below demonstrates the scope of the training, with a breakdown by employee category and regions.

ANTI-CORRUPTION TRAINING PERFORMANCE

		Number of permanent employees, not absent	Number of permanent employees, received training on anti-corruption	% of employees received training on anti-corruption
Americas	White collars	849	755	89%
	Blue collars	629	0	
APAC	White collars	480	461	96%
	Blue collars	451	0	
EMEA	White collars	1,563	1,366	87%
	Blue collars	883	0	
Total		4,855	2,582	53%

We expect our suppliers and other business partners to conduct their business with integrity and commit to Kemira’s Code of Conduct for Business Partners in their business activities with Kemira. According to the CoC-BP, Kemira expects our Business Partners to ensure that they, and third-parties acting on their behalf, do not offer, give or accept improper or corrupt payments, and that they will not engage in any form of bribery. We aim to communicate the CoC-BP to all of our suppliers, agents and distributors. All of our suppliers (engaged with an SAP Purchase Order) receive a written reference to Kemira’s CoC-BP as part of the Kemira general terms of purchase on the back of the Purchase Order.



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TOTAL NUMBER AND PERCENTAGE OF SUPPLIERS THAT OUR ANTI-CORRUPTION POLICY HAS BEEN COMMUNICATED TO

Region	Total number of suppliers*	Total number of suppliers* that our anti-corruption principles have been communicated to	% of suppliers* that our anti-corruption principles have been communicated to
Americas	4,100	4,100	100%
APAC	1,900	1,900	100%
EMEA	7,400	7,400	100%
Total	13,400	13,400	100%

\*The numbers include suppliers engaged with an SAP Purchase Order. In addition to SAP transactions, some small purchases are processed via the travel claim process.

CONFIRMED INCIDENTS OF CORRUPTION AND ACTIONS TAKEN

There were no confirmed incidents of corruption in 2023.

Community Involvement

Kemira is committed to respond ethically and with integrity to the needs of our surrounding communities and society. We want to create positive social impacts in communities close to our operations and we also encourage our employees to engage with local community initiatives and activities on a voluntary basis.

The main themes for our community involvement activities and sponsorships are related to water, sustainable chemistry and their applications. We are supportive of initiatives to innovate sustainable solutions that create a better every day for us all. Initiatives where we can provide expertise and create more value for society, our customers and other stakeholders and support initiatives for building good relationship with communities in which we operate. Kemira also supports research, education and studies in natural sciences in order to promote innovation and growth.

Our Sponsorship and Donation Policy provides guidance on the permissibility, appropriateness and general acceptability of cash donations, sponsorships, contributions to community involvement initiatives and other donations made on behalf of or in the name of any Kemira company.

All our community involvement activities are locally selected, planned and executed. Examples of local activities include open house days for local residents, cooperation with local schools and universities, and local charity work. In 2023, Kemira organized approximately 30 local community activities.

Public Policy and Membership in Associations

POLITICAL CONTRIBUTIONS

The Kemira Code of Conduct, Kemira Group Sponsorship and Donation policy and the Kemira Group Gifts, Entertainment and Anti-bribery Policy, prohibit any financial support to politicians, political parties or political organizations. No financial or any in-kind political contributions paid by Kemira have come to Kemira's attention during 2023.

MEMBERSHIP IN ASSOCIATIONS

Kemira is a member of Cefic, the European Chemical Industry Council, and Kemianteollisuus ry, which is a national chemical industry association in Finland.

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# The Organization and its Reporting Practices

## Organizational Details and Activities

In the [Financial Statements](#) section of the Annual Report, a list of group subsidiaries and investments in associates can be found. In the referred section, Kemira's legal entities are listed and thus our countries of operation.

Below is a short description of downstream entities and relevant business relations. Kemira has divided its business into two segments Pulp & Paper and Industry & Water. There has not been any significant changes in Kemira's sector, value chain or business relationships during 2023. More information on Kemira's main business segments can be found in the Annual Report and on the kemira.com homepage.

