

kemira

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Annual Review 2024

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At Kemira, over more than 100 years, our work at the cutting edge of chemical science has taken us on a groundbreaking journey of discovery. At the very center of this work has been our focus on molecules; those tiny particles composed of one or more atoms. Since 1920, our increasing understanding of these molecules has guided our research and development. The insights gained have driven our innovation, directed our strategy and helped deliver our growth.

Whether developing chemical applications to clean water, or innovating new products, like safe, renewable, biodegradable and water-resistant coated linings in food packaging – our industry-leading chemistry expertise lies at the heart of our long and proud company heritage.

It's this heritage of chemistry expertise that underpins our new operating model and our theme for 2025 and beyond, 'Growth: A New Horizon'.

With our new business units, Water Solutions, Packaging & Hygiene Solutions, and Fiber Essentials, along with our digital services, we are ready for both the next phase in our story and, in collaboration with our partners, to further enable our customers to succeed on their own sustainable path ahead.

This is Kemira's 2024 Annual Review.



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CEO's Review

2024 was a significant period of change for Kemira. It was also my first year as CEO. Leading a company is a team effort, and our strength comes from our collective expertise and commitment to Kemira's bright future.

We took several steps to accelerate our strategy execution and our transformation in 2024. In August, we announced a new Group Leadership Team, laying the groundwork for Kemira's next chapter. We also renewed our operating model and undertook a comprehensive organizational redesign aimed at enhancing customer centricity, sharpening strategic focus, accelerating delivery, and driving growth and shareholder value. Starting in January 2025, Kemira moved to a customer solution-based organization with three new customer-facing business units: Water Solutions, Packaging & Hygiene Solutions and Fiber Essentials.

Kemira's solid performance continued with strong profitability. Revenue reached EUR 2,948.1 million and operative EBITDA margin was 19.90%. We updated our long-term financial targets, aiming for more than 4% organic growth on average while retaining operative EBITDA within 18–20% and operative ROCE above 16%. We took further steps on our profitable growth strategy execution journey with several investments and one acquisition, entering the activated carbon market for micropollutant removal.

Our net promoter score (NPS) reached an all time high in 2024 and our employee engagement stayed strong. Fostering diverse talent remains essential to driving innovation, resilience and long-term growth. By embracing different perspectives, we ensure our business is well-equipped to meet the needs of our global customers and stakeholders. Our safety focus is strong and will continue to be going forward. Kemira's ambitious climate targets were validated by the Science Based Target Initiative, and our long-term target is to become carbon neutral by 2045 for scope 1 and 2.

Our business environment remains complex which means that we must be even more agile and flexible to leverage the opportunities. We will continue to collaborate widely with partners from the private sector to academia to speed up our innovation, and we will apply our chemistries to new growth platforms to continue our sustainability-driven growth journey.

I want to thank all our stakeholders: customers, suppliers and other partners, as well as our Kemira employees, for another successful year of collaboration.

ANTTI SALMINEN
President & CEO

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From our roots in Finland to the global presence Kemira holds today, the bond that connects our past, our present and our ambitious vision for the future, has been a core driver of our success to date. But we are far from standing still. Quite the opposite, in fact. While we will continue to build on our legacy and the many exceptional attributes that have supported our transformation

and sustained our long-term growth to the present, we are also fully prepared to embrace the new and increasingly complex world in which we operate.

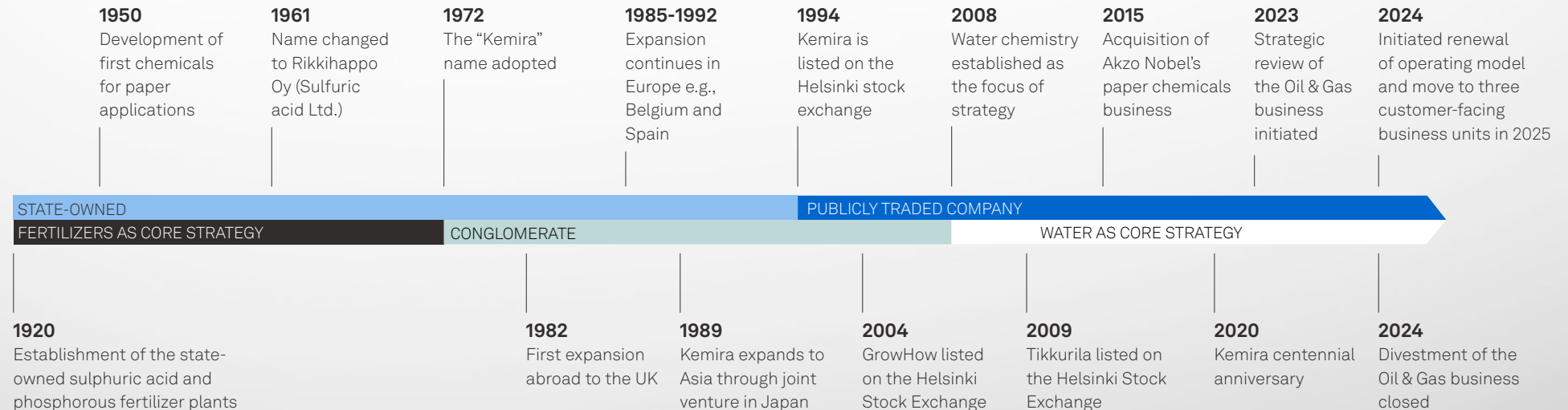
Therefore, in our company's 105th year, we have begun to write a bold new chapter in our rich history. On January 1, 2025, our new operating model came into force; a model

designed to better meet our profitable growth ambitions and better serve our customers. The new model contains three customer-focused business units: Water Solutions, Packaging & Hygiene Solutions, and Fiber Essentials.

We are building on a solid foundation. In 2024, Kemira's strengths included a strong business

model with a clearly defined and customer-centric portfolio, as well as an efficient operation organization with around 5000 talented employees. In the years to come, we must be more courageous and more open. We will develop our growth mindset as well as our 'outside-in' thinking, and our innovation. By 2030, Kemira aims to be the industry-leading provider of sustainability solutions.

KEMIRA'S TRANSFORMATION INTO A WATER-FOCUSED COMPANY



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Water Solutions is our largest business unit with a firm ambition to significantly grow our global water business, both organically and inorganically. The Packaging & Hygiene Solutions business unit focuses on, among others, the growing renewable solutions market, and particularly packaging solutions, where our product offering will strongly support our customers on their critical sustainability journey. Finally, our Fiber Essentials unit focuses on the pulp and bleaching market, where our products play an essential role in the value chain.

In addition, we have also established a centralized Operations unit to further strengthen our operational backbone, thus enabling stronger cooperation and enhanced efficiency. Furthermore, we have changed our ways of working in Research & Development. Product Development has moved into the new business units, increasing the proximity to our valued customers and the unit's autonomy to prioritize initiatives to result in increased speed-to-market. The new Research & Innovation unit is focused on long-term

research and the expansion of our leading portfolio of patented technologies.

A New Ventures and Services unit has also been established, and though not reported as a separate business unit externally, it will act as a growth engine through the development and commercialization of new products and services, as well as develop digital services for all business unit customers.

With our new operating model built on our strong foundations, our enhanced

transformation to a leading provider of sustainable solutions represents a significant new phase in our journey. As we look ahead, we are now better able to navigate the complex future global shifts and trends that will direct our ambitious growth path. We are now ready, together with our partners and customers, to use our more than 100 years' chemical expertise to protect and sustain the planet's most precious resources.



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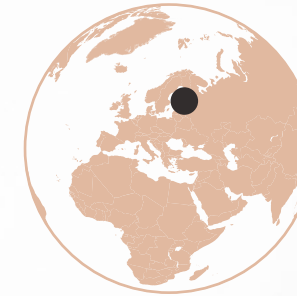
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Revenue, EUR 2,948.1 million	Operative EBITDA, EUR 585.4 million
Operative EBITDA margin 19.90%	Earnings per share, diluted, EUR 1.61
Total employees 4,698	NPS 59
TRIF 3.2	Shipping to 118 countries 58 manufacturing sites Operating in 36 countries

EUROPE, MIDDLE EAST AND AFRICA



Kemira HQ
Helsinki, Finland
R&D
Espoo, Finland

Revenue
1,543.2
million EUR

52%

Employees
2,517

AMERICAS



Regional HQ R&D
Atlanta, USA

Revenue
1,113
million EUR

38%

Employees
1,242

ASIA PACIFIC



Regional HQ R&D
Shanghai, China

Revenue
291.8
million EUR

10%

Employees
939

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KEMIRA AND IFF ENHANCE THEIR COLLABORATION

As part of a strategic cooperation to provide new renewable alternatives to fossil-based products, the two companies announced the completion of a market-entry scale industrial polymer plant.



KEMIRA'S SOLUTION 'WINS GOLD' AT THE 2024 PARIS OLYMPIC AND PARALYMPIC GAMES

KemConnect™ DEX, Kemira's performic acid solution, was utilized to disinfect treated wastewater before discharging, in preparation for the swimming events in the Seine River.



KEMIRA ACCELERATES THE SWITCH TO RENEWABLE SOLUTIONS

Derived from renewable feedstocks, the launch of biomass balanced wet strength resins for the paper industry are a genuine drop-in solution with immediate sustainability benefits.



KEMIRA EXPANDS ITS CAPACITY IN NANJING, CHINA

To respond to increased market demand, Kemira expanded its ASA sizing agents capacity which are used to improve water resistance in paper and board, including packaging solutions.



