Kemira

Annual Report 2021

Kemira

The Kemira Annual Report 2021 consists of four modules: **Annual Review 2021**, **Sustainability Report 2021**, **Corporate Governance 2021**, and **Financial Statements 2021**. This interactive PDF version of the Annual Report has been enhanced with linked navigation to help you find the information you want more quickly. The table of contents, page references and URLs link to pages and sections within this document as well as to outside websites.

Content

All forward-looking statements in this report are based on the management's current expectations and beliefs about future events, and actual results may differ materially from the expectations and beliefs such statements contain.

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Kemira

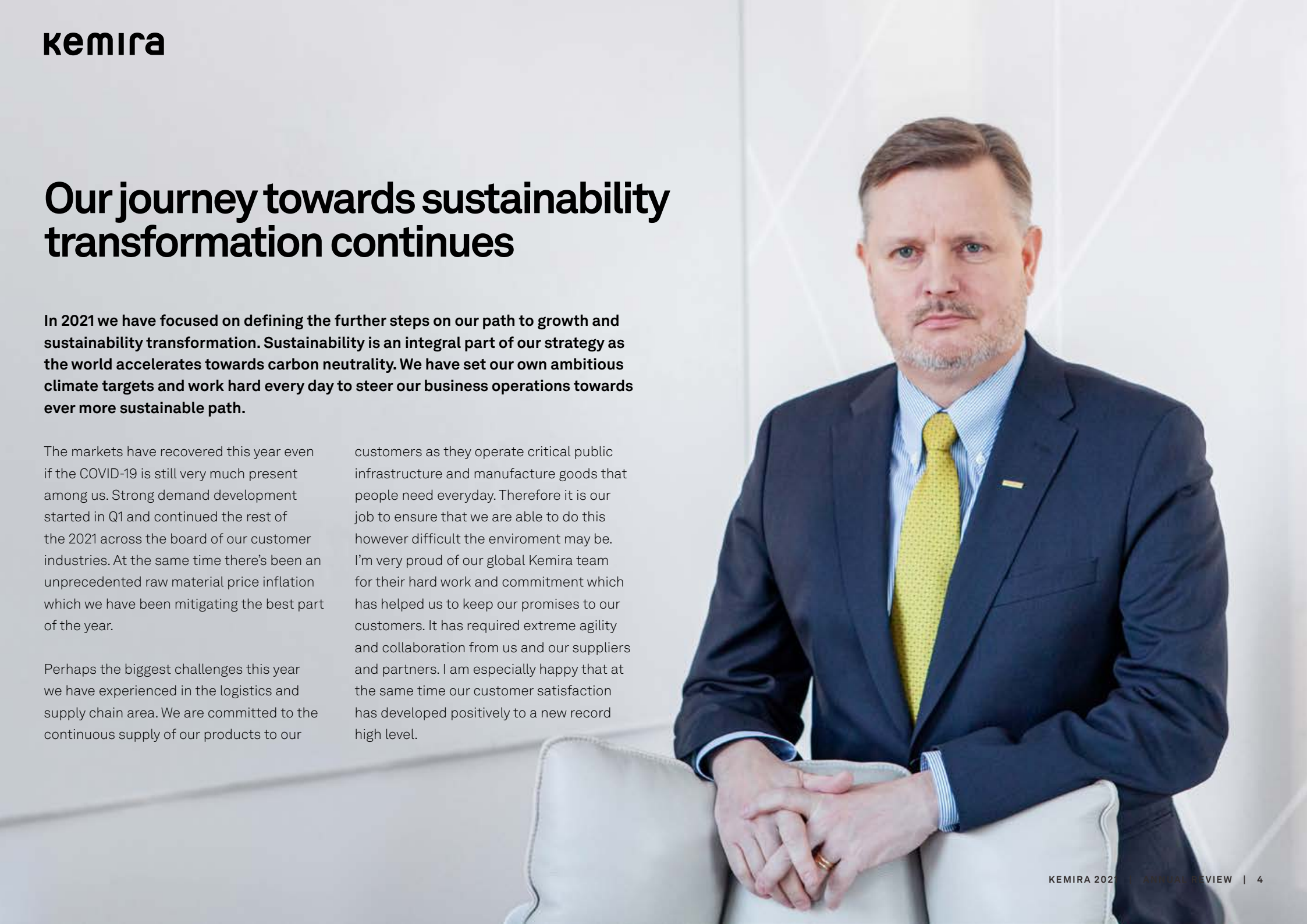
Annual Review 2021

Our journey towards sustainability transformation continues

In 2021 we have focused on defining the further steps on our path to growth and sustainability transformation. Sustainability is an integral part of our strategy as the world accelerates towards carbon neutrality. We have set our own ambitious climate targets and work hard every day to steer our business operations towards ever more sustainable path.

The markets have recovered this year even if the COVID-19 is still very much present among us. Strong demand development started in Q1 and continued the rest of the 2021 across the board of our customer industries. At the same time there's been an unprecedented raw material price inflation which we have been mitigating the best part of the year.

Perhaps the biggest challenges this year we have experienced in the logistics and supply chain area. We are committed to the continuous supply of our products to our customers as they operate critical public infrastructure and manufacture goods that people need everyday. Therefore it is our job to ensure that we are able to do this however difficult the enviroment may be. I'm very proud of our global Kemira team for their hard work and commitment which has helped us to keep our promises to our customers. It has required extreme agility and collaboration from us and our suppliers and partners. I am especially happy that at the same time our customer satisfaction has developed positively to a new record high level.



> Our new purpose statement “Chemistry with a purpose. Better every day.” reflects the impact our work has on people, business, society and the environment.

Our financial performance was good and we achieved a record revenue of EUR 2,674 million in 2021 driven by the strong demand in both of our segments. Our profitability was impacted by the significantly higher raw material and energy prices as well as supply chain issues. Our growth investments started to bring in benefits on several fronts as we completed capacity expansion projects in the USA, South Korea and UK. Our bleaching capacity expansion project in Uruguay is ongoing and we expect it to positively contribute to our EBITDA in 2023. We also announced new investments to Kemira’s Nanjing and Yangzhou sites in China which will strenghten our position in the APAC markets. Our biobased strategy has also progressed as planned and first sales were made with biodegradable coating materials based on PHA in Q2 2021. We have also continued our profitablity improvement initiatives and focused on strict cost management.

Our new purpose statement “Chemistry with a purpose. Better every day.” reflects the impact our work has on people, business, society and the environment. I am extremely proud of the role we play in society. Our work is part of the clean water cycle, the fiber-based value chain and in the global energy sector. We recognize the immense impact chemistry has made and continues to make and we’re experts in applying chemistry in a reliable, responsible and a safe way. Continuous improvement is deep in our DNA and we’re committed to that today and going forward be it better ways to use and recycle natural resources, optimizing water management, enabling clean water and sanitation and helping our customers to improve their businesses.

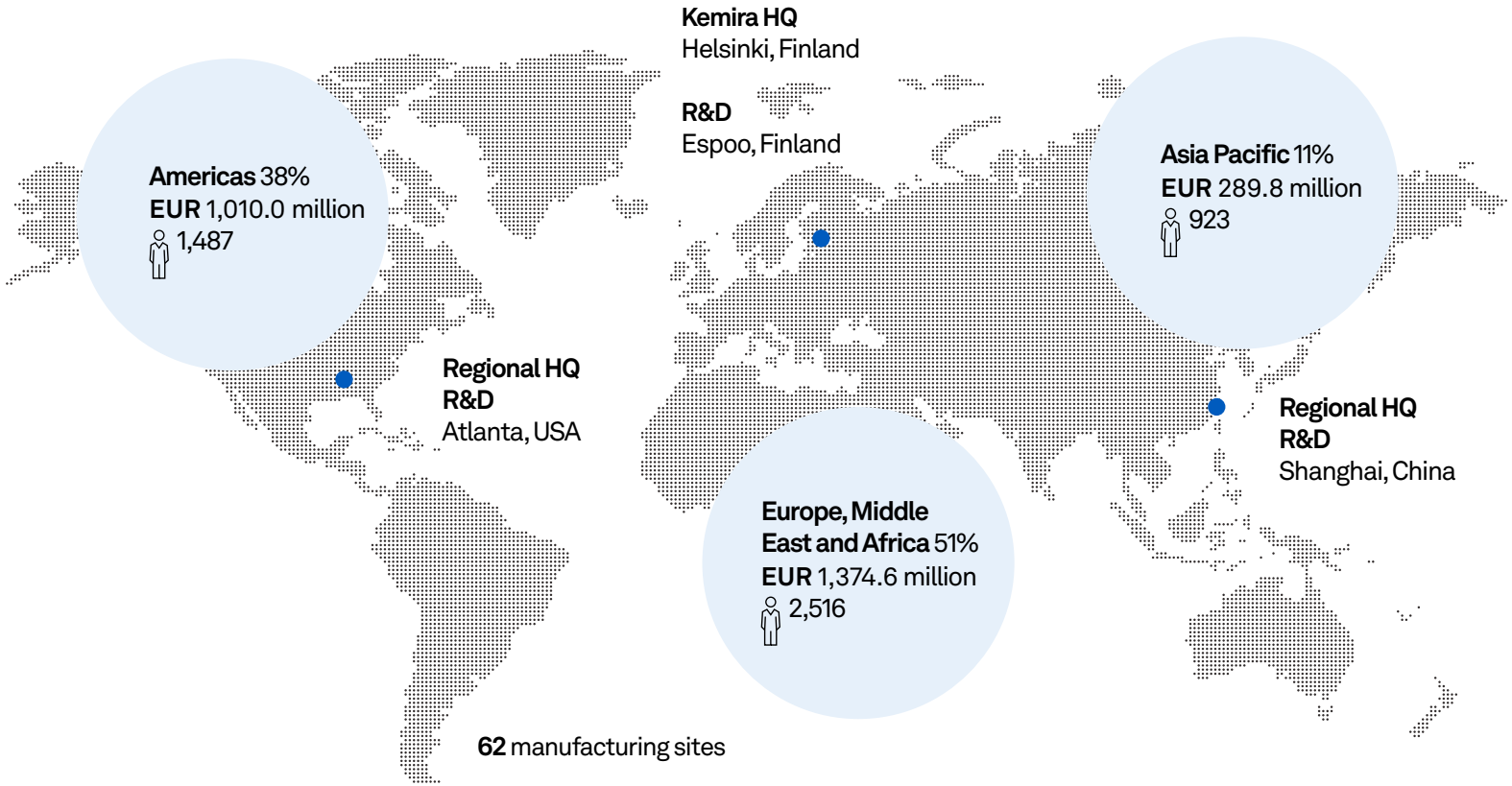
We updated our sustainability targets in safety, people, water, climate and circularity in 2021. These are the five areas where we can make the biggest difference either by reducing our own footprint or maximizing our handprint and positive contribution to the United Nations Sustainable Development Goals. We especially focus on bringing our customers innovative products and applications that help them become more sustainable and improve their end-use resource efficiency. Continuous daily focus on the safety and health of our own employees and everyone we work with is the key on our journey to zero incidents. We are also fully committed to even further develop Kemira as a diverse and inclusive workplace.