### PULP & PAPER

The Pulp & Paper segment combines best-in-class application expertise, the latest technologies for advanced process management and a complete chemistry portfolio to serve our customers in the forest industry across different grades from pulp to board, tissue and specialty papers as well as graphical and printing papers. We help customers improve their sustainability, product quality, process and resource efficiency. Our focus is on growth areas in fiber-based applications and renewable materials, such as packaging board and dispersion barrier coatings.

### INDUSTRY & WATER

The Industry & Water business segment enables water intensive industries and municipal water and wastewater treatment operators to improve their process and resource efficiency. Our chemistry is used for optimizing all stages of the water cycle – enabling clean water and sanitation as stated in UN SDG 6. In oil and gas applications, we enable reduced water and energy use for more efficient well management and improved oil sands tailings treatment. Our focus on water intensive industries continues and we are constantly evaluating new opportunities for growth within this sector.

## Entities Included in the Sustainability Reporting

### SIGNIFICANT CHANGES TO THE ORGANIZATION AND ITS SUPPLY CHAIN

At the end of the year 2023, Kemira had 60 (62 in 2022) manufacturing sites of which 60 were included in the environmental reporting scope, and 60 in the auditing scope of our integrated management system. There were no significant changes in the company structure, size or ownership. Kemira offices and other non-manufacturing sites are not included in the environmental reporting, as they do not represent a material share of our environmental related processes.

### DEFINING REPORT CONTENT AND TOPIC BOUNDARIES

When defining the relative importance of material topics for reporting purpose we have taken into account our environmental, social and governance impacts, risks and opportunities, stakeholder expectations, our purpose and strategy, and our commitments to the Code of Conduct, United Nations Global Compact, SDGs and Responsible Care® program. According to the GRI 1 Foundation standard, the principles for defining the report content were applied when assessing material topics and boundaries. The data boundaries are defined as described in the following table.

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TOPICS	TOPIC BOUNDARIES	KEMIRA DATA COLLECTION PRACTICES
Other topics		
Product development	Kemira Operations <sup>1)</sup>	Product sales data is extracted from Kemira's ERP system. Product applications are manually linked to product categories.
Product stewardship	Kemira operations	Data is extracted from Kemira's ERP system and from PSRA documentation, and from Kemira processes.
Products and solutions	Kemira operations <sup>1)</sup>	Data is extracted from Kemira's ERP system.
Governance		
Economic performance	Kemira operations <sup>1)</sup>	Data is extracted from Kemira's ERP system.
Anti-corruption	Kemira operations <sup>1)</sup>	Data is collected from each region, from Kemira's legal archive, and through notifications from Kemira's Compliance and Ethics Hotline.
Anti-competitive behavior	Kemira operations <sup>1)</sup>	Data is collected from each region, from Kemira's legal archive, and through notifications to Kemira's Compliance and Ethics Hotline.
Environment		
Materials	Kemira operations as covered by our ERP <sup>2)</sup>	Data is extracted from Kemira's ERP system.
Energy	Kemira manufacturing sites <sup>3)</sup>	Data is collected from each production site and consolidated at the Group level.
Greenhouse gas emissions Scope 1 and 2	Kemira manufacturing sites <sup>3)</sup>	Data is collected from each production site and consolidated at the Group level.
Scope 3	Kemira suppliers and other sources	Scope 3 emissions data is collected from Kemira's ERP system and the relevant organizational units.
Other emissions to air	Kemira manufacturing sites <sup>3)</sup>	Data is collected from each production site and consolidated at the Group level.
Water and effluents	Kemira manufacturing sites <sup>3)</sup>	Data is collected from each production site and consolidated at the Group level.
Waste	Kemira manufacturing sites <sup>3)</sup>	Data is collected from each production site and consolidated at the Group level.
Biodiversity	Kemira manufacturing sites <sup>3)</sup>	Data is collected from each production site and consolidated at the Group level.
Environmental compliance	Kemira manufacturing sites <sup>3)</sup>	Data is collected from each production site and consolidated at the Group level.
Supplier environmental assessment	Kemira suppliers	Data is extracted from Contract Management Tool used to track suppliers' signing of Code of Conduct for BP. Assessment data is stored on both external and internal service platform.