KEMIRA AND PA CONSULTING COLLABORATE ON SUSTAINABLE FOOD PACKAGING

The strategic collaboration aims at accelerating the development of an innovative polysaccharide-based renewable barrier coating material, supporting the transformation into more sustainable food packaging.



KEMIRA ACQUIRES NORIT'S UK REACTIVATION OPERATIONS

Kemira expanded its water treatment offering by entering the activated carbon market for micropollutants removal.



KEMIRA EXPANDS SODIUM CHLORATE CAPACITY IN SOUTH AMERICA

The expanded capacity in Ortigueira site in Brazil will allow Kemira to capitalize on growing pulp & paper market opportunities.



KEMIRA RENEWS ITS OPERATING MODEL AND LEADERSHIP TEAM

The announced changes to Kemira's operating model will better meet profitable growth ambitions and the move to three externally reported business units.



KEMIRA'S AMBITIOUS SCIENCE-BASED TARGETS VALIDATED

The Science Based Targets initiative (SBTi) approved and validated Kemira's absolute Scope 1, 2 and 3 near-term and long-term emissions reductions targets, an important contribution to tackling accelerating climate change.



KEMIRA EXPANDS ITS CAPACITY IN SPAIN AND NORWAY

Supporting customer sustainability and circular solutions in Spain, the expanded capacity will cater for growing demand in biogas applications and phosphorus removal. In Norway, the expansion of coagulant capacity will meet growing market demand and ensure production reliability in the Nordic region.

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KEY INPUTS

Our people

- Competence and skills of 4,698 employees representing 66 nationalities

Natural resources

- Out of the total 2.55 million tons of used raw materials, 49% consists of recycled materials, while 3% is derived from renewable sources
- 3,324 GWh purchased energy of which 72% is emission-free
- Water consumption 5.2 million m³

Collaboration with stakeholders

- Key relationships with customers, suppliers, contractors, distributors and agents, and industrial partners for secondary raw materials

Financials

- Equity: 1,785.4 MEUR
- Interest bearing liabilities 810.7 MEUR
- Cash: 519.2 MEUR

Intellectual property

- 1,868 granted patents
- Brand and reputation

OWN OPERATIONS

PULP & PAPER



A purpose-driven inclusive culture

- Our principles: Focus on Growth, Collaborate to Succeed, Deliver Value



Responsible operations and supply chain

- Safety of people, products, processes and environment
- Science-based climate targets and carbon neutrality by 2045
- Sustainable supply chain and sourcing
- Sustainability integrated into company processes



Innovation

- Dedicated forward-looking R&I
- 24 new product and concept launches
- 46% of our research is in renewable solutions



Global operations

- 58 manufacturing sites
- 118 ship-to countries

INDUSTRY & WATER

KEY OUTPUTS

Our value-creating solutions

- Functional and safe products
- Efficient and compliant production processes
- Advanced digital technologies

Serving clients particularly in

- Pulp
- Packaging, board, and tissue

Products and solutions

- Revenue from renewable solutions about 240 MEUR
- 58% of our products improve customers' resource efficiency

Our value-creating solutions

- Clean, safe, and affordable drinking water
- Efficient water processing, wastewater treatment and reuse
- Advanced digital technologies

Serving clients particularly in

- Municipalities
- Water-intensive industries

KEY OUTCOMES

Stakeholders, society

- Customer satisfaction: NPS 59
- Collaboration with key business development and innovation partners
- Recognition for our contribution to better societies and environment by external parties, such as CDP, EcoVadis and MSCI
- Job opportunities, and partnerships for local communities
- Employee engagement, competencies, and strong leadership for future growth
- Collaboration with universities and research institutions

Environment

- Emissions reductions from our own operations and our purchased energy: 34.5% compared to 2018.
- 21 billion m³ of water treated with the help of Kemira chemistry, which is comparable to the annual water consumption of approximately 370 million people

Sustainable growth

- Revenue from customers 2,948.1 MEUR
- EBIT 363.2 MEUR
- Wages and benefits paid 419 MEUR
- Income taxes paid 89.6 MEUR
- 119.1 MEUR dividends paid to shareholders

Our Strategy: three priorities

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At Kemira, we are advancing our growth strategy with an ambitious focus on sustainability, and a stronger commitment to delivering solutions that address global challenges.

Our progress in 2024 includes strategic portfolio adjustment that strengthens our focus. We completed our first acquisition in micropollutant removal in EMEA to accelerate growth in our water business, and divested our Oil and Gas related portfolio to concentrate on focused markets. In August 2024, we also announced a new operating model for 2025 and beyond, which further enhances the execution of our growth strategy with a more agile, customer-centric approach.

These moves allow us to move forward with clarity and purpose and we have sharpened three core strategic priorities:

EXPANDING IN WATER

Growing our water business remains our top priority. Our goal is to double this business, leveraging both organic growth and strategic acquisition, such as our expansion in Europe in 2024. This focus is driven by the increasing demand for water solutions in response to global water scarcity and heightened industrial needs, reinforcing our role as a leader in sustainable water treatment.

BUILDING LEADING RENEWABLE SOLUTIONS PORTFOLIO

The second priority is to build a leading and comprehensive portfolio of renewable solutions, by both enabling a

sustainability transformation in our existing markets, as well as leveraging our many capabilities in the new circularity driven markets. Through innovation and a commitment to renewables, we aim to lead the way in providing solutions that benefit our customers and the environment.

UNLOCKING NEW GROWTH PLATFORMS

The third strategic priority is to unlock new growth platforms and to increase our penetration into selected new high-growth adjacent markets. By diversifying our portfolio and harnessing the power of our digital solution, we can capture new opportunities in emerging sectors that align with evolving market needs.

Our growth priorities are firmly aligned with major global megatrends—decarbonization, circularity, water scarcity, and resource efficiency—that are reshaping industries and guiding our focus. By aligning our business priorities with these trends, we are better positioned to meet urgent needs and to lead in building a sustainable future.

To support these priorities, we are strengthening strategic partnerships, optimizing feedstock conversion processes and enhancing product innovation. Together with mergers and acquisitions, this approach enables us to adapt to market changes, scale effectively, and continuously meet evolving customer demands. This further enables us to create long-term value for our stakeholders and foster a positive impact on the world.

“At Kemira, we are driving growth by focusing on sustainable solutions. With a clear focus on our water and renewable solutions portfolio, we are meeting the evolving needs of our customers and creating value for our shareholders.”



Linus Hildebrandt
EVP, Strategy

Our Innovation

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For over a century, innovation has been a key part of Kemira's DNA. This fundamental cornerstone of our operations can now draw on a comprehensive and industry-leading portfolio of patented technologies, and trusted and long-term collaboration with our customers, as well as academic and commercial partnerships – both large and small – around the world.

BUILDING ON R&I FOR THE FUTURE

Kemira's newly formed Research & Innovation (R&I) unit concentrates on delivering groundbreaking research, and a stronger focus on long-term innovation, with renewable solutions at the core of the unit's work. By embedding product development within our business units, we have increased proximity to customers and created the autonomy to prioritize initiatives that accelerate speed-to-market.

This strategic shift in R&I represents our transition from predominantly incremental projects to a majority being classified as transformational. This shift now clearly aligns with our new growth strategy, focusing on pioneering and truly innovative solutions that are new to the industry and to our customers.



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This approach signifies our deep and long-term commitment to developing groundbreaking innovations that require a unique fusion of skills, a forward-thinking approach, and a willingness to venture into uncharted territories. This evolution reflects our dedication to pushing the boundaries of what's possible in chemical solutions, ensuring that our long-term R&I strategy is not only about sustaining the present, but also about fundamentally shaping the future of sustainable chemistry.

OUR INNOVATION TOOLBOX

Today, our new innovation toolbox is more robust than ever, reflecting deeper and more enhanced knowledge of chemistry and applications know-how across our three business units, Water Solutions, Packaging & Hygiene Solutions, and Fiber Essentials. In addition, our team is further developing state-of-the-art digital capabilities, pioneering smart solutions together with our valued partners and customers.

The increase in patent applications across recent years highlights our shift towards innovative projects in growing areas like renewable coated barriers, textiles and molded fiber, but also on strengthening our core business. The Finnish Patent and Registration Office recognized Kemira as holding the fifth position among Finnish domestic companies for the highest volume of patent applications filed in 2023. Kemira leads its industry-specific reference group, securing the top position in its sector for patent submissions.

OUR INNOVATION MINDSET

In the field of R&I, a strong background in chemistry and engineering is essential. However, R&I is about much more than just scientific knowhow and other technological skillsets; it also requires the utilization of psychological flexibility, resilience, and strong motivation. These skills are becoming ever more intrinsic to our future operations and company growth.

For increasingly complex issues, greater emphasis on deep-dive collaboration, notably with startups and other external partners, is an area which will form an important component of our new global R&I strategy. We see it as a win-win. By engaging with external entities, we not only broaden our knowledge base but also accelerate the innovation process.

A key highlight in 2024 was the Kemira Technical Conference 2024, held in Helsinki, Finland; a landmark event that celebrated innovation and technical excellence within Kemira. Featuring top-tier technical expertise and fostering collaboration across the organization, under the theme "Technical Excellence and Collaboration", the conference showcased cutting-edge work, spanning core business areas and strategic growth fields. The main topics included renewable solutions (bio-based barriers, bio-based polymers, and others), new concepts for water treatment (micropollutant removal and more), textiles, molded fiber products, and digital services.