Our new leadership principles *Focus on growth*, *Collaborate to succeed* and *Deliver value* support the strategy execution and our transformation journey as we also implement the new way to lead our global team in Kemira. Unlocking the growth mindset will enable us to reach our long term targets and further empower our people to bring all their considerable skills and capabilities for the good of our customers.

I am very proud of our global Kemira team and what we have achieved together this year. I want to also warmly thank our customers and other stakeholders for their continued trust in us. I am convinced that what we have learned in 2021 will help us to build a better and more sustainable future together with our customers, employees, suppliers and shareholders

JARI ROSENDAL
President and CEO

Key figures 2021



Revenue, EUR	Operative EBITDA, EUR	Operative EBITDA margin	Earnings per share, diluted, EUR	Total employees
2.7 billion	**426** million	**15.9%**	**0.70**	**4,926**

Our purpose shows the difference we make

In 2021, we defined Kemira's new purpose: Chemistry with a purpose. Better every day.

It emphasizes our core focus, the chemistry we work with. It also shows our commitment to continuous improvement and our goal of a better everyday for people, business, society and the environment. We live our purpose for example by developing and applying chemistry to optimize water management and the ways natural resources are used and recycled. We advance people's everyday health and safety and constantly improve our customers' processes – enabling their sustainable business.

We make sure chemistry is applied in a reliable, responsible and a safe way for our employees, our customers and the society. Through chemistry we are creating a better every day for everyone.

PROFITABLE GROWTH THROUGH SUSTAINABILITY TRANSFORMATION

Our strategic focus is based on sustainability transformation as one of the key enablers for profitable growth. We aim to become the leading provider of sustainable chemical solutions for water-intensive industries, supporting our customers in reaching their sustainability and other performance targets. Our success is built on a unique combination of more than 100 years of chemistry expertise, high quality product portfolio and advanced digital technologies for process optimization and transparency.

PULP & PAPER

The Pulp & Paper segment combines best-in-class application expertise, latest technologies for advanced process management and a complete chemistry portfolio to serve our customers in the papermaking industry across different grades from pulp to board, tissue, 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 biobased materials, such as packaging board and dispersion barrier coatings.

INDUSTRY & WATER

The Industry & Water business segment enables water intensive industries and municipal water treatment operators 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 the United Nations Sustainable Development Goals (SDGs). In oil and gas applications we enable reduced water and energy use for more efficient well management and improve oil sands tailings treatment. Our focus on the water intensive industries continues and we are constantly evaluating new opportunities for growth within this sector.

Value creation model

INPUTS

Equity:
EUR 1,342.7million

Interest-bearing liabilities:
EUR 992.2 million

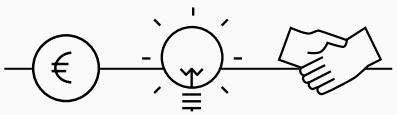
Cash:
EUR 142.4million

Key relationships:
Customers, suppliers, contractors, distributors and agents, industrial partners for secondary raw materials

Skills and capabilities of all Kemira employees

1,972 granted patents

Total materials purchased:
→ 2.51 million tonnes, 37.7% industrial by-products
→ Total energy purchased 4,101 GWh

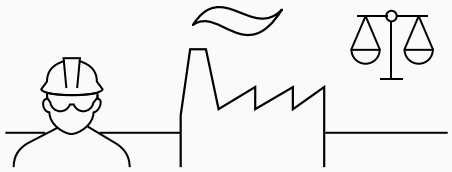


BUSINESS ACTIVITIES

Sustainable products and solutions:
→ Improve our customers' product quality and process efficiency
→ Enabling our customers to improve their water, energy and raw material efficiency
→ That are safe to use

Responsible operations and supply chain
→ Lowering costs and environmental impacts of our operations
→ Workplace safety
→ Sustainability in sourcing and supply chain management

People
→ Compelling employee experience promise
→ Purposeful work, recognition and growth opportunities
→ Leadership Principles guide leaders to Focus on growth, Collaborate to succeed and Delivering value to enable our sustainability transformation and profitable growth
→ Focus on Diversity & Inclusion to cover sense of belonging, authenticity, inclusive leadership, learn and grow for all employees



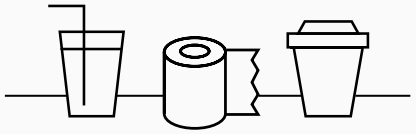
OUTPUTS

Revenue received from customers
→ EUR 2674.4 million

Services
→ Technical expertise, including application support, digital services and total chemistry management
→ Process control and monitoring

Emissions and waste
→ Scope 1 + Scope 2 GHG emissions (CO_2 eq.) = 856,000 tonnes
→ Total waste 117,044 tonnes

People
→ Compliance with Kemira's Code of Conduct
→ Engaged employees and high performing talent
→ Value based inclusive culture



OUTCOMES

Customers
Product quality, yield optimization, and reduced environmental impacts
→ Process and energy efficiency
→ Improved water quality and regulatory compliance
→ Customer satisfaction at an all-time high: NPS 50

Society
→ Clean safe water
→ Renewable biobased economy
→ Water and energy efficient industry
→ Energy availability
→ Income taxes paid: EUR 44 million

Shareholders
→ EUR 95.3 million paid in dividends

Employees
→ Skills and competences and strong leadership for the future of work
→ Reach top 10% cross industry norm for Diversity & Inclusion by 2025

Why our partners choose Kemira

Our deep R&D and application knowhow, secure supply network and complete technology portfolio are some of the reasons why we are a safe, efficient and sustainable partner.

CHEMISTRY EXPERTISE

Our world-class chemistry expertise is supported by R&D centers in Europe, North America and Asia. We work together with customers, suppliers and research organizations to provide cutting-edge solutions that can be applied to solve customers' and societies challenges.

RELIABILITY

We are there when you need us. Our global presence and experience across water-intensive industries allows us to provide unique analysis and insight for our customers. We also provide our customers with peace-of-mind and reliability through dealing with a mature company that can respond to their needs and ensure safe operations.

SUSTAINABLE SOLUTIONS

Our R&D experience and commitment to zero harm to people and the environment mean that we are constantly developing more sustainable solutions, be it through enhancing energy efficiency, using less harmful substances or capturing micropollutants from wastewater streams. We can help partners understand and address the societal challenges of today and tomorrow.

SHARED VISION

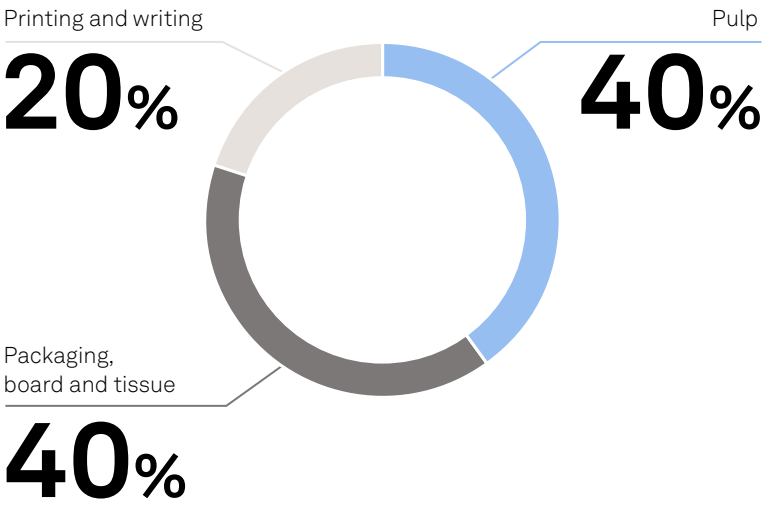
Our focus is just as much on saving cost for customers as helping deliver a positive impact in society. As a global company we share a vision of building sustainable societies. Kemira is more than a great product company, we are the partner of choice to deliver our services, capabilities and innovation into global markets.

PULP & PAPER

Leading chemistry solutions for the pulp and paper industry

Paper and board are sustainable natural products based on renewable raw materials, and are utilized in a variety of applications and end uses. Pulp and paper industry is impacted by global megatrends, such as growing environmental awareness and e-commerce. We collaborate with industry-leading companies to address these trends, and the emerging requirements and opportunities. Our application expertise, latest technologies for data-driven process management, digital services and a complete chemistry portfolio help our customers enhance their sustainability, process efficiency, productivity and end-product quality.

KEMIRA PULP & PAPER CUSTOMERS



Our knowhow spans across four main customer applications

PULP

There's always room for improvement in any pulp line or bleaching operations. Kemira offers targeted chemistry and application know-how that can help squeeze more efficiency and profitability out of processes. Extensive R&D and application knowledge throughout the entire papermaking process helps customers with pulp quality and environmental performance.

TISSUE

Strength, softness and absorbency are the required properties for many tissue products. We analyze customers' processes to introduce the desired functionality into the sheet with the help of chemistry. We also help reduce costs for raw materials and energy, and help with the hygiene and cleanliness of operations.