TOPICS	TOPIC BOUNDARIES	KEMIRA DATA COLLECTION PRACTICES
Social		
Employment	Kemira operations <sup>1)</sup>	Data is extracted from HR data management system.
Labor-Management relations	Kemira operations <sup>1)</sup>	Data is collected from each region and combined with the HR data management system.
Workplace safety and occupational health and safety	Kemira operations <sup>1)</sup>	Data is extracted from synergy data management system. Data covers also contractors working at Kemira sites.
Training and education	Kemira operations <sup>1)</sup>	Data is extracted from HR data management system.
Diversity and equal opportunity	Kemira operations <sup>1)</sup>	Data is extracted from HR data management system.
Non-discrimination	Kemira operations <sup>1)</sup>	Data is collected from each region, from Kemira's legal archive, and through notifications from Kemira's Compliance and Ethics Hotline.
Freedom of association and collective bargaining	Kemira operations <sup>1)</sup>	Data is collected from each region, from Kemira's legal archive, and through notifications to Kemira's Compliance and Ethics Hotline.
Human rights	Kemira operations <sup>1)</sup>	Data is collected with a Human Rights Impact Assessment and from company processes and procedures.
Public policy	Kemira operations <sup>1)</sup>	Data is collected from each region, from Kemira's legal archive, and through notifications to Kemira's Compliance and Ethics Hotline.
Customer health and safety	Kemira operations as covered by our ERP <sup>2)</sup>	Data is extracted from Kemira's ERP system and from R&D New Product Development process documentation, from PSRA documentation, and from Kemira's legal archives.
Marketing and labelling	Kemira operations as covered by our ERP <sup>2)</sup>	Data is extracted from Kemira's ERP system and from PSRA documentation, and from Kemira's legal archives.
Socioeconomic compliance	Kemira operations <sup>1)</sup>	Data is collected from each region, from Kemira's legal archive, and through notifications to Kemira's Compliance and Ethics Hotline.
Supplier social assessment	Kemira suppliers	Data is extracted from Contract Management Tool used to track suppliers' signing of Code of Conduct for BP. Assessment data is stored on both the external and internal service platform.
Community involvement	Kemira operations <sup>1)</sup>	Data is collected from each region.

1) Kemira's operations = All operations covered by Kemira's consolidation rules.  
2) Kemira's operations covered by ERP = All operations covered by both Kemira's consolidation rules and the company's Enterprise Resource Planning (ERP).  
3) Kemira's manufacturing sites = All manufacturing sites covered by Kemira's consolidation rules.  
4) PSRA Product Stewardship and Regulatory Affairs.

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Reporting Period, Frequency and Contact Point

REPORTING PERIOD

The reporting period is from January 1 to December 31, 2023.

DATE OF MOST RECENT REPORT

Kemira's most recent Annual Report including non-financial information (GRI disclosures) was published on February 16, 2023.

REPORTING CYCLE

Kemira's Annual Report is published yearly, by calendar year. The Annual Report consists of the [Annual Review](#), Sustainability Report, [Corporate Governance Statement](#) (including Remuneration Report) and [Financial Statements](#).

CONTACT POINT FOR QUESTIONS REGARDING THE REPORT

The contact point for questions is Kemira Communications and Corporate Sustainability. Contact details are available at [www.kemira.com](http://www.kemira.com).

CLAIMS OF REPORTING IN ACCORDANCE WITH THE GRI STANDARDS

- The report is prepared in accordance with the latest GRI standards. The latest versions of the topical standards have been used where applicable.
- Communication on Progress (COP) of the United Nations Global Compact at Global Compact Active level by using the GRI-standards reporting principles.

GENERAL REPORTING PRACTICES

- Individual figures presented in the Sustainability Report have been rounded to the nearest exact figure. Therefore, the sum of the individual figures may deviate from the sum figure presented in the Sustainability Report. The key figures are calculated using exact values.