"Our focus on strategic partnerships and bold innovation reflects our long-term commitment to pioneering responsible and industry-leading products. By pushing the boundaries of chemistry, we're helping to shape a future where renewables lead the way in sustainable chemical solutions."



Sampo Lahtinen
SVP, Growth Accelerator

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At Kemira, safety is always our top priority. Throughout the year, we strive to ensure responsible operations as well as the safe production and use of our products throughout their lifecycle. Our ongoing target is to achieve zero harm to our employees, our communities and the environment, to deliver customer satisfaction, and to meet ambitious sustainability and profitability targets.

We understand that the responsible management of our operations and products, from inception to utilization, is critical for the wellbeing of people and the environment. Safety is the foundation for all our operations, and includes people safety, environmental safety, process safety, chemical safety, transportation safety and asset integrity.

Every individual throughout Kemira's 58 manufacturing sites globally has a critical role to play in ensuring a safe work environment. The systematic compliance with Kemira Life-Saving Rules, together with continual improvements to safety culture, helps to ensure that every employee returns home safe and unharmed each day. Kemira proactively promotes a culture where safety is a shared value; sets, and monitors ambitious key performance indicators; and launches new initiatives to enhance overall safety performance. In 2024, Kemira conducted a Shop Floor Focus Training Program (see the case study on page 13), for driving safety culture and

operational improvements across Kemira manufacturing sites worldwide. In the EMEA region, Kemira also conducted a Transportation Safety Enhancement Program (see the case study on page 14) aimed at improving safety in Kemira's transportation operations. Safety performance is closely tied to Kemira's metrics at all levels of employees.

In 2024 Kemira recorded zero permanent occupational incidents. In addition, the incident severity declined, resulting in fewer lost time incidents compared with 2023. However, due to several minor hand and finger injuries the number of Total Recordable Injuries (TRI) was 43, and Total Recordable Injury Frequency (TRIF) was 3.2 covering Kemira's own workforce and contractor incidents per one million working hours. TRIF was above the target (1.9 in 2024) and this resulted in Kemira re-evaluating the target and adjusting it from 1.5 to 2.2 by end of 2025, and from 1.1 to 1.5 by end of 2030.

"Preventing incidents and accidents is critical. To reach the next level, besides compliance, we need to focus more on people competences and safety behaviors. We are one Kemira, and by being mindful and vigilant, we can upgrade our learning and safety behaviors on the path towards zero incidents."



Anne Helenius-Heir
VP, EHSQ

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CASE

Supervisors scored high in safety training

Supervisors working at Kemira sites scored high in safety training in 2024. For the training, a major collaboration between Kemira's Manufacturing, Global and Local Environment, Health, Safety and Quality (EHSQ) was implemented, in a concentrated effort to elevate safety standards and redefine supervisory roles across the company's 58 manufacturing operations throughout the EMEA, Americas and APAC regions. This collaborative approach was designed to enhance the effectiveness of the training and promote a unified safety culture across the organization. The program took place from April to December.

The 'Shop Floor Training' initiated by the Manufacturing and Technology Steering Committee consisted of a three-day face-to-face program designed to equip the supervision level of manufacturing with clear and

consistent expectations and responsibilities, as well as a comprehensive safety toolbox, 'Safety 101'.

Beginning with a half-day session dedicated to setting forth supervisory roles and responsibilities and recognizing the pivotal role that supervisors play in manufacturing, the learning underlined their key role in the safety performance of their site and the importance of maintaining and nurturing a positive safety culture along with driving operational excellence. The training element was then delivered by the regional manufacturing heads to shop floor supervisors from each site.

The initiative dedicated the remaining time to safety training and the 'Safety 101' toolbox, authored by both the Local and Global EHSQ teams. The toolbox covers a wide array of essential topics for fostering a safe working environment,

and from enforcing life-saving rules to conducting root-cause analysis and incident reporting, supervisors received thorough training on a number of essential safety protocols.

This global initiative to train Kemira's supervisors on safety represented a significant effort at the manufacturing sites to boost practical safety measures on the shop floor throughout the company's global operations and enhance safety behaviors and life-saving rules. Its aim was to instill a safety-first mindset among supervisors and employees and ensure that safety was not just about numbers but about people and their wellbeing. The future ambition of this initiative is to target behavioral safety, as well as safety compliance and competencies, with the goal of strongly improving Kemira's safety culture at all supervisory levels. The sessions were conducted in local languages throughout the sites, and the feedback was very positive.



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Positive results for the EMEA Transport Safety Program

In 2024, Kemira's Transportation Safety enhancement program had a positive impact on the daily safety of the company's transportation operations. The program utilized revised and updated processes and aligned roles and responsibilities across the organization in the EMEA region. The program consisted of three streams – shipment document compliance, delivery operations, and manufacturing site operations concerning the carriers – and the streams contained several projects.

The program was initiated in 2023, due to the increasing number of safety issues recorded in Kemira's transportation operations since 2020. The impact of the program is followed through process compliance and the amount of Category A transportation incidents.

A number of 'human-related' factors were identified as being behind the rise in incidents, including less post-Covid-19 face-to-face contact, a decline in well-trained drivers in the region, many experienced drivers retiring, and a dramatic reduction in driver availability due to the war in Ukraine, and other challenging macroeconomic indicators.

After detailed work to ensure that the shipping documents contained the correct content, the enhancing of safety skill-set requirements of the subcontracted partners, and a clear focus on operations within selected Kemira's manufacturing sites, the positive impact of the safety program reaped dividends in 2024. As a result, there was a noted decline in the number of incidents compared to the previous few years. In 2024, the key performance indicator benchmark was 1.0 to receive a 'green' rating, and Kemira recorded a score of 0.4 within the EMEA region.



“Transportation safety is critical to our operations. Working closely together with our manufacturing sites helps ensure that those involved in transportation operations can focus on important safety topics. In 2025, learned best practices will be implemented throughout our operations in EMEA.”



Lilli Piispa
VP, SCM, EMEA
Supply Chain Management

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Scarce water resources, accelerating climate change and sustainably meeting the needs of a growing global population with limited resources, are some of the most pressing and critical challenges of our times. At Kemira, employees across our two business segments in 2024, Pulp & Paper*, and Industry & Water*, worked intensely, in collaboration with our partners, to develop, enhance and deliver innovative and industry-leading solutions and products for our valued global customers.

* On January 1, 2025, Kemira updating its operating model and moved to a customer solution-based organization with three new customer-facing business units; Water Solutions, Packaging & Hygiene Solutions, and Fiber Essentials.



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While addressing global megatrends, urban and industrial water and wastewater treatment plants must also adhere to increasingly stringent regulatory requirements. Kemira offers a range of innovative solutions to optimize all stages of the water treatment process and reduce expenses for energy, labor and chemicals, while safely achieving water quality targets.

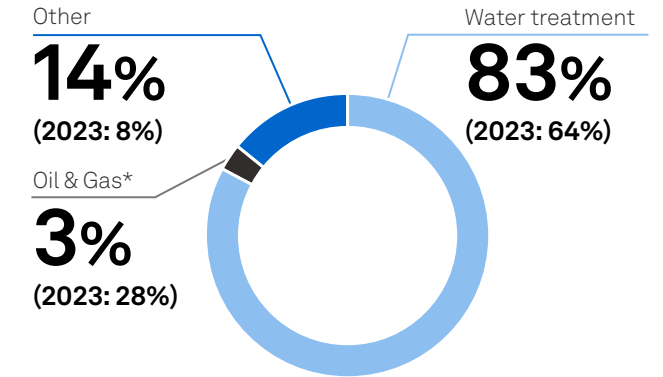
“In 2024, we were very successful in securing the base business profitability in water treatment applications. We were able to positively grow our volume in some areas, for example, in inorganic coagulants, as well as win some new polymer business, particularly in EMEA. In addition, we successfully launched new biomass balanced polymer, a renewable product line, one of our strategic initiatives. Through these products, we are enabling our customers, including cities like Barcelona, Turin and Stuttgart as examples, to meet their own sustainability ambitions, using renewable rather than fossil-derived chemistry. In North America, we further opened up the next chapter, with new customers interested in our renewable polymer chemistry solutions. A final highlight was the 2024 Paris Olympics, where we had our innovative disinfection technology applied at the Seine Amont Wastewater Treatment Plant in Valenton, Europe's second largest treatment plant, and the last step before the treated wastewater flowed into the Seine River in preparation for the triathlon events.

Looking at 2025, now that we have updated our operating model, we can create more customer intimacy and focus greater attention on additional business opportunities in both industry and urban areas. This is the key going into 2025: we still want to continue with our excellent base business, which the new organizational structure enables, but at the same time, to be fully prepared for the new regulatory changes, both in Europe and in North America. There are going to be even tighter regulations for water treatment in Europe, for example, and particularly from the new Urban Wastewater Treatment Directive as approved in 2024. We are also developing some new initiatives like activated carbon technology to remove micro pollutants which we are adding to our portfolio. As part of this new market for Kemira, we made a small acquisition in the UK and announced the planning of our activated carbon reactivation investment in Sweden. We are looking forward to expanding in 2025 as part of our ambitions in our new Water Solutions business unit and our target is to double our revenue in the future. Taken together, I feel incredible pride for all the work the whole team achieved in 2024, and the feeling of personal excitement at the new organizational structure and focus areas as we move forward into 2025.”