BOARD

High quality packaging board both protects a wide variety of products and promotes brands in the best possible way. This requires properties such as strength and stiffness, lightest possible weight as well as superb printing and converting of the package. With liquid packaging and food service grades, strict standards for hygiene and cleanliness must be met. We offer industry-leading chemistry expertise to help board manufacturers achieve all these qualities.

PAPER

Great opportunities exist in the paper business to use chemistry for competitive advantage. On the cost side, this includes fiber substitution where strength aids and binders allow the use of cost effective fibers and fillers. In operations, cleaner machine water systems can increase uptime and sellable tonnes.

CASE

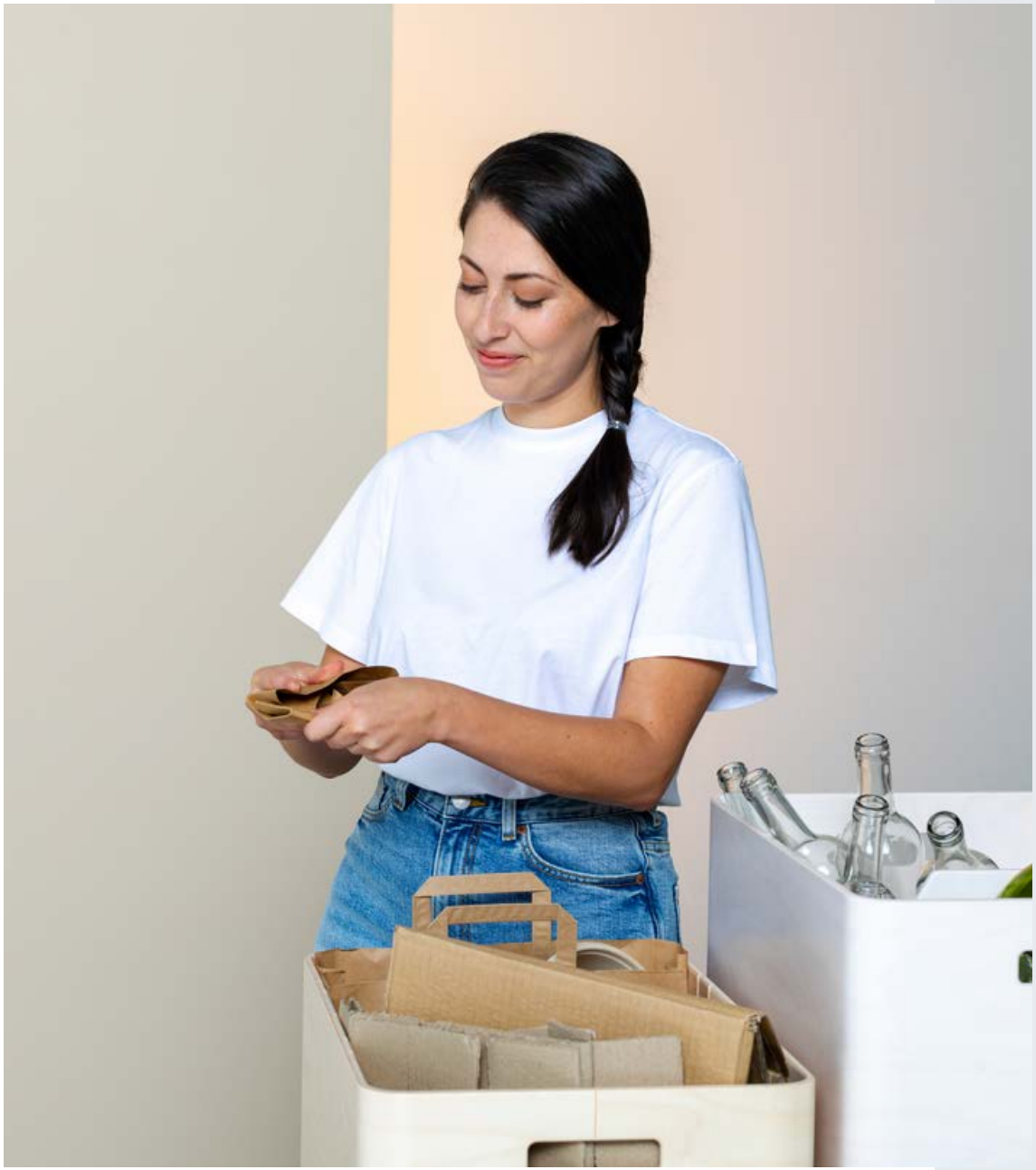
Biobased raw materials

Increasing the share of renewable raw materials is an important goal for suppliers along the entire fiber-based packaging value chain.

As industry moves toward fully fossil-free, renewable products, Kemira is committed to increasing the share of biobased products in its portfolio.

Our recent innovation in internal sizing, FennoSize™ MO or the Sunflower ASA (Alkenyl succinic anhydride), replaces fossil-based sizing chemistries with a solution that is made from renewable sunflower oil.

The Sunflower ASA provides efficient hydrophobation, that is, resistance against moisture and liquid for paper and board while helping to lower the packaging material's environmental footprint.



CASE

Enabling recyclability

Demand from consumers and legislators is driving the packaging value chain to find new sustainable and safe solutions for recyclable food packaging.

Paper and board are renewable packaging materials as such, but barrier properties against grease, oil, liquid, and other substances are often achieved with e.g. extrusion polymers (PE) and fluorochemicals. The PE and fluorochemicals based barrier products are non-recyclable and can cause safety concerns in food packaging.

Kemira FennoGuard™ GO is a novel water-based dispersion barrier coating for food service paper and board. It helps reduce plastic and is a safe alternative to fluorochemicals used in food packaging. FennoGuard GO enables recyclable and repulpable end-products. The product is partially made from renewable raw material to replace fossil-based chemistries, further reducing its environmental footprint.

INDUSTRY & WATER

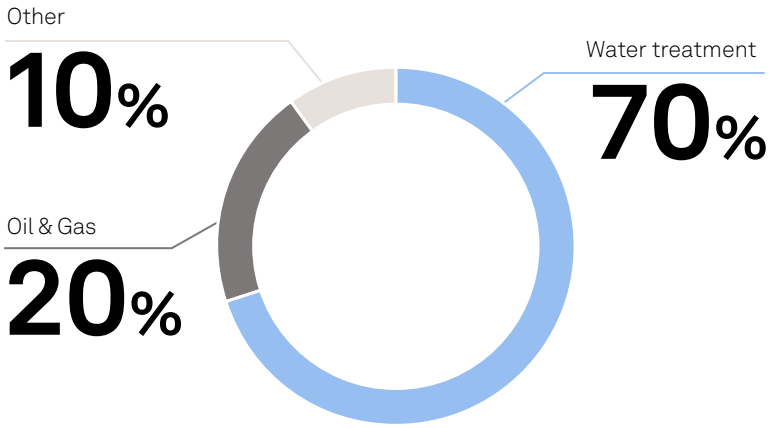
Generating value across diverse industries

The demands on our water resources are streched all the time. The more we produce, manufacture, consume, and discard, the more water we use. How can we replenish the water cycle and manage our increasing needs?

We help municipalities and water-intensive industries with responsible water use as well as process and resource efficiency. In oil and gas applications, our chemistries enable improved yield from existing reserves and reduced water and energy use. Water treatment is an important part of all our customer industries, as raw water, process water and wastewater need to be appropriately managed, in the most cost-effective way. Sludge treatment offers opportunities for further efficiencies and for creating value from waste.

Our customers are diverse, yet they look for many of the same qualities from our products: safety, resource efficiency and solutions that are future proof for regulatory requirements driven by sustainability. We are going above and beyond to improve renewability, recyclability and biodegradability of waste and end products. Additionally, we are developing safer formulations and constantly looking for opportunities to replace substances of concern.

INDUSTRY & WATER APPLICATION SPLIT



We support municipalities and water intensive industries

WATER TREATMENT

Through our work with cities' and municipalities' water treatment plants, we help ensure citizens have access to the clean, safe, and affordable drinking water they need for a healthy life. Our chemistries also help in treating the discharged wastewater in an efficient and responsible way – ensuring it meets environmental permit standards.

INDUSTRIAL WATER

Each process water system is different and requires customized products, depending on the water quality, branch of industry and process parameters. With the right technologies, water can be reused through several cycles. We help customers optimize the total cost of process, with lower energy and water consumption, and keep equipment running reliably with less maintenance required.