RESTATEMENTS OF INFORMATION

- In 2023, Kemira re-evaluated the definition of product for reporting purposes. Kemira was previously reporting the amount of treated wastewater from its stand-alone wastewater treatment facility in China as "product." This approach is not aligned with the other manufacturing sites that include internal wastewater treatment plants at the sites. Therefore, production volumes are now limited to chemicals manufactured at the site and exclude volumes associated with services such as wastewater treatment. Production volumes for previous years have been updated accordingly.
- Historical data for disposed production waste intensity target has been updated for 2021 and 2022. The change in definition of product for reporting purpose (see above) has an impact on the target, as the intensity target is based on production volumes. The stand-alone wastewater treatment facility started its operation as a stand-alone unit in 2021. Historical data for disposed production waste intensity target has been updated only for 2021 and 2022. No impact on baseline year figure of 4.6.
- Waste data has been updated:
  - Systematic error was identified in reporting of waste under correct categories. Some filter cake waste had been reported systematically wrong as other chemical waste historically. This has no impact in total waste volumes or disposal and recovery method total volumes.
- The formula to calculate freshwater use has been changed.
  - Former formula: freshwater use as m<sup>3</sup> of total freshwater withdrawal minus withdrawal of cooling water and produced water.
  - New formula: freshwater use as the m<sup>3</sup> of total freshwater withdrawal minus cooling water withdrawal associated with once-through cooling water systems and produced water.
  - The former formula excluded both make-up water to cooling towers and cooling water associated with once-through cooling water systems. In the new formula only water withdrawal of cooling water associated with once-through (single pass) cooling systems is excluded, as this water is not consumed (evaporated), but only circulated through heat exchangers at the site and returned to source water basin in the same quantity.
  - Kemira's goal is to continuously decrease freshwater use intensity. The freshwater use intensity is calculated as the freshwater use per metric ton of production. The 2019 baseline of the goal has changed from 1.5 to 1.8 due to the change in the calculation formula of freshwater use.

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- GHG emissions data has been updated.
  - For Scope 2 location-based emissions: The IEA database used to estimate emissions was updated with new factors effective as of 2021. Therefore, the values for 2021 and 2022 have been updated to reflect the new version of the emission factors.
  - Scope 3.1 emissions have been updated to reflect the findings of our Supplier Engagement program that was launched in 2023. Prior to the engagement program, Kemira relied on published global emission factor databases. As part of the engagement program in 2023, Kemira: 1) reviewed and updated the published emission factors used for its purchased raw materials to account for regional differences and other details, such as concentration percentages, and 2) replaced published database factors with internally validated product carbon footprint data obtained from suppliers.
  - Scope 3.4 and 3.9 emissions for 2022 have been updated to reflect a change in the calculation methodology regarding sea transport. The original 2022 emissions were calculated using estimated sea transport distances. The 2022 emissions were updated using actual sea transport distances.
  - GHG emissions intensity values for 2021 and 2022 have been recalculated due to the updated production volumes as noted above.
- Energy intensity values for 2021 and 2022 have been recalculated due to the updated production volumes as noted above.
- Carbon monoxide emissions in 2021 were updated due to a rounding error.
- In the Remuneration report 2021, the short-term incentives based on the performance period amount paid in March 2022 was 53,374 EUR.
- In 2022, 1 CSR audit of a direct material supplier was conducted, despite reporting 0 completed CSR audits in 2022 reporting period.
- In the materials reporting, the recycled raw materials figures for 2022 were revised slightly downwards, due to incorrect assumptions used for certain raw materials in the South America region.

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# External Assurance Report

EXTERNAL ASSURANCE

The corporate sustainability information presented in the Annual Report are externally assured by an independent third-party. Information on the organization’s policy and current practice with regard to external assurance can be found in the Assurance statement

## Independent accountant’s assurance report

To the Management of Kemira Oyj.

SCOPE

We have been engaged by Kemira Oyj (hereafter Kemira) to perform a ‘limited assurance engagement,’ as defined by International Standards on Assurance Engagements, here after referred to as the engagement, on Kemira’s Sustainability Report 2023, and the EU taxonomy KPIs in Financial Statements 2023’s pages 9–13, (the “Subject Matter”) for the period 1.1.– 31.12.2023.

CRITERIA APPLIED BY KEMIRA

In preparing the Subject Matter, Kemira applied the Global Reporting Initiative Sustainability Reporting Standards and the EU Taxonomy Regulation (EU 2020/852) and respective Delegated Acts (the “Criteria”). As a result, the subject matter information may not be suitable for another purpose.