Tuija Pohjolainen-Hiltunen
President, Segment I&W (in 2024), and
EVP, Water Solutions (from January 2025)

INDUSTRY & WATER APPLICATION SPLIT



* Kemira announced the divestments of its Oil & Gas portfolio in December 2023 and completed the divestment on February 2, 2024.

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Activated carbon purifies water of many micropollutants

In June 2024, Kemira expanded its water treatment portfolio and entered the activated carbon market for micropollutants removal through the acquisition of Norit's UK reactivation operations. Activated carbon is the most common technology to remove taste and odor in drinking water, and delivers excellent water purification for use in food processing, and all the areas where high-grade water is required for manufacturing and industrial processes. Activated carbon also removes micropollutants including PFAS ('forever chemicals') in water treatment applications.

Micropollutant removal is expected to become increasingly relevant for water and wastewater treatment plants due to the increasing concern for consumer health and environmental safety. PFAS removal from drinking water and micropollutant removal from wastewater have also been introduced in recent EU legislative updates.

Kemira is already an established player in solid liquid separation, with the company's leading chemical products enabling water treatment plants to clean, reuse, or recycle wastewater. This process allows for the removal of relatively 'big' particles. Activated Carbon technology allows Kemira customers to remove far smaller particles and enable water-focused companies to utilize an effective "polishing" process to further purify the water.

Activated carbon is derived from sources as varied as peat, wood and even coconut shells, and once it is first produced, the Virgin Activated Carbon contains an associated cost and carbon footprint. The acquired reactivation facility produces 'Green' reactivated carbon for potable water and food-related applications, and 'Amber' reactivated carbon for other non-food related applications. With the recent acquisition, Kemira is now able to regenerate (or reactivate) the used, or 'spent' activated carbon using a high temperature oven that burns out the micropollutants and other contaminants. This process can be repeated, depending on use cases, up to 10 times, allowing the carbon material to become inherently more sustainable. As a result, the total CO₂ burden of reactivated carbon is a small fraction of the virgin material, and through its entire lifecycle is estimated to provide an emissions reduction of up to 90% if regenerated to its feasible maximum limit.

Currently, Kemira is only servicing UK customers, but is in the process of completing its EU REACH registration, which will enable it to import and export Activated Carbon goods, allowing the company to source more materials and also to serve many more customers outside the UK.



“Activated carbon, particularly in terms of where regulations are heading, will enhance the removal of pharmaceutical micropollutants and PFAS chemicals. It's early days, but we're learning and refining our business, and are planning to establish sites in Europe in the future.”



David Normington
Director, Product Lines,
Process Chemicals

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Cellulosic fiber, the renewable and abundant wood, and woody plant-derived raw material, plays an essential role in the global circular economy. With our chemistry expertise, we enable the manufacturing of a wide range of traditional and new end-products, from recyclable paper and board packaging to tissue products and textiles. We help our customers achieve resource-efficient and compliant production processes as well as functional and safe end products.

“The whole value chain saw the expected pickup in consumer demand in early 2024, but over the summer, especially in Europe and the APAC region, consumer confidence declined and the market for packaging and hygiene products stagnated in the third and fourth quarter. That said, our growth trajectory was upwards, and it was a positive year for us. One highlight for 2024 is that we made a strategic decision to enter India, currently the fastest growing paper market in the world. In 2025, we will have an established team in place to accelerate our growth in the country. In addition, we also initiated a third production line of ASA sizing agent in China, and our projected growth in both countries shows our continued dedication and commitment to the Asia Pacific region.

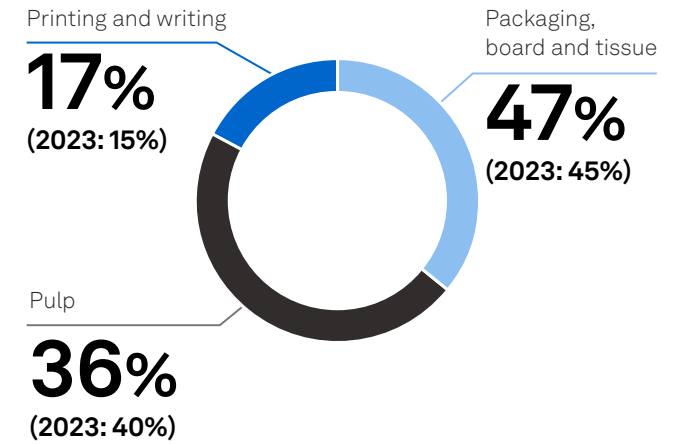
The other major project of 2024 was the preparation for Kemira's new operating model which came into effect in January 2025. It allows us to further focus on the

growth areas of packaging solutions and hygiene papers, while maintaining our strong geographical presence in bulk chemicals. The new business unit gives us a clear mandate in packaging and hygiene solutions to grow our presence in those areas. And within the packaging space, you also have the new emerging technologies driven by increasing consumer demand for sustainable solutions. So, the paper or the board will largely replace today's solutions, and the future will be renewable. It is in these areas we talk about the 'paperization' of packaging, and this will be the primary focus of our packaging and hygiene solutions as we move into 2025. One example in this area is our new collaboration with PA Consulting on renewable coating products (see our case study on page 19). Additionally, in 2024 our work in advanced chemistries for molded fibers (see case study on page 20), and our broad expertise in developing solutions for the paper and board domain, enabled the launch of our new molded fiber solution. FennoGard 3D was introduced in January 2025, as part of our full and global portfolio of molded fiber solutions, launching in 2025.”



Harri Eronen
Interim President, Segment P&P and Head of Region EMEA (in 2024), and EVP, Packaging & Hygiene Solutions (from January 2025)

REVENUE BY PULP & PAPER CUSTOMER TYPE



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Collaboration for a renewable future in packaging

In early 2024, Kemira and PA Consulting formed a strategic collaboration with the aim of accelerating the development of a new renewable coating technology, thereby supporting the transformation into more sustainable food packaging. The collaboration is focused on bringing to market an innovative “alpha-glucan” renewable barrier coating, which provides an inherently strong environmental profile, including recyclability and compostability, combined with excellent barrier properties for flexible food packaging applications. This alpha-glucan barrier technology is based on IFF’s Designed Enzymatic Biomaterial™ (“DEB”) production platform, a cutting-edge biotechnology process that enables the production of new renewable polymers with enzymatic polymerization.

For Kemira, the rationale behind the collaboration, at its most simple, is about moving away from plastic films in favor of renewable and biodegradable paper where possible, and in places where the technology can make a positive impact in a significant volume. The major global brands driving sustainable packaging forward have targets to replace fossil-based materials with renewable alternatives, and/or use more recyclable materials in the future. In many regions, mixed waste streams combining both plastics and fiber-based materials are difficult to recycle. Therefore, having renewable packaging that breaks down more easily and results in a higher-quality recovery of the fiber is highly valuable.

During 2024, Kemira and PA Consulting engaged with more than 100 different brands with the view to developing a replacement for single or multi-layer plastic film-based packaging materials. At the end of 2024, the collaboration project successfully reached the proof-of-concept stage, setting the stage for scale-up during the next few years.

In addition to the alpha-glucan barrier program, and as a further demonstration of Kemira’s commitment to sustainable paper-based packaging, Kemira also continued the development of PHA-based barriers. The first commercial phase of a flexible, heat-sealable package created for a globally recognized brand is expected to take place in 2025, and will be based on a new proprietary formulation that includes PHA, a biodegradable polyester produced by Kemira’s partner, Danimer Scientific.

Developing new chemical solutions for demanding applications, especially those used in direct food and beverage contact, requires time and dedicated knowledge. Later in 2025, and through our collaboration with PA Consulting, we are aiming to be in a commercial position to launch a limited portfolio of renewable coating technology solutions in limited markets.

“Legislation, consumer expectations and brand commitments are driving the renewable packaging industry forward. Our target is that in the next few years, our work with PHA and alpha-glucan-based formulations will be utilized by major brands in the food and beverage renewable packaging sector.”



Adam Tonzi
VP, Biomaterials,
Paper & Board

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“We have the competence to be part of new developments in molded fiber, together with our partners and customers. The industry is growing and gradually replacing other non-sustainable packaging material, and we are confident that Kemira can make an important contribution to the sector.”



Tianxing Wen
Director, Product Lines,
Pulp & Paper, APAC
(from January 2025)

CASE

Molded fiber – forming a renewable future

In recent years, the critical need to reduce plastic waste has driven research into more sustainable alternatives to traditional packaging. Recyclable and compostable packaging made from renewable resources, like molded fiber products, is increasingly being seen as a viable solution.

To replace plastic, fiber-based packaging needs to contain barrier properties for oil, grease, oxygen, and moisture. In the past, PFAS compounds (known as ‘forever chemicals’) were quite commonly used in molded fiber, and safe alternatives are needed to replace these compounds.

For Kemira, understanding and developing both molded fiber and barrier technologies is essential to ensuring that recyclable and compostable packaging can perform reliably in various applications, from food and liquid protection to cosmetic and hygiene products.

Kemira’s commitment to this sector is unwavering, bolstered by a robust product portfolio and a strategic position within the APAC region, which is responsible for 70% of the world’s molded fiber production. Continued partnerships with globally recognized brands underscore Kemira’s role as a trusted leader, with a promising outlook for future growth and innovation.