OIL & GAS

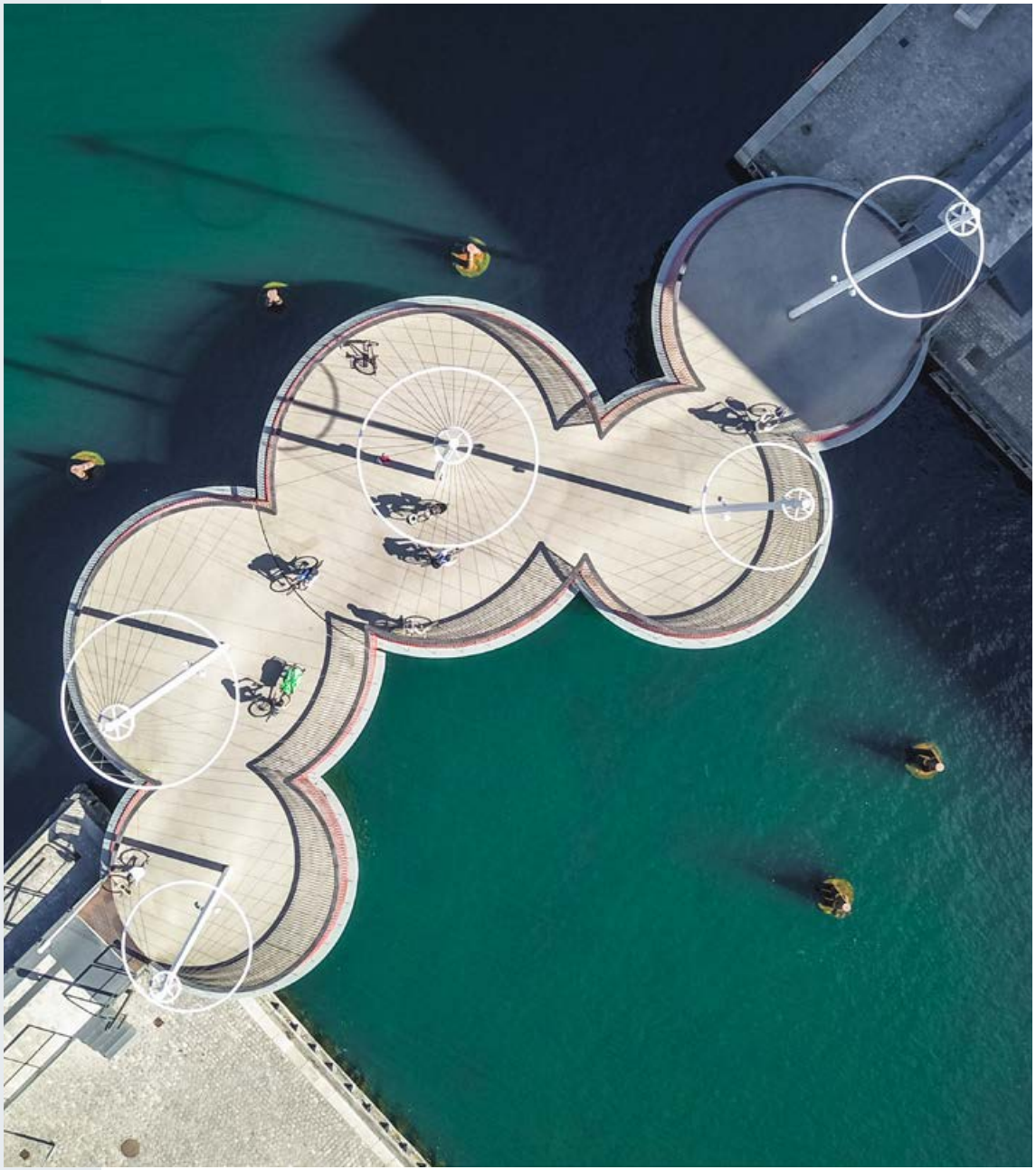
Oil and gas producers are searching for ways to produce more with less. Our solutions for stimulation and chemical EOR are designed to help operators produce more with less resources. In oil sands, Kemira's water treatment expertise and know-how from oil and gas customers creates a unique market position. We add value to customers' mandatory tailings treatment process.

CASE

Circular economy in action

Like many other wastewater treatment plants, BIOFOS, the utility that manages wastewater for the city of Copenhagen in Denmark and its neighboring communities, has found that the sludge they generate is an ideal energy source for climate-friendly electricity, biogas, and heating for the grid. Here, Kemira's chemistry and applications expertise has helped BIOFOS tremendously.

Together, Kemira and BIOFOS implemented a configuration that allows BIOFOS to produce more biogas and process smaller sludge loads in the secondary step of the treatment process, helping to reduce the energy demand. "That is making us greener and helping with our climate efforts. It saves energy downstream. As an added benefit, it indirectly reduces costs," says Dines Thornberg, head of R&D at BIOFOS. This is a great example of circular economy in action: BIOFOS has turned a waste stream into valuable energy for their local community.



CASE

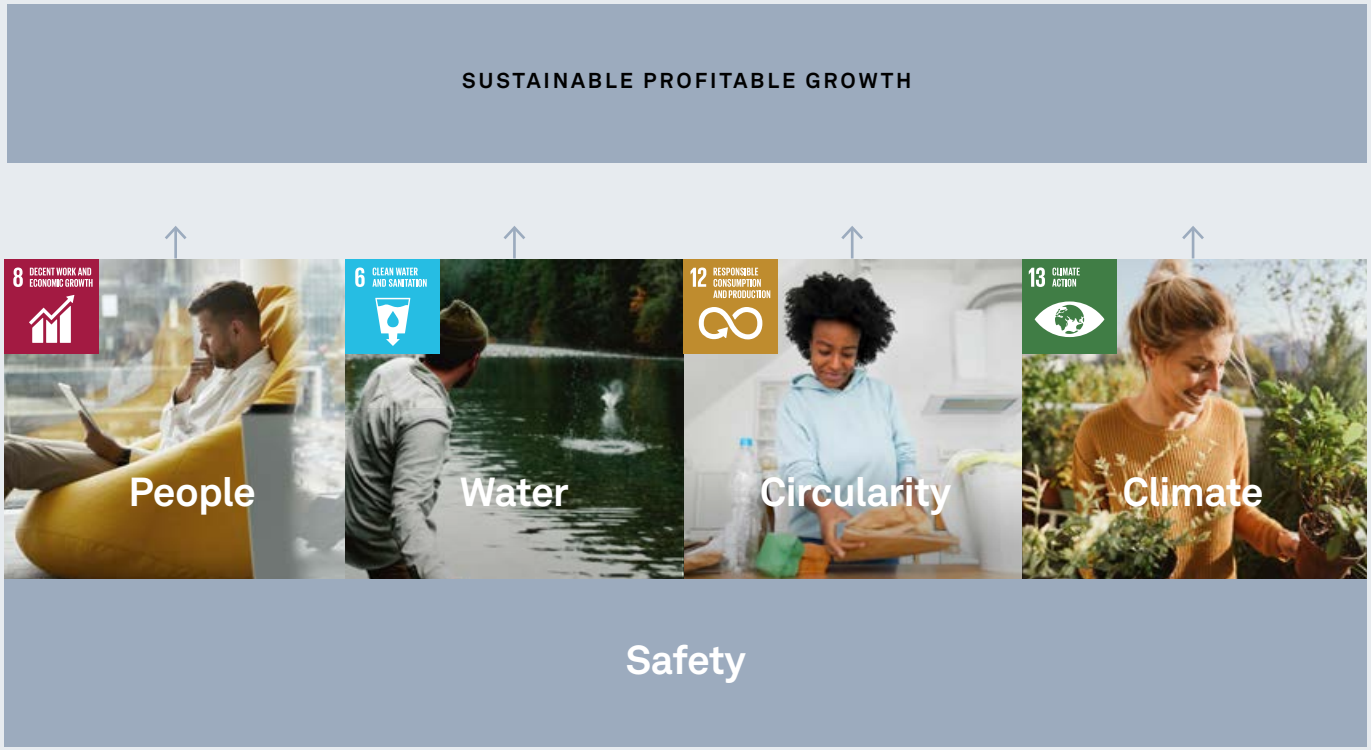
Revolutionary technology

In the Canadian oil sands mining industry, there are over 1.27 billion m^3 of fluid fine tailings that are produced and put into storage. Through a Canadian government directive, oil sands operators must form and execute detailed plans to reclaim the tailings ponds. As operators strive to meet regulatory guidelines, there is a need for innovative solutions to dewater the tailings in preparation for land reclamation.

Oil sands operators in Canada are continuously improving their tailings treatment technologies. This includes the use of polymer flocculants to provide tailings dewatering and coagulants to control contaminants and release clean water. As the only manufacturer of both coagulants and flocculants, Kemira is in a unique position to support tailings remediation.

Through Joint Development Agreements and Innovation partnerships, tailings treatment technology will continue to be enhanced to help our customers and the oil sands industry meet the stringent environmental regulations in Canada. Since 2018, Kemira's water treatment chemicals and technical services have helped our customers treat over 90 million m^3 of fluid tailings.

Sustainability is at the core of our strategy



Our focus

Our sustainability work is guided by the United Nations Sustainable Development Goals (SDGs). We have chosen four SDGs that are the most relevant for Kemira; 6, 8, 12 and 13. We have also prioritized five key sustainability themes as safety, people, water, circularity and climate where we can make the biggest positive contribution, taking all aspects of sustainability; economical, social and environmental into consideration.

We at Kemira contribute to building a better every day together with our employees, our whole value chain and with the societies in which we operate in.

BALANCING OUR SUSTAINABILITY AGENDA

In 2021 Kemira expanded its committment to the UN SDGs with the addition of SDG8; Decent work and economic growth. This complemented the existing environmental commitments to SDG6, SDG12 and SDG13. It brought a bigger emphasis on social and economic sustainability, supporting our focus on safety, people and sustainable profitable growth.

Our targets

We don't want to stop at the pledge. We measure sustainability to make our transformation visible. Our long term targets describe our ambitions and we measure our progress with relevant KPIs.

PEOPLE

Our employees drive our sustainability transformation. A diverse and inclusive culture enables us all to bring our best selves to work every day.

Target:
Reach top 10% cross industry norm for Diversity & Inclusion by 2025

WATER

We believe in clean water and sanitation for all. Our actions set the example for world class water management.

Target*:
Continuously improve freshwater use intensity

CIRCULARITY

We set sustainability at the center of every design. Our sustainable chemistry and digital solutions accelerate the circular- and bio-economies.

Targets:
Reduce disposed production waste intensity by 15% by 2030

Biobased products >500 million EUR revenue by 2030

CLIMATE

We cut our climate impact throughout our value chain. Clean energy and processes will support our ambition to go carbon neutral by 2045.

Target:
Scope 1&2 emissions -30% by 2030

SAFETY

We prove that a safe business is a sustainable business. Safety of people, products and processes is the foundation of everything we do.

Target: TRIF 1.5 by 2025 and 1.1 by 2030

*New Water target for 2022, see **Water section** for details

Our Commitment and Ratings

Besides using the UN SDGs as guidance for our sustainability work Kemira is,

- Committed to the United Nations Global Compact 10 principles, to respect and promote human rights, implement decent work practices, reduce our environmental impact, and combat corruption.
- Working by the United Nations Guiding Principles which require companies to conduct due diligence to protect and respect human rights.
- Reporting according to Responsible Care®, a voluntary commitment by the global chemical industry to drive continuous improvement and achieve excellence in environmental, health and safety and security performance.

ECOVADIS PLATINUM LEVEL ACHIEVED

Kemira was awarded with the Platinum level rating by the global sustainability rating platform EcoVadis. A total score of 73 out of 100 puts Kemira among the top 1% of companies in the world. This is the first time Kemira is awarded with the Platinum level, having receiving the Gold-rating already for the previous 5 years. This achievement reflects Kemira's long-standing commitment to sustainability and transparency.