KEMIRA’S RESPONSIBILITIES

Kemira’s management is responsible for selecting the Criteria, and for presenting the Subject Matter in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the subject matter, such that it is free from material misstatement, whether due to fraud or error.

ERNST & YOUNG’S RESPONSIBILITIES

Our responsibility is to express a conclusion on the presentation of the Subject Matter based on the evidence we have obtained.

We conducted our engagement in accordance with the International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information (‘ISAE 3000’), and the terms of reference for this engagement as agreed with Kemira on 19.9.2023. Those standards require that we plan and perform our engagement to express a conclusion on whether we are aware of any material modifications that need to be made to the Subject Matter in order for it to be in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

OUR INDEPENDENCE AND QUALITY MANAGEMENT

We have maintained our independence and confirm that we have met the requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, and have the required competencies and experience to conduct this assurance engagement.

EY also applies International Standard on Quality Management 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services engagements*, which requires that we design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.



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DESCRIPTION OF PROCEDURES PERFORMED

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

Although we considered the effectiveness of management’s internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.

A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the Subject Matter, and related information, and applying analytical and other appropriate procedures.

- Our procedures included:
- a. An update of our knowledge and understanding of Kemira's material sustainability reporting topics, organization and activities,
  - b. An assessment of suitability and application of the reporting principles regarding the stakeholders' needs for information,
  - c. Interviews with senior management to understand Kemira's sustainability leadership,
  - d. Interviews with personnel responsible for gathering and consolidation of the sustainability information to understand the systems, processes and controls related to gathering and consolidating the information,

- e. Assessing sustainability data from internal and external sources and checking the data to reporting information on a sample basis to check the accuracy of the data,
- f. Site visit to Bradford, UK, and virtual site visit to Augusta, USA, site where we assessed reporting practices.

We also performed such other procedures as we considered necessary in the circumstances.

CONCLUSION

Based on our procedures and the evidence obtained, we are not aware of any material modifications that should be made the Sustainability Report 2023, and the EU taxonomy KPIs in Financial Statements 2023’s pages 9–13, for the period 1.1–31.12.2023, in order for it to be in accordance with the Criteria.

Helsinki, 14.02.2024

Ernst & Young Oy  
Authorized Public Accountant Firm

Mikko Rytilahti  
Authorized Public Accountant

Nathalie Clément  
Leader of Climate Change and Sustainability Services, EY Finland

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GRI 102-55

Abbreviations:AR= Annual ReviewGRI=Annual Review AnnexCG = Corporate GovernanceFS = Financial Statements

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GRI 2: General Disclosures 2021	The organization and its reporting practices			
	2-1 Organizational details	70	Sustainability Report	
	2-2 Entities included in the organization’s sustainability reporting	70–71	Sustainability Report	
	2-3 Reporting period, frequency and contact point	72	Sustainability Report	
	2-4 Restatements of information	72–73	Sustainability Report	
	2-5 External assurance	74–75	Sustainability Report	
	Activities and workers			
	2-6 Activities, value chain and other business relationships	70 4, 8, 11–19	Sustainability report, Annual Review	
	2-7 Employees	52–54	Sustainability Report	Principle 6
	2-8 Workers who are not employees	54	Sustainability Report	Principle 6
	Governance			All principles
	2-9 Governance structure and composition	14–15	Sustainability Report	
	2-10 Nomination and selection of the highest governance body	2–4	Corporate Governance Statement	
	2-11 Chair of the highest governance body	3–4, 11–12	Corporate Governance Statement	
	2-12 Role of the highest governance body in overseeing the management of impacts	4–5	Corporate Governance Statement	
	2-13 Delegation of responsibility for managing impacts	5–9	Corporate Governance Statement	
	2-14 Role of the highest governance body in sustainability reporting	14–15	Sustainability Report	
	2-15 Conflicts of interest	9–10	Corporate Governance Statement	
	2-16 Communication of critical concerns	2–10	Corporate Governance Statement	
	2-17 Collective knowledge of the highest governance body	2–10	Corporate Governance Statement	
	2-18 Evaluation of the performance of the highest governance body	2–10	Corporate Governance Statement	
	2-19 Remuneration policies	14–20	Remuneration Report	
	2-20 Process to determine remuneration	14–20	Remuneration Report	
	2-21 Annual total compensation ratio	54	Sustainability Report	