As part of intense collaborative work in this field, Kemira is a member of the RISE Wet Moulding Barrier project under the Bioeconomy Research Programme. A consortium of industry partners, together with RISE as the coordinator, are currently

investigating various aspects regarding barriers for packaging products produced using wet moulded fiber materials. In addition, Kemira is also part of Zero F, a Horizon Europe project with a focus on a safer future without harmful PFAS compounds. With 12 research and industry partners from nine countries across Europe joining forces to develop renewable coating alternatives to replace PFAS compounds in food packaging and textiles, the collective ambition to move the industry forward is palpable.

Following intense development work throughout 2024, Kemira will launch and begin commercializing its proprietary and advanced oil and grease resistant (OGR) chemistry, FennoGuard 3D, in early 2025. This PFAS-free dispersion barrier coating meets the requirements of customers and brand owners and fulfills all major regulatory requirements worldwide. Additionally, Kemira made significant progress in 2024 on its next-generation biodegradable barrier product for molded fiber, made from renewable raw materials and planned for launch in 2025.

Another highlight of 2024 were efforts to bring about the 2025 launch of a complete molded fiber product portfolio – a portfolio including both process and functional chemistries for improving process efficiency and creating needed properties such as hydrophobicity and strength – to all three regions (EMEA, Americas, APAC). This product portfolio is PFAS free and follows the latest global regulations and restrictions. Building on its experience and established market presence, Kemira is now focused on supporting the evolving industry by developing solutions that meet the needs of more demanding end markets.

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Ongoing efforts in textile recycling

In 2024, less than 1% of textiles globally were recycled, and most were landfilled or burned. In the European Union, for example, approximately 5.8 million tons of textiles are discarded annually, the equivalent of 11.3 kg per person. This less than positive trend is partly the result of ongoing consumer confusion with how to dispose of textiles, like clothes, and the impractical collection of the textiles to date.

Under **EU rules on waste**, Member States are required to set up a separate collection of textiles by 1 January 2025. For this to happen, the separate collection, sorting, reuse and recycling capacities within the EU will require strengthening. For Kemira, it is in post-industrial and post-consumer textile waste recycling where the company can play a critical role in the future. Specifically by providing leading chemical solutions to third-party mechanical and chemical textile recyclers, as well as to companies in the next stage of the process, namely textile producers who are utilizing the recycled fibers.

As part of efforts to boost public and professional dialogue, collaboration and knowledge sharing across the value chain within the sustainable textile fiber domain, VTT (Technical Research Centre of Finland), Kemira and Valmet joined forces to host the first-ever Nordic Textile Fibre Day in Helsinki, Finland, in January 2024. The event brought together over 100 key industry stakeholders from a region currently seen

as at the forefront of pioneering textile fiber innovations, and it explored the latest developments in man-made cellulosic fibers (MMCF) and textile recycling.

However, the processes to develop chemical solutions to meet specific textile recycling needs are complex. With many textiles comprised of more than one material, this presents multiple challenges in the fiber-to-fiber recycling process. Moreover, decolorization, non-cellulosic fibers, and many other impurities from recycled textiles will continue to hold back the rapid increasing in volume of recycled fibers ready for future MMCF production.

Kemira, however, is being proactive in the field. During 2024, chemical solutions that support the fiber recycling process and which help both maximize the removal of synthetic fibers and minimize the loss of valuable cellulosic fibers, were further developed. As part of the process, Kemira has also been undertaking studies together with its customers, both as part of Kemira's internal RD&I, as well as at the customers own facilities. In addition, Kemira's chemistry and application expertise in existing pulp bleaching processes can also be applied in treating cellulose-based pulp. This, in turn, helps decolorize textile waste and turn it into dissolving pulp that is highly reactive and meets the requirements for fiber reuse in high-value applications. The hard work will continue in 2025 and beyond.



“We have the ability to work together with our partners and customers across the value chain to find the most optimal solutions in the textile recycling sector. Our job at Kemira is to get in early with industry-leading solutions to help move this whole process forward.”



Jörg Schöner
Senior Manager,
Global Business Creation,
Textile Fibers

Driving sustainability

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Sustainability is a business imperative. It means reducing climate impacts, increasing water resilience and using resources responsibly. For Kemira, it is also about tightly linking our sustainability targets with our business strategy.

In 2024, we updated our global sustainability program and increased our ambition levels in our sustainability-driven strategic priorities. Our commitment to sustainability supports our customers and drives our profitable growth.

To make our work as beneficial as possible, we have made a comprehensive impact, risk and opportunity analysis of our sustainability matters throughout our value chain with the lens of short-, medium- and long-term timescales, a process that enables us to identify the issues that are most important to us and our stakeholders.

And what is important to us is water, circularity, climate and nature, and our people at the centre – because nothing happens without our people. These are our four sustainability focus areas where we can make the biggest positive contributions across economic, social, and environmental dimensions. Our chemistry expertise can be best utilized, together with our digital know-how, to help mitigate the most critical planetary challenges we currently face: water scarcity, resource scarcity and accelerating climate change.

Sustainability for us means two things. Reducing our value chain-wide negative impacts is important, and through our commitment to the Science Based Targets initiative and our ambitious GHG reduction targets, our firm ambition is to actively deliver concrete actions to mitigate our impact. Besides reducing our footprint, we put major efforts into increasing our positive business impacts, or handprint and societal impact, meaning how much water we clean, how we transform the chemistry origins in our value chain by moving from fossil materials to renewable ones and how our solutions improve the customer resource efficiency for our resource intensive customers globally.

To that end, our shared global ambition to build a sustainable world is articulated in the UN Sustainable Development Goals (SDGs), and as part of our new sustainability strategy for 2025 and beyond, we focus on the four goals where Kemira can make the most significant impact: SDG 6; clean water and sanitation, SDG 8; decent work and economic growth, SDG 12; responsible consumption and production, and SDG 13; climate action.

“In 2024 we have focused on developing our sustainability work and taking the first steps towards a full alignment of our sustainability program and business strategy. Our aim in the coming years is to go from the remains of feel-good corporate responsibility to hard-nosed sustainable value creation.”



Rasmus Pinomaa
Director,
Corporate Sustainability

A Closer Look at Sustainability

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Our shared global ambition to build a sustainable world is articulated in the UN Sustainable Development Goals (SDGs), and we focus on the four SDGs where Kemira can make the most significant impact: 6, 8, 12, and 13.

We prioritize four sustainability themes — water, circularity, climate & nature and people — that are most material to us, where we can make the biggest positive contributions across economic, social, and environmental dimensions.

OUR TARGETS AND PROGRESS:



Improving safety*

Reduce our Total Recordable Injury Frequency (TRIF) across our operations to 2.2 by the end of 2025, and 1.5 by the end of 2030.



Fostering inclusivity

Reach top 10% cross industry norm for Diversity & Inclusion by the end of 2025.



Leading water management

Achieve a Climate Disclosure Project (CDP) water security score for leadership of A or A- by the end of 2025.



Enhancing waste impacts

Reduce disposed production waste intensity by 15% by the end of 2030, from a 2019 baseline (4.4).



Reducing emissions**

Reduce GHG emissions from Scope 1 and 2 by 51.23% by the end of 2030, compared to base year 2018.

Reduce GHG emissions from Scope 3 by 32.5% by the end of 2033, compared to base year 2021.



Expanding our renewable offering

Derive more than EUR 500 million from renewable solutions by the end of 2030.

	RESULT 2024	TARGET
Improving safety*	3.2	1.5
Fostering inclusivity	>25%	10%
Leading water management	B	A / A-
Enhancing waste impacts	4.2	15%
Reducing emissions**	34.5%	51.23%
	19.5%	32.5%
Expanding our renewable offering	EUR 240 million	EUR 500 million

*TRIF: Kemira re-evaluated the safety target and adjusted it from 1.5 to 2.2 by end of 2025, and from 1.1 to 1.5 by end of 2030. Target for 2024 was 1.9.

**Near-term GHG emission reduction targets for Scope 1, 2 and 3 were validated by SBTi in 2024.

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Our circular economy actions are critical to our operations at Kemira. These actions go far beyond simple recycling. Rather, they require fundamental changes to the way our materials are sourced, and how our products are designed, produced, sold, used and disposed of throughout the global value chain.

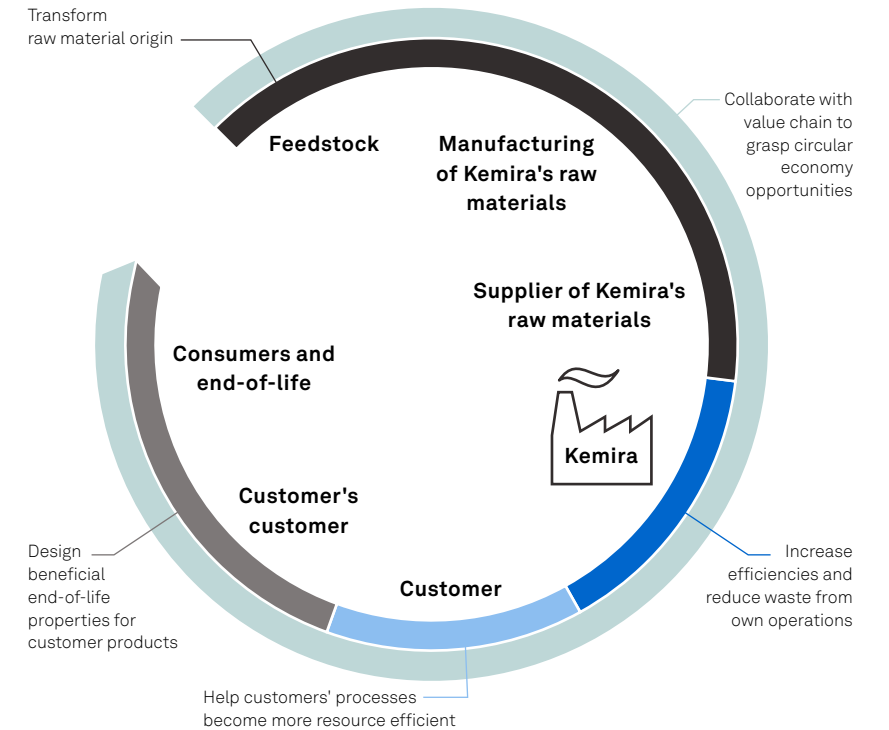
We have a vast range of opportunities available to help shape a more circular world. We achieve this through the comprehensive adoption of circular business practices across our own operations and throughout the value chain, empowering our valued customers to become more energy, resource, waste, and water efficient. This, in turn, helps our customers reduce their overall environmental impacts, like carbon footprint, and create better solutions for further downstream partners.