BROADENING OUR CDP REPORTING

Kemira received a C score in CDP Climate 2021 rankings. Despite our reporting developments and decrease in absolute and intensity GHG emissions, our score dropped from B due to new increased and stricter reporting requirements. Kemira has been reporting the CDP Climate since 2010 and has been scored since 2012. We are committed to improving our management systems and increasing measures to mitigate climate change.

Kemira received a B score in the CDP Water 2021 rankings. This is the first year that we are reporting the full CDP Water questionnaire and also the first year that we received a scoring. Kemira has also published a new water target, aiming to improve the CDP Water scoring to leadership level and joined the CEO Water Mandate, to solidify our commitment to world class water management.

KEMIRA RATINGS COMPARED TO THE CHEMICAL INDUSTRY AVERAGE: ▲ ABOVE ● EQUAL TO ▼ BELOW

PLATINUM Top 1% 2021 ecovadis Sustainability Rating	CDP DRIVING SUSTAINABLE ECONOMIES WATER	CDP DRIVING SUSTAINABLE ECONOMIES CLIMATE	ISS ESG	SUSTAINALYTICS	MSCI
▲	●	▼	▲	▲	▲

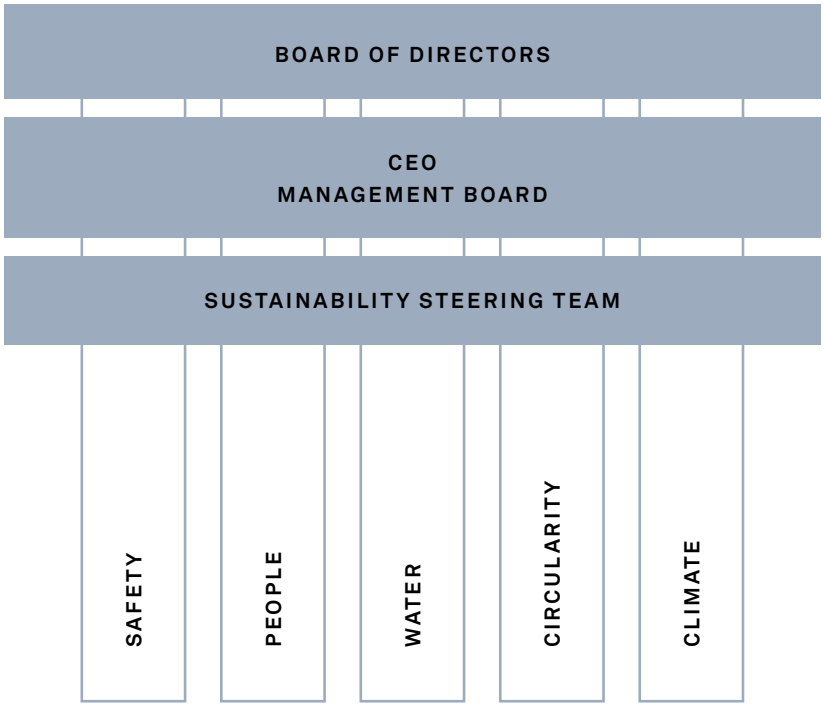
HIGHLIGHTED ACHIEVEMENTS IN 2021

- New sustainability governance model was implemented and key sustainabilty competences strenghtened in business segments and functions.
- EU Taxonomy reporting structure was developed. Kemira has very little eligible revenue, operating expenses and capital expenditures under the first two environmental climate related objectives as Kemira produces specialty chemicals which are not emission-intensive.
- Initiation of an internal biodiversity assessment and revision of all sites for biodiversity-related risks associated with operations. Results reported in accordance with the GRI 304 Standard.
- Materiality study performed together with stakeholders to crystallize our sustainability priorities.
- Human Rights Assessment updated.

THE NEXT BIG THING IN PROGRESS

- EU Taxonomy reporting process development continues with upcoming delegated acts relating to water, pollution, circular economy and biodiversity.
- Human rights best practices development based on the suggestions from our most recent assessment.
- Improve our capabilities in climate mitigation related issues especially relating to scope 3 emissions.
- Further development of our sustainability governance.

NEW SUSTAINABILITY GOVERNANCE TO GO FROM STRATEGY TO INCREASED ACTION



Safety

We are committed to safe, responsible operations and the reduction of our environmental impact. We ensure safe production and use of our products throughout their lifecycle.

Safety is central to everything we do. We must operate our manufacturing sites safely, transport high quality products to customers on time and without incidents, ensure our customers understand how to handle our products and finally, that the end consumer product is safe to use.

We want to meet rigorous requirements to avoid potential harm to people and the environment. Therefore, safety has always been fundamental to Kemira and our improved performance over time demonstrates our capabilities and continuous improvement focus.

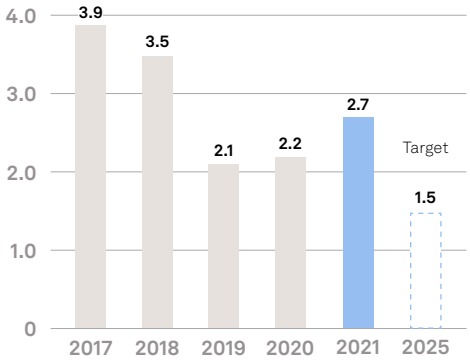
Target:
TRIF*: 1.5
by 2025 and
1.1 by 2030

*Total recordable injury frequency per million hours, Kemira + contractors, year-to-date

Continuous improvement is in our DNA. We implement and share best practices and innovations across our organization.

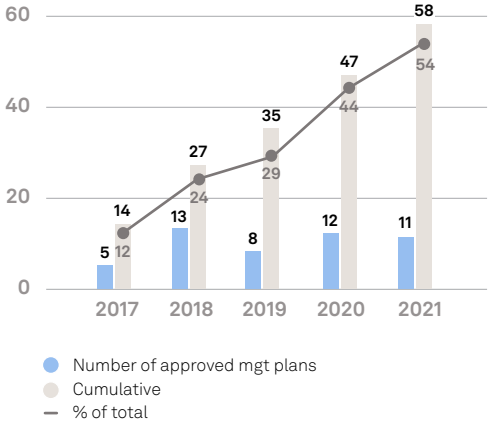
- Total number of TRIs in 2021 was 36 and TRIF was 2.7
- Number of reported hazardous conditions/activities was 20,601. Kemira employees performed over 337,000 individual BBS (Behavioral Based Safety) observations included in 15,118 surveys
- 88 percent of Kemira employees agree that Safety is a top priority (MyVoices employee survey 2021)
- Priority Substance management plans enable us to act proactively to changing requirements and stakeholder expectations. Our priority substance management plan aims to define the risks associated to each substance, examine options for managing these specific risks and formulate action plans for the preferred options. These options to mitigate risks may include (e.g. substitution, phase-out or limiting exposure).

OUR SAFETY PERFORMANCE (TRIF)



TRIF: Total Recordable Injury Frequency per million hours

NUMBER OF PRIORITY SUBSTANCES HAVING APPROVED MANAGEMENT PLAN



As a part of Kemira's priority substance management process Priority Substance List includes substances found in Kemira's portfolio either as raw materials or final products in a concentration >0.1%. 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 mineral lists examine options for managing these specific risks, and formulate action plans for the preferred options. These options to mitigate risks may include (e.g. substitution, phase-out or limiting exposure).

HIGHLIGHTED ACHIEVEMENTS IN 2021

- Safety Performance: We did not reach out 2021 TRIF goal of 1.9. To achieve our targets going forward we need to continuously drive behavioral and safety awareness in all our operations.
- Contractor Safety: Due to an increased number of contractor incidents in H1 we initiated a global project to review, upgrade and harmonize our contractor qualification & work execution processes. In October we reached five consecutive months without contractor incidents. We had only one contractor incident in H2.
- Competence Management: We developed an advanced learning program to ensure competencies of critical health and safety standards and practices for manufacturing operations.
- Process Safety: Major changes to further improve our Process Safety Management. Three focus areas covering process safety information, pre-startup safety reviews and process risk assessment, now featuring tighter integration with Engineering & Technology practices.
- UK and South Korean REACH related activities with deadlines during 2021 were achieved.

THE NEXT BIG THING IN PROGRESS

- Sustainability & EHSQ tools digitalization project was started in 2021. We will also refresh our existing Behavioral Based Safety program (BBS). We believe that BBS is the key in improving our ways of working.
- Regulatory initiatives from EU Chemicals Strategy for Sustainability (CLP, REACH)

CASE

Secret of Safety Performance in APAC

Safety first is central to everything we do every day in Kemira APAC, which has maintained Total Recordable Injury rates below a world class level of 2 since 2016. This is not based on sheer luck, but rather driven by top management commitment and engagement of all layers of the work force in continuous safety improvement.

The continuous safety improvement is evident in the improved My Pulse Safety Culture Survey score, which increased from 66 in 2016 to 98 in 2020. Also the safety maturity of employees has clearly increased and employees are looking out for each other's safety. At the end of September 3538 Hazard Activities and Conditions cases were recorded with 3362 cases approved and closed by line managers in discussions with reporting employees, followed up in monthly team discussions.

All of APAC manufacturing sites have fully implemented Behavioral Based Safety since the start of 2019 and observers are meeting the target of three tours per month. There has been no injuries to contractors in APAC since 2015, and this is because contractors are integrated in Kemira's safety process and closely supervised whilst they are on Kemira sites.

We want employees and contractors working for us to go home safe and healthy, every day.

People

At Kemira, our employees drive our sustainability transformation. A diverse team and inclusive culture enables us all to bring our best selves to work every day. Our global Kemira team builds the future of our company together with our customers and other stakeholders.

Reach top
10%
cross industry norm
for Diversity & Inclusion
by 2025

Kemira is a global company and our people come from diverse backgrounds. Diversity is one of the greatest contributors to Kemira's success and we believe that solving tomorrow's challenges is only possible when we bring together our diverse knowledge, experience and passion for what we do. A truly diverse workforce and an inclusive workplace create a company culture that embraces collaboration and innovation and makes us the preferred choice for our customers.