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	Strategy, policies and practices			All principles
	2-22 Statement on sustainable development strategy	11–12	Sustainability Report	
	2-23 Policy commitments	15–17	Sustainability Report	
	2-24 Embedding policy commitments	15–17	Sustainability Report	
	2-25 Processes to remediate negative impacts	19–20	Sustainability Report	
	2-26 Mechanisms for seeking advice and raising concerns	26–27	Sustainability Report	
	2-27 Compliance with laws and regulations	44, 66	Sustainability Report	
	2-28 Membership associations	69	Sustainability Report	
	Stakeholder engagement			
	2-29 Approach to stakeholder engagement	5–7	Sustainability Report	
	2-30 Collective bargaining agreements	53	Sustainability Report	Principle 3
GRI 3: Material Topics 2021	Disclosures on materials topics			
	3-1 Process to determine material topics	8–10	Sustainability Report	All principles
	3-2 List of material topics	8–10	Sustainability Report	
	3-3 Management of material topics	3–73	Sustainability Report	
	Material Topics			
	Product development			
	GRI 3-3 Management of material topics	21	Sustainability Report	
Own material topic	Product development	21	Sustainability Report	Principle 9
	Product stewardship			
	GRI 3-3 Management of material topics	22–23	Sustainability Report	
Own material topic	Product stewardship	22–23	Sustainability Report	Principle 9
	Products and solutions			
	GRI 3-3 Management of material topics	45–46	Sustainability Report	
Own material topic	Products and solutions	45–46	Sustainability Report	Principle 9
	GRI 200 Economic Standard Series			
	ECONOMIC PERFORMANCE			
	GRI 3-3 Management of material topics	67	Sustainability Report Financial statements	
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	67	Sustainability Report	
	201-2 Financial implications and other risks and opportunities due to climate change	28–29	Financial statements / Sustainability Report	
	201-3 Defined benefit plan obligations and other retirement plans	40, 65	Financial statements	
	201-4 Financial assistance received from government	40	Financial statements	

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GRI STANDARD	DISCLOSURE	PAGE NUMBER(S)	DOCUMENT	UNITED NATIONS GLOBAL COMPACT
ANTI-CORRUPTION				
GRI 205: Anti-corruption 2016	GRI 3-3 Management of material topics	68–69	Sustainability Report	Principle 10
	205-1 Operations assessed for risks related to corruption	68–69	Sustainability Report	Principle 10
	205-2 Communication and training about anti-corruption policies and procedures	68–69	Sustainability Report	Principle 10
	205-3 Confirmed incidents of corruption and actions taken	68–69	Sustainability Report	Principle 10
ANTI-COMPETITIVE BEHAVIOR				
GRI 206: Anti-competitive Behavior 2016	GRI 3-3 Management of material topics	68	Sustainability Report	
	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	68	Sustainability Report	
TAX				
GRI 207: Tax 2019	GRI 3-3 Management of material topics	2–8	Tax Footprint Report	
	207-1 Approach to tax	2–8	Tax Footprint Report	
	207-2 Tax governance, control, and risk management	2–8	Tax Footprint Report	
	207-3 Stakeholder engagement and management of concerns related to tax	2–8	Tax Footprint Report	
GRI 300 Environmental Standards Series				
MATERIALS				
GRI 301: Materials 2016	GRI 3-3 Management of material topics	45	Sustainability Report	
	301-1 Materials used by weight or volume	45	Sustainability Report	Principles 7, 8
	301-2 Recycled input materials used	45	Sustainability Report	Principles 7, 8, 9
ENERGY				
GRI 302: Energy 2016	GRI 3-3 Management of material topics	34–36	Sustainability Report	
	302-1 Energy consumption within the organization	34–36	Sustainability Report	Principles 7, 8
	302-2 Energy consumption outside of the organization	34–36	Sustainability Report	
	302-3 Energy intensity	34–36	Sustainability Report	Principle 8
	302-4 Reduction of energy consumption	34–36	Sustainability Report	Principles 8, 9
WATER				
GRI 303: Water and Effluents 2018	GRI 3-3 Management of material topics	38–42	Sustainability Report	
	303-1 Interactions with water as a shared resource	38–42	Sustainability Report	Principles 7, 8
	303-2 Management of water discharge-related impacts	38–42	Sustainability Report	
	303-3 Water withdrawal	38–42	Sustainability Report	Principles 7, 8
	303-4 Water discharge	38–42	Sustainability Report	Principles 7, 8
	303-5 Water consumption	38–42	Sustainability Report	Principle 9