Our work is structured around our five circularity principles (see infographic). These principles refer to the transformation of raw materials, increasing efficiencies and reducing waste, helping our customers to become more resource efficient, designing optimized end-of-life properties for products, and collaborating with third-party entities in the value chain to boost circularity-related opportunities.

As part of this process, the sourcing of materials is essential to ensuring an efficient circular economy, and turning circular raw materials into new innovative products is where we are uniquely positioned to empower our customers. By increasing the use of recycled, and renewable raw materials, co-developing new products with circular properties, and innovating in new ways to reduce waste, we drive circularity across the industries we work with.

Throughout 2024, and related to our own operations and value chain, we continued to prioritize increasing the share of renewable and recycled raw materials used across our production units. In 2024, around 52% of used raw materials were renewable and recycled. In addition, approximately 70-80% of the raw materials in our coagulants are already sourced from recycled materials, including from other industries' side-streams and waste by-products.

CIRCULAR ECONOMY



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Another focus area is our renewable solutions portfolio, which offers concrete ways for our customers to incorporate a greater share of circular materials into their own processes. This portfolio is on-track to reach EUR 500 million in sales by 2030. In 2024, we totaled EUR 240 million in sales, in collaboration with our business segments and supported by our Growth Accelerator unit. We will further enhance our efforts in 2025.

Meanwhile, our digital solutions – such as KemConnect™ - can optimize resource efficiency for customers to keep waste and water use to an absolute minimum, offering significant cost and emissions savings while increasing water resilience.

By working with our customers and focusing our circular efforts on the sourcing of the materials we all need, Kemira is dedicated to securing the future availability of natural resources and unlocking more value from the limited resources we have.

RENEWABLE CARBON INITIATIVE

Kemira has joined the Renewable Carbon Initiative (RCI) to partner with leading companies and accelerate the industry shift from fossil carbon to renewable carbon and raw materials. Becoming a member of the RCI demonstrates Kemira's commitment to advancing innovative sustainability practices with a focus on promoting circularity and a bio-based economy. RCI champions the transition

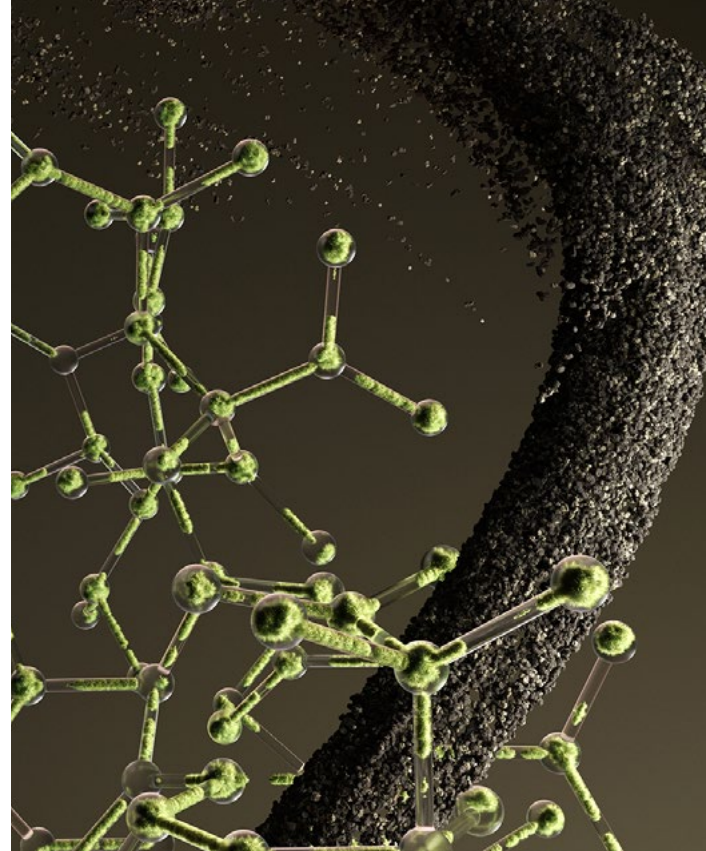
from fossil carbon to renewable carbon for all organic chemicals and materials. The relevant sources of renewable carbon include biomass, CO₂ and recycling. The RCI, founded in September 2020, is a group of more than 50 pioneering companies from the entire chemical value chain from raw material to end-of-life.



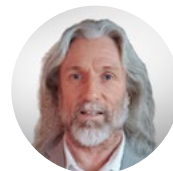
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“Through highly complex chemical processes, we are working to develop new molecular formulations that can transform waste side-streams into valuable products. We are in the early stages of this work but are excited about the potential benefits for the environment and the community in the long term.”



Jussi Nikkarinen
Sr. Research Scientist,
Polymer Chemistries,
R&D and Technology, Kemira

CASE

Enhancing circularity – from waste by-products to new products

We are actively exploring how to better utilize by-products from manufacturing and water treatment processes. Rather than discarding these by-products (or side-streams), we see a significant opportunity to recycle and reuse them, contributing to a more circular economy. One such example is the potential use of ADAME by-products. ADAME (Dimethylaminoethylacrylate) is used in the composition of many industrial products, including hydrosoluble agents for dispersants, thickeners and flocculating agents. In 2024, we planned to test the reuse of around 1,800 tonnes of by-products at Kemira's San Giorgio site in Italy as part of an ongoing pilot initiative. The test will take place in spring 2025.

This circularity project was initiated in 2022 by Kemira's engineering and technology unit, with the goal of improving process efficiency at the San Giorgio chemicals plant. The site produces polymers for different customer applications in the pulp and paper and water treatment sectors.

As part of the project, we are developing new analytic methods to better understand the yield of the polymer process and the resultant waste-stream by-products. When the chemists realized they could not meaningfully improve the 90% yield of the ADAME products, the idea was suggested that instead of incinerating the 10% waste by-product – a viscous molten liquid sludge named 'ADAME heavy' – the waste-stream could be separated and the raw materials used to synthesize what ultimately became surface active agents' products used in many different applications.

At this stage, we are still in the experimental phase, and the development of these new products is ongoing. If successful, these products could be used in a variety of applications, including anti-corrosion agents, textile and fiber softeners, emulsion stabilizers, and even foaming agents designed to significantly reduce water consumption in the paper and board industry, which traditionally relies heavily on water. The effort we are taking today lays the foundation for a potential breakthrough in sustainable manufacturing and circularity.

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Kemira's products help to protect lakes from phosphorus

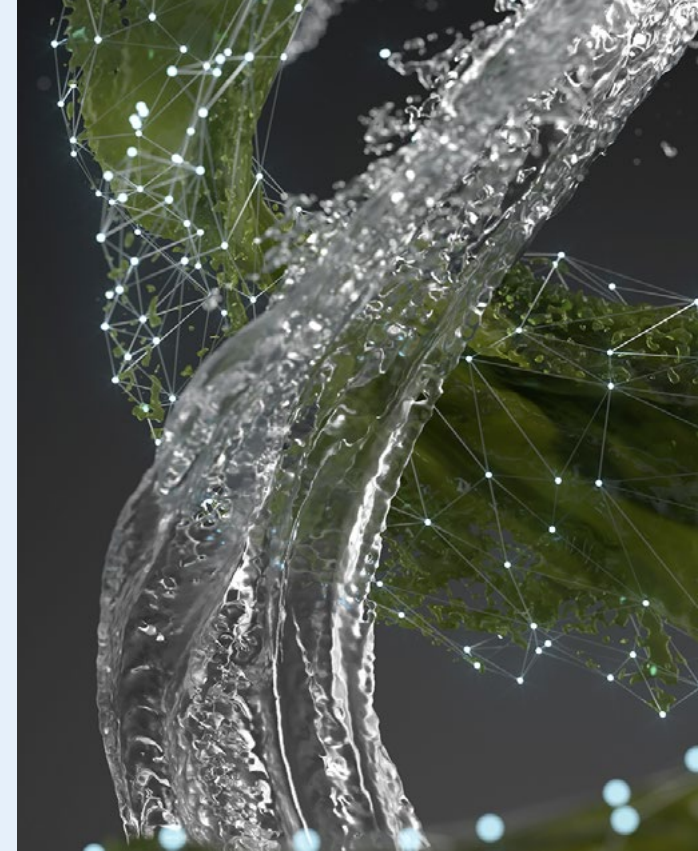
In 2024, Kemira continued efforts in its own operations and value chain to increase the share of renewable and recycled raw materials used across its 58 global manufacturing sites. As part of this work, around 70–80% of the raw materials used in the manufacturing of coagulants were sourced from recycled materials, including other industries' waste streams. These are known as Alternative Raw Materials (ARMs) and they result in a lower carbon footprint for Kemira's iron and aluminum coagulants.