Our purpose and strategy explain the why and what we do. To enable us to reach our ambitions we also need to focus on how we lead Kemira. Our new leadership principles Focus on growth, Collaborate to succeed and Deliver Value guide how all our leaders bring our purpose alive every day in driving profitable growth and sustainability transformation. The principles cover the elements of the future, our people and strategy execution reflecting employees, external stakeholders and the society at large.

We want every employee to feel they can genuinely be themselves at work and contribute in meaningful ways to the organization. By treating everyone with respect, holding ourselves to the highest standards of ethics and acting with integrity, we have a positive impact in our value chain and in the communities around us. We aspire to build a team and culture that celebrates Kemira employee's unique and diverse characteristics and perspectives and fosters a strong sense of belonging.

HIGHLIGHTED ACHIEVEMENTS IN 2021

- Our commitment to diversity and inclusion was crystallized in a long-term target to reach the top 10% cross-industry norm for diversity and inclusion by 2025. This is measured by the perception of diversity and inclusion of our employees.
- We committed to the UN Sustainable Development Goal 8 “decent work and economic growth” and conducted a human rights assessment during Q3 2021. According to the assessment, Kemira meets on group level the EU Taxonomy minimum safeguards of most recognized human rights guidelines and guiding principles.
- We co-created our Leadership Principles Focus on growth, Collaborate to succeed and Deliver Value with a diverse team of employees. These new leadership principles define how we will transform the way of Kemira leaders will lead to enable our sustainability transformation for profitable growth.
- We completed a review of Kemira values which remain valid and unchanged.
- Our future competencies program of our global commercial and manufacturing teams continued successfully. Program includes also customized learning solutions on strategic topics to cover Sustainability, Digital, and EHSQ.

THE NEXT BIG THING IN PROGRESS

- We will continue the implementation of our Leadership principles by building new leadership behaviors into people processes and embed them into everyday leadership habits.
- We will continue the implementation of our hybrid work model. We gather employee feedback through our continuous employee listening tools.
- We will continue to monitor and assess the possible gender pay gap, and create a future remediation plan where and if needed.

CASE

Hybrid work model brings productivity

Integrating both office and remote working into a new hybrid work model is the way forward after the pandemic. This allows eligible employees to work up to half the time from another location, while Kemira sites continue to be the main work environment. A welcome change to employees in China, where working remotely was not in the toolkit before the COVID-19 restrictions. Kemira Asia was awarded Asia’s Best Employer Brand Awards 2021 by Employer Branding Institute, in collaboration with World HRD Congress. One of the evaluation criteria for the award was employee engagement strategy and the implementation of hybrid work model has helped to drive employee engagement by offering more flexibility and productivity in the way we work.

Water

Access to clean, safe water is essential for all life on Earth. Water covers 71% of the Earth's surface, which might seem that water is plentiful on our blue planet, but in reality we only have access to a small fraction of this colossal volume. This is because just 2.5% of it is fresh water of which 1.7% is locked up in glaciers and ice caps.

Population growth, urbanization, and the increase in water consumption mean that the natural water cycle can no longer manage water pollution by itself. Currently, more than 80% of the wastewater produced globally is discharged back into rivers and seas without any treatment, causing vast challenges to people and the environment.

Companies that provide water-treatment solutions play a critical role in rebalancing the water cycle. Working across academia, industry, municipalities, and drinking and wastewater treatment plants, we can reduce the strain on life below water, life on land, and societies.

Continuously **improve freshwater use** intensity	Improve our water management to **Leadership level** based on CDP Water Security scoring methodology by 2025.

Kemira serves water-intensive industries, and our solutions help make more clean, safe water available to everyone. We call this our water handprint.

OUR WATER FOOTPRINT – OWN OPERATIONS

Kemira's water target for 2021 has been to continuously improve freshwater use intensity. Beginning in 2022, Kemira will continue with a more comprehensive target to improve our water management to Leadership level based on CDP Water Security scoring methodology by 2025. Freshwater use intensity is defined as m^3 freshwater withdrawn minus use of cooling water, rainwater and produced water per ton of production. Baseline is 2019 at 1.5 m^3 per metric tonnes of production. Freshwater use intensity has decreased by approximately 10% from the baseline year 2019 due to process improvements and a decrease in the proportion of water intensive products. Kemira answered to CDP's Water Security full questionnaire for the first time in 2021 and achieved score B (Management level).

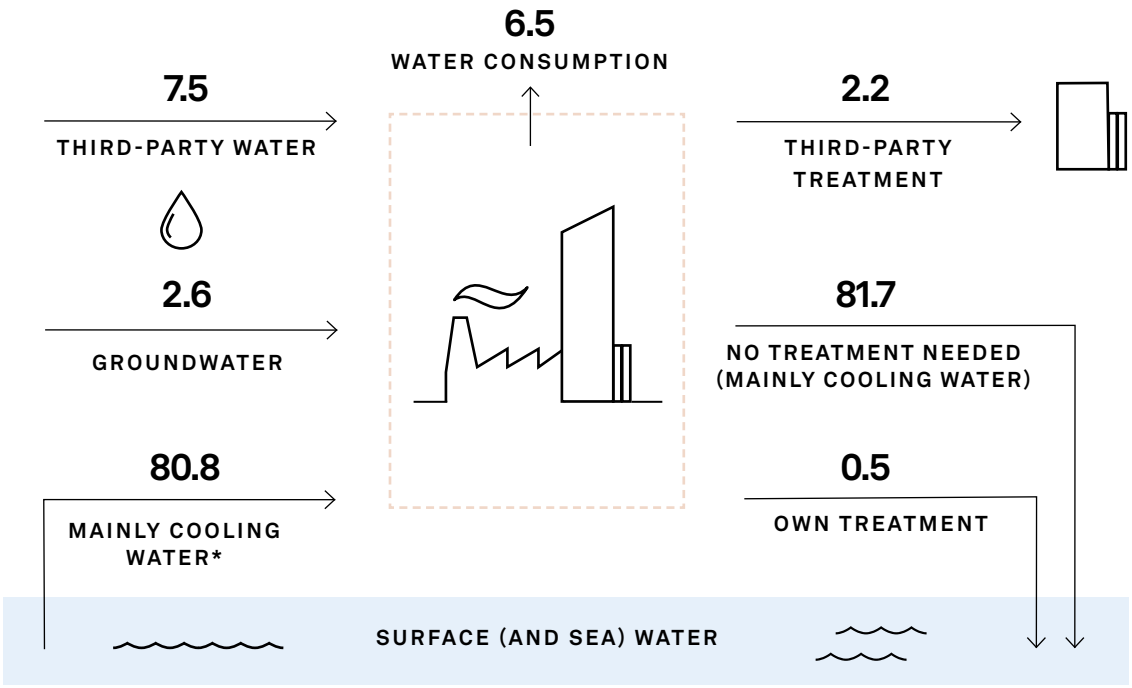
HIGHLIGHTED ACHIEVEMENTS IN 2021

- We answered to CDP's Water Security full questionnaire for the first time in 2021 and achieved score B (Management level).
- We developed a new target to ensure sustainable water management in our manufacturing operations by 2025.
- We updated our water risk assessment, based on our audited EHSQ risk assessment process, WRI's Aqueduct tool and WWF Water Risk Filter for operational risks at manufacturing sites located in areas of water stress. Kemira has 9 sites (14% of the sites) located within water stressed areas, that are areas in which more than 40% of available water is used by industry, household and agriculture. Water-related risks with potential to have significant (>1 M€) financial or strategic impact in site's business (3 to 6 years into the future) have been identified at some manufacturing sites. Site specific water risk assessments including more detailed assessment of the risk potential will be performed in spring 2022 at these sites and results will be reported in Kemira's 2022 CDP Water Security disclosure.
- We signed the CEO Water Mandate. By signing the mandate, Kemira commits to advancing water stewardship and to reporting on progress annually.

THE NEXT BIG THING IN PROGRESS

- Addressing opportunities for improvement identified in our CDP Water Security disclosure. The most significant areas of improvement include water risk identified in indirect operations, elaborated water policy, water goals and guidelines for action at the corporate level.
- Continuous development of our Water Management Program to ensure continuation of progress.
- Extending coverage of Life Cycle Assessments in our product portfolio to better understand water related impacts in our whole value chain.

OVERFLOW OF WATERFLOWS (MILLION m³)



*99% cooling water and 1% process water.

CASE

Partnering with Kemira

Our customer Veolia Česká Republika keeps Prague's water pristine and serves more than 2 million local customers. In addition to contributing to shared goals like the SDGs, Veolia has also had to focus on a very local issue of phosphorous removal from Prague's wastewater due to tightening environmental requirements. Kemira's advanced water treatment solution, KemConnect™ P, has been instrumental in providing Veolia with world-class chemistry together with smart technologies for automated and optimized phosphorous removal. The solution offers specific control over chemistry consumption and gives the team better control of the entire process. The result is better environmental performance at a lower cost: Veolia has been able to reduce the cost of phosphorus removal by almost 34%.