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	GRI 3-3 Management of material topics	43	Sustainability Report	
GRI 304 Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	43	Sustainability Report	Principles 7, 8
	304-2 Significant impacts of activities, products, and services on biodiversity	43	Sustainability Report	Principles 7, 8
	304-3 Habitats protected or restored	43	Sustainability Report	Principles 7, 8
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	43	Sustainability Report	Principles 7, 8
EMISSIONS				
	GRI 3-3 Management of material topics	31–34	Sustainability Report	
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	31–34	Sustainability Report	Principles 7, 8
	305-2 Energy indirect (Scope 2) GHG emissions	31–34	Sustainability Report	Principles 7, 8
	305-3 Other indirect (Scope 3) GHG emissions	31–34	Sustainability Report	Principles 7, 8
	305-4 GHG emissions intensity	31–34	Sustainability Report	Principle 8
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	GRI 3-3 Management of material topics	45–50	Sustainability Report	
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	46–51	Sustainability Report	Principles 7, 8
	306-2 Management of significant waste-related impacts	46–51	Sustainability Report	Principles 7, 8
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SUPPLIER ENVIRONMENTAL ASSESSMENT				
	GRI 3-3 Management of material topics	24–25	Sustainability Report	
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	24–25	Sustainability Report	Principles 7, 8
	308-2 Negative environmental impacts in the supply chain and actions taken	24–25	Sustainability Report	Principles 7, 8

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GRI 401: Employment 2016	GRI 3-3 Management of material topics	52–54	Sustainability Report	
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	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	52–54	Sustainability Report	Principle 6
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GRI 402: Labor-Management relations 2016	GRI 3-3 Management of material topics	54–55	Sustainability Report	
	402-1 Minimum notice periods regarding operational changes	54–55	Sustainability Report	Principle 3
OCCUPATIONAL HEALTH AND SAFETY				
GRI 403: Occupational Health and Safety 2018	GRI 3-3 Management of material topics	55–58	Sustainability Report	
	403-1 Occupational health and safety management system	55–58	Sustainability Report	Principle 6
	403-2 Hazard identification, risk assessment, and incident investigation	55–58	Sustainability Report	Principle 6
	403-4 Worker participation, consultation, and communication on occupational health and safety	55–58	Sustainability Report	Principle 6
	403-5 Worker training on occupational health and safety	55–58	Sustainability Report	Principle 6
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TRAINING AND EDUCATION				
GRI 404: Training and Education 2016	GRI 3-3 Management of material topics	59–60	Sustainability Report	
	404-1 Average hours of training per year per employee	59–60	Sustainability Report	Principle 6
	404-2 Programs for upgrading employee skills and transition assistance programs	59–60	Sustainability Report	Principle 6
	404-3 Percentage of employees receiving regular performance and career development reviews	59–60	Sustainability Report	Principle 6
DIVERSITY AND EQUAL OPPORTUNITY				
GRI 405: Diversity and Equal Opportunity 2016	GRI 3-3 Management of material topics	61–63	Sustainability Report	
	405-1 Diversity of governance bodies and employees	61–63	Sustainability Report	Principle 6
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NON-DISCRIMINATION				
GRI 406: Non-discrimination 2016	GRI 3-3 Management of material topics	26–27	Sustainability Report	
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	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	64	Sustainability Report	Principle 3
SUPPLIER SOCIAL ASSESSMENT				
GRI 414: Supplier Social Assessment 2016	GRI 3-3 Management of material topics	24–25	Sustainability Report	
	414-1 New suppliers that were screened using social criteria	24–25	Sustainability Report	Principle 2, 4, 5
	414-2 Negative social impacts in the supply chain and actions taken	24–25	Sustainability Report	Principle 2, 4, 5
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