The role of coagulation in water treatment is significant: it is the complex process of reducing the electric repulsion between particles by the addition of iron or aluminum salts (inorganic coagulants) to the water. As a result, coagulants can successfully remove almost all particles (including most microplastics) from the water. In addition, some dissolved matter like phosphates are effectively removed with coagulants.

In 2024, Kemira cooperated with Easy Mining, a company that has developed technologies for recovery of products from waste streams. Kemira has collaborated with Easy Mining on recovery from sewage sludge ash where phosphorus, iron and aluminum can be recovered. Iron and aluminum are potential raw materials for Kemira's coagulant production and will further improve the circularity of this product group.

Phosphorus is a nutrient present in the wastewater that needs to be removed to avoid algae growth and eutrophication in our lakes, rivers and seas. At wastewater treatment plants, coagulants are used to precipitate the phosphorus from the wastewater and separate it to the sludge produced. When the sludge is incinerated, an ash is produced that can be upgraded in Easy Mining's process and coagulants can be recycled.

In the past, many companies neglected to utilize their waste streams, as they saw no value from doing so. But now, many companies see a public and commercial value in finding solutions for their waste streams, as well as their need to respond to increasing legislative pressure to deliver reduced or zero waste targets. During 2024, Kemira was approached by many companies who now see an enhanced value-added benefit to both recycling resources and reducing emissions. Most of these companies are heavy industries, including titanium dioxide plants and steel mills. Kemira is confident that the share of recycled materials being used in its manufacturing of coagulants will increase in the next decade.



“We have initiated new venture technologies and several projects with partners are aimed at utilizing alternative and recycled raw materials to create our coagulants. Further commercializing our expertise is part of our long-term vision of enhancing circular raw material use.”



Jakob Smusin
Senior Technology Manager

Climate and Nature

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We are determined to reduce the impact of climate change, not only within our own operations but also across our entire value chain. These actions involve our suppliers and customers and benefit our communities. Our collaborative efforts have already led to a reduction in our Scope 1&2 emissions of 34.5% at the end of 2024, compared to our 2018 base year, keeping us on the road towards our 2030 target to reduce the Scope 1&2 emissions by 52%. In 2024 we also published a target for Scope 3 emissions, where we have been able to stay on the science-based targets guided trajectory in the past years. Great examples for our Scope 3 work is our focus on renewable materials, but also our logistics. For example, in Sweden, deliveries to municipal water treatment facilities have been running with hydrogenated vegetable oil since the start of 2024. This has led to a significant 70% reduction in carbon footprint on customer deliveries.

CLIMATE TARGETS VALIDATED BY THE SBTi

In October 2024, the SBTi approved and validated Kemira's near-term science-based emissions reduction target. The SBTi has classified Kemira's Scope 1 and 2* target ambition as in line with a 1.5°C trajectory as part of the global agenda of the Paris Agreement. Kemira also commits to reduce absolute Scope 1&2 emissions by 51.23% by 2030 compared to the 2018 base year.

* Scope 1, 2 & 3 emissions as defined by the Greenhouse Gas Protocol. Scopes 1 & 2 cover the emissions related to Kemira's own production. Scope 3 includes all other relevant emissions throughout the value chain.



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In addition, Kemira has also committed to reduce absolute Scope 3 GHG emissions from purchased goods and services, and upstream and downstream transportation and distribution, by 32.5% by 2033 from the 2021 base year. Kemira will continue to keep its long-term ambition of becoming carbon neutral by 2045 for Scopes 1 and 2.

The SBTi is a partnership between CDP, the United Nations Global Compact, the World Resources Institute and the World Wide Fund for Nature, to drive climate action by enabling companies to set science-based emissions reduction targets.

DRIVING THE TRANSITION TO EMISSION-FREE ENERGY

The sources of the energy we use play a significant role in the climate impacts of our own operations, which is why Kemira is making ongoing and dedicated efforts, both big and small, to transition its production sites to emission-free energy. In 2024, approximately 72% of our purchased energy was emission-free. With sites like our Swedish facility drawing 50% of its electricity from wind and our Finnish sites increasingly powered by nuclear and renewable sources.

Kemira is also currently evaluating ten of its plants worldwide for potential solar power projects. In 2024, our target to establish a 100% renewable electricity site in California was both realized and implemented.

An example of an important but smaller-in-size measure to further reduce our emissions relates to our opting for greener energy sources to get shipments from A to B. In 2024, our team in California completed their first liquid bulk deliveries using electric trucks powered by solar energy, exemplifying our commitment to greener energy sources for shipments. Additionally, in Europe, we have been delivering to municipal water treatment facilities in Sweden with diesel vehicles now running on hydrogenated vegetable oil since the start of 2024, leading to a significant 70% reduction in carbon footprint for those customers. These efforts drive us closer to our Scope 3 targets and strengthen the resilience of our supply chain.

RAW MATERIAL TRANSFORMATION ANALYSIS

In 2024, Kemira conducted an internal Scope 3.1 GHG abatement analysis to identify key abatement levers. Above 50% of Kemira's Scope 3.1 abatement relies on renewable electricity and heat for our Tier 1 and Tier 2 suppliers. The key levers also consider renewable feedstocks, including renewable naphtha, ammonia and methanol, and the implementation of carbon capture and storage (CCS) technologies to emission intensive processes, like steam methane reformers and stream crackers. The Scope 3.1 abatement strategy includes a combination of levers influenced by both Kemira and our suppliers. These levers include innovating sustainable material sourcing, enhancing resource circularity, and improving efficiencies throughout our supply chain.



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IMPROVING TRANSPARENCY FOR INFORMED CLIMATE ACTION

Throughout 2024, Kemira's climate action initiatives involved mitigating site-specific climate impacts and further preparing for climate disclosure requirements, particularly the new EU regulations on Corporate Sustainability Reporting (CSRD) and its European Sustainability Reporting Standards (ESRS) that came into force for financial year 2024.

In addition, Kemira continued its efforts to enhance its significant project to model climate risk scenarios, which started with a limited number of manufacturing sites in 2022 and expanded to encompass a broader range of locations

throughout 2023 and 2024. This project addresses both physical risks related to the impacts of climate change and transitional risks, including financial ones.

To increase transparency, Kemira actively reports on sustainability to platforms such as CDP and EcoVadis, 2023 scores of 'B' in both climate and water rankings. We also retained top industry positioning with EcoVadis Gold and MSCI's AAA rating, placing us among the global leaders in our industry. These ratings reflect our strong performance in environmental, social, and governance areas, with commitments to continually strengthen our impact.

MAKING BIODIVERSITY MORE VISIBLE

Kemira is a member of the ongoing Biodiversity ad-hoc group organized by the Finnish Chemical industry since 2022. For the past three years, we've been working to understand Kemira's impacts, dependencies, risks and opportunities related to biodiversity in our direct operations and upstream value chain. We have conducted several internal biodiversity assessments using specialized tools like IBAT (Integrated Biodiversity Assessment Tool) and WWF Biodiversity Risk Filter, and we had a pilot-scale consultancy-led project in 2023. In 2024, we completed a half a year training for the Science-Based-Targets for Nature (SBTN), organized by the UN Global Compact Finland alongside 14 renowned Finnish companies.



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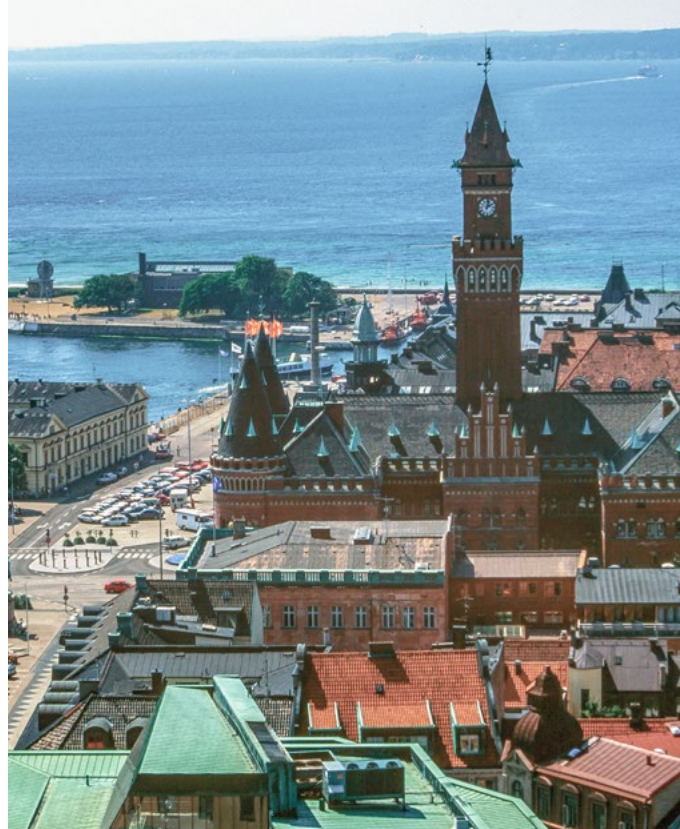
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“A truly symbiotic and beneficial relationship between Kemira’s plant and Helsingborg city, this ongoing union clearly shows how district heating, circularity and lower-emission logistics can successfully contribute to global climate efforts and also positively enhance the community impact.”