Circularity

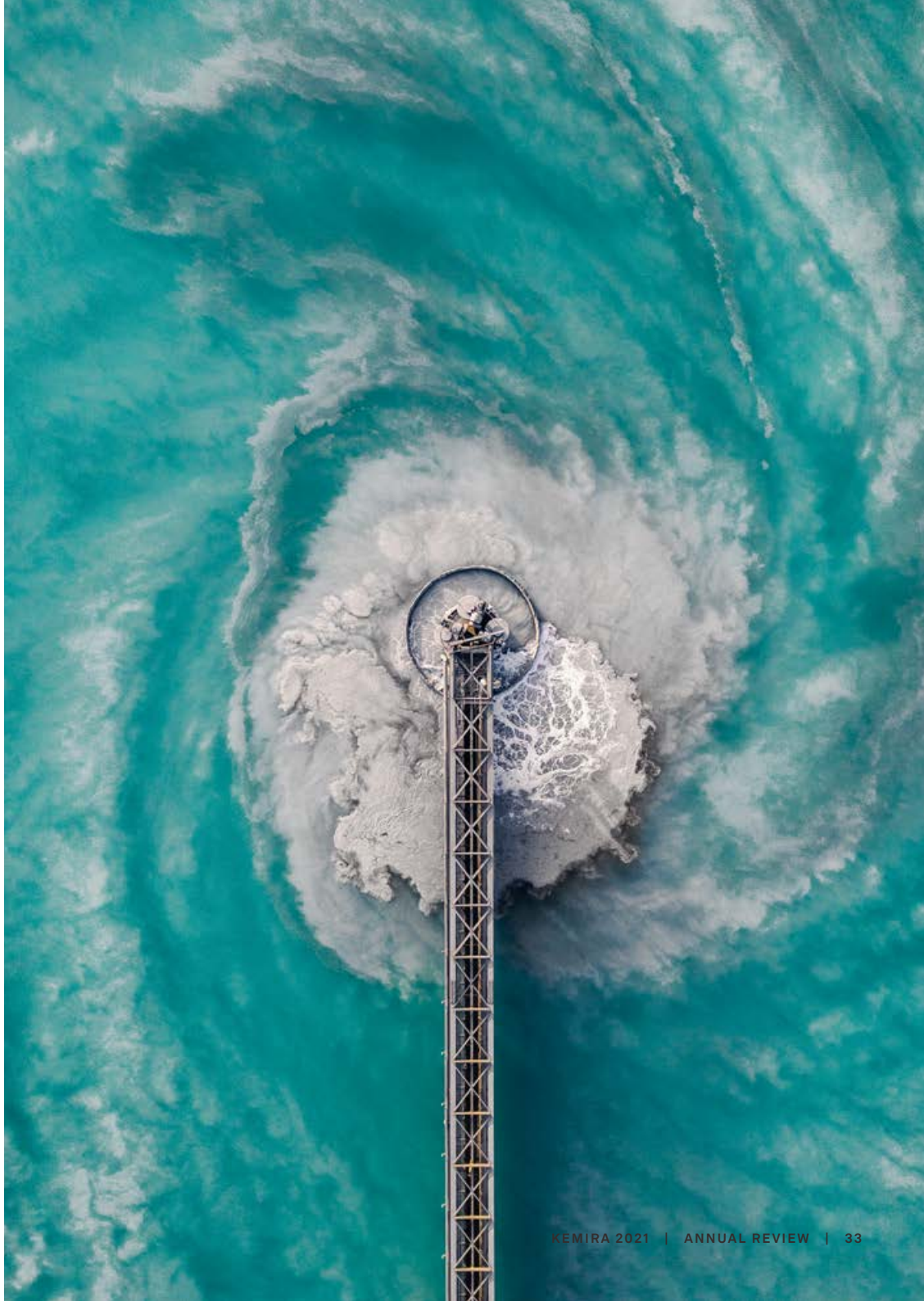
We are committed to enable a biobased circular economy, adopt circular business practices across our own operations and to improve our customers' energy, water, waste and material efficiency.

Kemira is innovating chemical solutions to solve problems for our customers in water-intensive industries and society. Growing global consumption increases pressure on our planet and resources. To decouple growth from consumption we need to adopt a circular mindset where we design out waste and increase resource productivity.

We can reduce unnecessary costs by reducing the amount of waste we generate. At the same time, sourcing industrial by-products has the potential to both reduce our raw material costs and alleviate pressure on natural resources.

As the fundamental drivers for sustainability shape our market, our products will increasingly be based on renewable (eg. biobased) and circular building blocks. More sustainable product portfolio combined with development of new digital solutions will support our customers' increased recyclability and biodegradability needs and enhance their water and waste management.

Reduce disposed production waste intensity by **15%** to 3.9 by 2030	By 2030, achieve **>EUR 500M** revenue from biobased products



Kemira's targets are to achieve over EUR 500 million revenue from our biobased products by 2030 and and reduce disposed production waste intensity by 15% by 2030. In the target we measure disposed production waste. It 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. Baseline is 2019 at 4.6 and target is 3.9 by 2030.

We are establishing a biobased roadmap and strategy to accelerate sustainability transformation and will gradually move from fossil-based carbon to renewable carbon in our own product portfolio. By 2030 over EUR 500 million revenue will come from our biobased products. We will also continue to improve our own use of recycled raw materials. Currently 38% of the total raw materials used are of recycled origin. In 2021, disposed production waste intensity was at level of 4.3 that is approximately 10% less than the baseline level of 4.6.

HIGHLIGHTED ACHIEVEMENTS IN 2021

- Development work with Kemira's external biobased partnerships progressed and technical proof-of-concept proceeded according to plan in 2021. Technologies are renewably sourced, biodegrable polyhydroxyalkanoate (PHA) which is an alternative for fossil-based barrier materials and an unique engineered polysaccharide technology platform for various applications across our product lines. First sales were made with biodegradable coating materials based on PHA in Q2 2021 with good customer interest in the product.
- For all new R&D projects we carry out sustainability assessment which is re-evaluated at each project gate. New offering is compared against benchmarked or existing solutions both from Kemira's and customer's point of view. In 2021 the average score of the assessments across our portfolio increased to 7.3 from 5.9 (2020).
- In 2021 Kemira selected ISCC PLUS certificationsystem for the mass-balance accreditation. Kemira produces certified biobasedproducts in ISCC accredited manufacturing facilities in Italy and the UK.
- Implementation of new GRI 306 Waste 2020 standard in our sustainability reporting process.
- Significant 45% reduction of total hazardous waste mostly due to cease of operations at the most hazardous waste intensive manufacturing site.
- Launching product line specific waste management groups to develop waste reduction programs.
- We improved our sustainability reporting, assessment and data analytics process by implementing a new state-of-the art sustainability reporting tool.

THE NEXT BIG THING IN PROGRESS

- Implementation of our biobased strategy and establishing supply-chain capabilities in biobased portfolio.
- Co-development and commercialization of new biobased solutions with partners.
- Continue development of sustainable offerings and digital solutions to accelerate circular- and bioeconomy targets.
- Wastewater contains a lot of energy that is captured and converted into biogas. To maximize recovery of the energy into reuse, Kemira has launched a new Kemconnect PT automated chemical dosing system for wastewater treatment plants. KemConnect PT enhances the performance of the pre-treatment process, to gain significantly more energy in form of biogas, while reducing the energy needed for downstream biological processes.
- Extending coverage of Life Cycle Assessments in our product portfolio to understand better waste related impacts in our whole value chain.

CASE

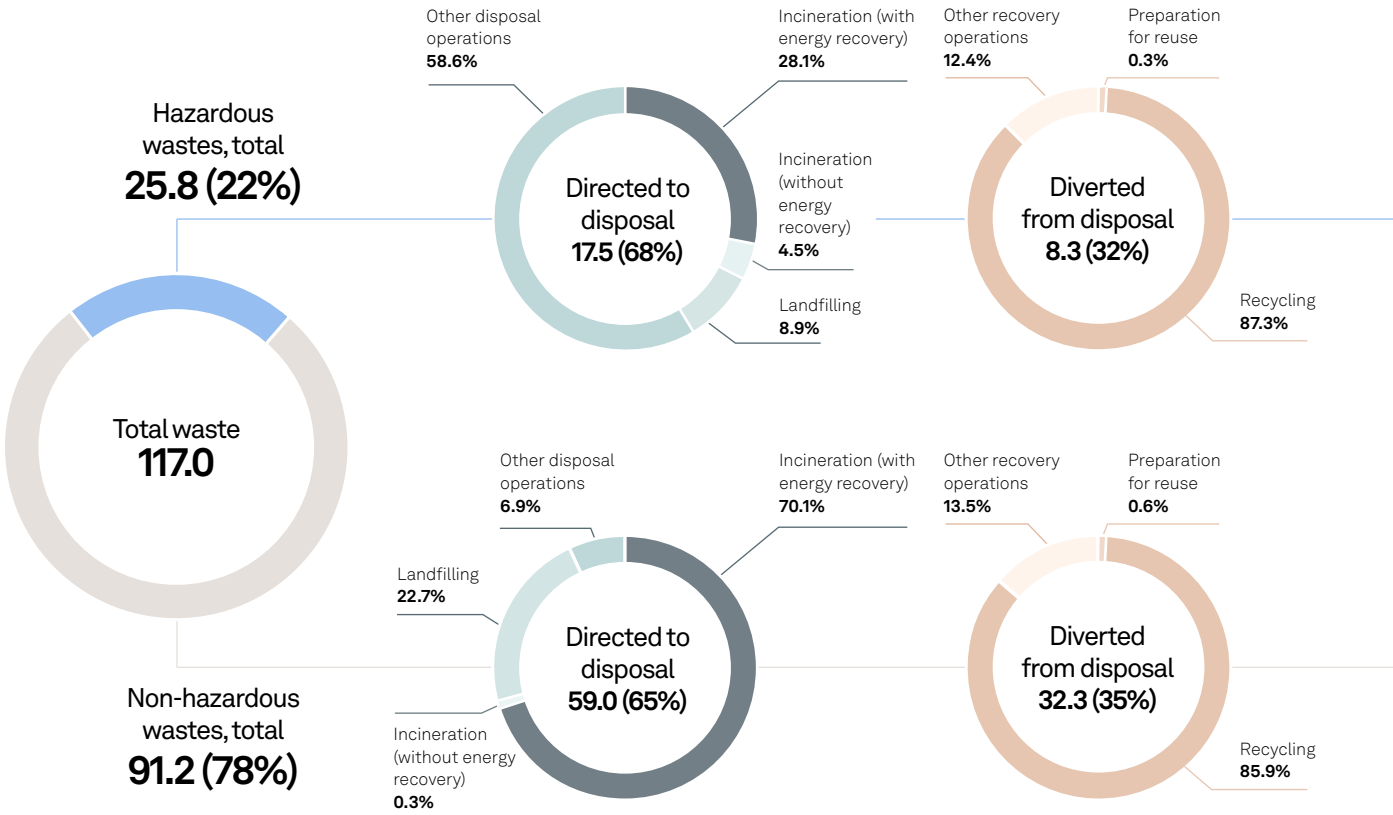
Landfill mining for sustainable raw materials

Kemira plant in Pori, Finland produces products for drinking water and wastewater treatment. The primary raw material in the 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 a former waste. Since the landfill mining started, Kemira has utilized approximately 600,000 tonnes of ferric sulphate from the landfill as a raw material and there is additional capacity available for use, putting some 30 years of accumulated industrial by-product back into our circular economy.