Peter Kihlgren
Managing Director, Sweden

CASE

Marking 50 years of groundbreaking climate, energy and circularity actions in Helsingborg

In 2024, Kemira and Öresundskraft’s cooperation regarding the residual heat from Kemira’s manufacturing site in Helsingborg, Sweden, marked its 50th anniversary. Across the decades, this cooperation has bolstered the competitiveness of the companies, significantly reduced CO₂ emissions, and led to positive regional economic benefits.

Launched in 1974, the cooperation began when hot water from the then Boliden Kemi began pumping out of the Helsingborg district heating network. At the same time, the oil crises of 1974 and 1979 had caused the oil price to dramatically increase, and the utilized residual heat was an important first step in moving away from oil dependence.

Based on commercial principles for the benefit of both parties, having an outlet for the residual heat gives Kemira a competitive advantage. For Öresundskraft, the residual heat is the foundation for the district heating of Helsingborg and delivers about 40% of the total heating needs.

The most noted benefit of the collaboration has been the resulting reduction in carbon emissions. From 1974-2024, the total CO₂ savings have been calculated at around 2 million tonnes, the equivalent of some 27,000 tanker trucks full of gasoline, or approximately 1,340,000 homes’ average electricity use for one year.

Beyond CO₂ reduction, Kemira’s lower-emissions logistics and advanced environmental controls, including filtration and scrubbing technologies, have decreased other pollutants like sulfur dioxide, nitrogen oxides, and volatile organic compounds. Additionally, using residual heat has reduced reliance on virgin natural resources.

At the site, Kemira’s largest global manufacturing facility, sulfuric acid is produced, and the entire process of producing sulfuric acid is exothermic. While a few other sources of energy are also utilized, like natural gas for certain high energy or high temperature processes, in total, the site recovers 600 gigawatt hours per year, the equivalent to the annual heating requirements of around 30,000 Swedish houses. Most of this energy comes from sulfur combustion, a CO₂-free process, making it an environmentally friendly energy source.

This collaboration across five decades is now understood to be one of the oldest, as well as the longest district heating agreements in the world.

Water solutions for the world

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At Kemira, we recognize the critical importance of clean water as a non-negotiable foundation of life. And in a world facing the increasing challenges of climate change and a growing population, ensuring access to this invaluable natural resource has been at the very core of our company ethos for many decades.

We provide solutions for clean and safe water that improve our customers water resilience and mitigate their risks towards water scarcity. In 2024, our solutions helped to clean more than 21 billion m³ of water – enough water to supply about 370 million people for one year (the average person uses about 155 liters of water per day) or the equivalent of around eight million Olympic-sized swimming pools – while efforts within our own operations have ensured continuous improvement in water recycling and freshwater use.

We offer solutions to water-intensive industries that enable them to minimize and improve their water impacts. Through our products, they are empowered to both use less water and usher in processes to increase reuse and recycling. Recycling water, rather than drawing from freshwater sources, is part of our strategic goal of enhancing water resilience wherever we operate. Kemira is strongly dedicated to delivering cleaner and more sustainable water management.



FASTER FORWARD INITIATIVE

In September 2023, Kemira joined the UN Global Compact Faster Forward Initiative, a world-wide effort that unites businesses to take measurable, credible, and ambitious action to accelerate the progress on the UN's 17 Sustainable Development Goals (SDGs). Kemira is committed to building water resilience through its participation.

A commitment of this kind means Kemira must build water resilience across global operations and supply chains and join hands to achieve collective positive water impact in at least 100 vulnerable prioritized water basins by 2030.

Kemira operates globally in regions where water scarcity is already an issue. Here Kemira can improve

water resilience through improving recycling of water, securing quality of drinking water and making sure that water is treated and nutrition loads, for example, are minimized before it ends up in nature.

Kemira has been proactive in addressing water-related challenges for many decades. It has an ongoing commitment to the CEO Water Mandate, where it strives to promote water stewardship best practices. Kemira's firm ambition is to elevate its water management to a Leadership level, as determined by the CDP Water Security scoring methodology, by the end of 2025. In addition, Kemira and its partners work together to apply innovations to secure a safe and clean water circularity.

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Our products help millions of people globally to have access to clean water

Our positive external water impact includes providing chemical solutions that help clean around 21 billion cubic meters of water every year. This vast number is equivalent to the annual consumption needs of approximately 370 million people. However, our firm commitment to water management extends beyond the water-intensive industries we provide our solutions to. We likewise uphold the same high standards throughout our own operations.

In 2024, we further enhanced our efforts to improve our own water balance accuracy, to track our water usage and recycling data, and to fully map our water impacts across all sites. These actions were taken so that we could implement more informed, targeted actions to conserve and preserve our own water consumption. The process included mapping of gaps in water accounting and installation of additional measurements at sites to reduce uncertainty in site specific water balances. In addition, water-related risks and opportunities are assessed at each Kemira plant and at a corporate level using scenario analysis. Mapping and conservation efforts in recent years have been particularly targeted to the sites located in water-stressed and water-scarce areas.

Kemira has 58 manufacturing sites globally. In 2024, 12 of Kemira's sites were located in water stress areas. It is deemed critical that the water consumption and accounting minimizes uncertainties, so we are able to track and quantify the impact of our improvements at all our sites and especially the sites located in water-stressed and water-scarce areas. Water withdrawal and discharge data, and calculated water consumption is collected in accordance with GRI standards. Our water management project strongly emphasizes the importance of accurate and foundational water accounting for both our mandatory and legislative-driven sustainability reporting, and for our continuous improvement to reduce water impacts.

As part of this process, Kemira has a target to improve water management to Leadership level based on CDP Water Security scoring methodology by the end of 2025, to show our customers and other stakeholders that our own water management is both at a high level and transparent.



“Our products really help many millions of consumers globally to have access to clean water. But it is also critical that our own house is in order and we have actions to reduce water related impacts and risks in our own operations and our water accounting is accurate. This important work will continue throughout 2025 and beyond.”



Teemu Mattila
Manager, Environmental Safety,
EHSQ

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Our valued and professional Kemira team drives our success and is front and center in our global operations collaborating across regions, businesses, and functions and with our customers and other stakeholders. Three Kemira principles support the development of the growth culture, accelerate strategy execution and drive performance: Focus on Growth, Collaborate to Succeed, and Deliver Value.

These principles are the high-level guidance for everyone in Kemira and are aligned with our purpose, values and strategy. They help us to anticipate the future needs of our customers, to embrace a growth mindset to develop sustainable long-term solutions and ensure that the whole organization has competences for growth. Embracing diversity, equity and promoting an inclusive environment not only enhances our innovation, but also boosts employee engagement, wellbeing, and satisfaction, factors which strongly contribute to our shared and successful growth journey and sustainability transformation. In 2024, we continued to promote an environment where every individual can feel respected, empowered and valued, with plenty of opportunities for learning and development.

In 2024, Kemira underwent a transformative journey as a company, with the announcement of a new CEO, a new structure, and a new operating model. These changes aimed to increase customer centricity, strategic focus, speed of delivery and accelerate growth and shareholder value creation. As part of the transformation process, we intensified the growth culture dialogue as well as greater adoption of the Kemira principles so everyone can contribute to Kemira's growth journey. By year end, adoption of the Kemira Principles and the associated nine habits were completed by 63% of our global employees via a short e-learning course.



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As part of our long-established and comprehensive framework to advance our commitment to diversity, equity and inclusion, our employee engagement has been consistently strong over the years, and 2024 continued the solid progress. In May 2024, the Kemira engagement score was 80, a result notably above the external manufacturing benchmark of 74. We completed 20 diversity focused workshops at our manufacturing sites and 70% of all our manufacturing sites have now been covered by these workshops during 2023–2024.

The 2024 Inclusion Index declined slightly compared to the previous year, reaching 77 (78) compared to the top 10% cross industry benchmark of 80, based on MyVoice May 2024.

- Key achievements include the internal staffing of leadership roles of the new organization.
- Updated Kemira Principles learning program for our employees to understand our new principles and operating model were implemented.
- Our Employee Resource Groups (ERG) actively help to promote an inclusive workplace through various initiatives. In August, KemPride and the Women's Network visited our manufacturing site in the Netherlands, one of the largest in Europe and discussed many important topics related to diversity, equity, and inclusion, as well as reiterated the importance of the ethos 'One Kemira' within the company.
- A wellbeing month in September and a learning month in October boosted employee resilience and prepared the employees for the transition to a new 2025 operating model.



“In 2024, our readiness for future growth and our ongoing commitment to diversity and employee wellbeing were further advanced. But we are on a transformational journey, and in 2025, I am excited to help our valued employees to successfully adapt and flourish in this next phase in our growth story.”



Sandra Dillon
Vice President,
Talent Development

Kemira

KEMIRA is a global leader in sustainable chemical solutions for water-intensive industries. We deliver tailored products and services to improve the product quality, processes, and resource efficiency of our diverse range of customers. Our focus is on water treatment, as well as on fiber and renewable solutions – enabling sustainability transformation for our customers. In 2024, Kemira reported annual revenue of EUR 2.9 billion with a global team of some 4,700 colleagues. Kemira is listed on the Nasdaq Helsinki.

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