While the water treatment industry is adept at using industrial waste streams as raw materials for sourcing metal compounds, this shows that there is much more potential available. As the best waste streams have been harnessed (e.g. scrap iron and spent pickle liquor, for drinking and wastewater treatment chemicals), many other waste streams are literally going to waste. Kemira actively continues exploring potential raw materials available in landfills across industries such as mining in order to reduce pressure on virgin raw materials.

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



Climate

Climate change is a defining challenge for our time. Successful climate action brings multiple co-benefits beyond simply greenhouse gas (GHG) emission reductions. Kemira fully supports the ambitions of the Paris Agreement.

Ambition to be **carbon neutral** by 2045

30% reduction

of GHG emissions by 2030 (Scope 1 + Scope 2)*

*Measured as % change in combined Scope 1 and Scope 2 greenhouse gas emissions compared to a 2018 baseline of 930 kt CO_2e.

We mitigate our climate impacts by preventing or reducing the greenhouse gas emissions (GHG) into the atmosphere. 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 climate change issues.

Emerging climate-related regulatory requirements are further driving Kemira's climate ambitions and obligations. We position our business for success by:

- Sourcing zero-emissions energy and implementing energy efficiency projects at our sites
- Accelerating the transition to renewable and circular raw materials
- Transparent and regular reporting and disclosure

EVALUATING OUR PERFORMANCE AND MEASURING OUR PROGRESS

Kemira established short and long term targets for climate. By 2030 we aim to reduce combined Scope 1 and Scope 2 GHG emissions by 30% compared to a 2018 baseline of 930k t CO_2e. By 2045, Kemira's ambition is to be carbon neutral by 2045.

In 2021, Kemira's combined Scope 1 and Scope 2 emissions were 856k tonnes. Based on our linear reduction factor from 2018 to 2030, our 2021 emissions were projected to be 860k tonnes. Kemira's year over year emissions reductions are in line with our progress toward achieving our 2030 target. Kemira's increased use of renewable and zero-carbon energy sources such as nuclear energy facilitated our decrease in emissions while increasing our production by more than 11% compared to 2020.

HIGHLIGHTED ACHIEVEMENTS IN 2021

Sourcing zero-carbon energy:

- Kemira and Statkraft have signed a new 10-year power purchase agreement to deliver 43.8 GWh of renewable wind energy per year to Kemira's Finnish sites. The first renewable energy purchase agreement between Kemira and Statkraft was signed in 2020.
- Our Oulu FI and San Giorgio IT sites entered into contracts with their local suppliers to provide 100% zero-carbon energy to the sites.

Energy efficiency:

- During 2021 energy savings were achieved through the implementation of 41 projects across Kemira's operations, saving a total of 28,228 MWh of energy (equivalent to EUR 1.2 million savings).
- Our Prevov CZ site implemented various energy reduction projects in recent years that reduced Scope 2 CO_2e absolute and intensity emissions over 50% compared to 2005. The site achieved the energy and emissions reductions while increasing production by 25% during this period.

THE NEXT BIG THING IN PROGRESS

- Improving our Scope 3 emissions estimates and reducing these emissions through increasing our value chain engagement and updating and expanding the scope of our product life-cycle assessments.
- Using local and EU regulations to identify opportunities to reduce Scope 1 emissions at our Helsingborg site (our largest Scope 1 emissions site).
- Continuing to invest in on-site generation and use of renewable energy at our manufacturing sites. In 2022, our Mojave, California USA manufacturing site will contract to install a 927 kW photovoltaic solar system and purchase the generated electricity to power the site. The project will generate renewable energy credits (RECs) owned by Kemira.
- The OL3 nuclear plant unit's regular electricity production starts in Finland during the summer of 2022. Kemira will through its ownership receive emission free energy from OL3. This will increase the share of emission free electricity in Kemira's electricity consumption in Finland from 43% to 76%.

CASE

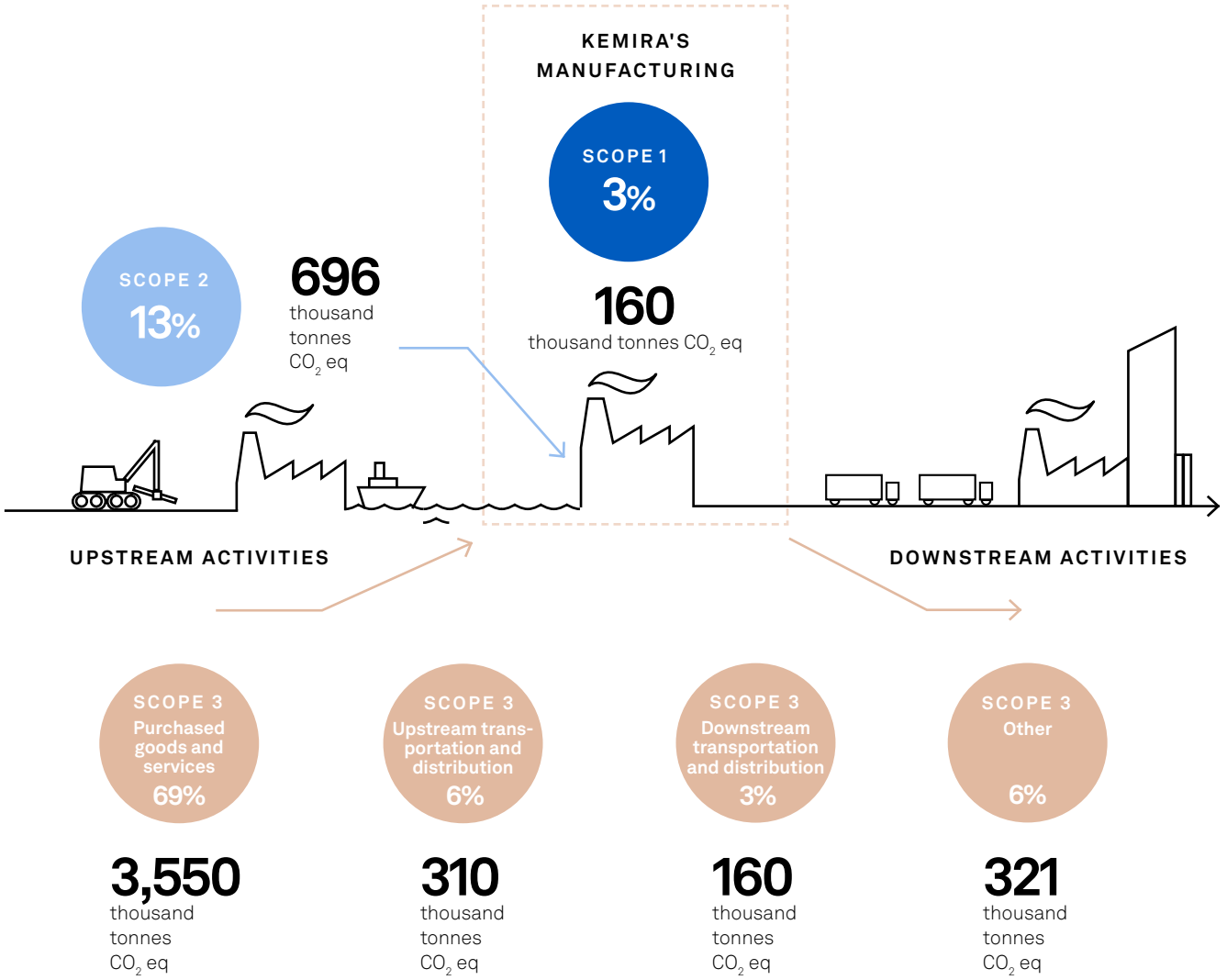
Household waste turns to fuel

Biogas is a renewable energy source that can help minimize human impact on the environment. By using organic waste and convert it to bio-methane and then use it as fuel, it supports the circular economy and reduces carbon emissions.

Sweden has long been a frontrunner when it comes to sustainability, so perhaps it's no surprise that Tekniska verken of the city of Linköping was early to the biogas game back in the 1990s. Their compressed biogas (CBG) has fueled Linköping's public buses for decades. Recently, they expanded their offering to include liquefied biogas (LBG) so that even more sectors can tap into this powerful renewable resource. Biogas not only makes excellent use of a waste product, it helps reduce CO_2 emissions. Those are two good reasons Kemira is proud to have partnered with Tekniska verken over the past 20 years, optimizing their production with our chemistry.

We also believe biogas has a big role to play going forward, especially when it comes to achieving the United Nations Sustainable Development Goals (SDGs) by 2030. It's well aligned with SDG 13 on climate action. It's also a great example of SDG 12, which is about responsible consumption and production.

GREENHOUSE GAS EMISSIONS



Future of water management

We need water to survive. Yet there are significant challenges to our world's water supply. How can we rise to the occasion and make sure that no one goes without? To understand what the future of water management might hold, we invited an influential panel of experts to discuss different challenges, opportunities and possible paths ahead. As an outcome of these discussions, four very different scenarios for the year 2040 were drafted and published in a report titled "Water management 2040 – future scenarios".

VISIONARY THINKING FOR SUSTAINABLE WATER MANAGEMENT

The scenarios in the report look forward into 2040. International institutions, governments, local authorities, water utilities and water-intensive industries all have important roles to play in ensuring a safe, sufficient water supply. So do water treatment solutions providers like Kemira. The decisions we make today about water access, quality, technologies for water treatment and water reuse impact the future living conditions of communities around the world.

Seventeen water experts from around the world, including representatives from industry, academia and finance shared their insights, which were processed in phases using a systematic inductive scenario development method. As part of the process, in addition to the scenario development some key uncertainties were discussed: what is the availability of water and who controls it? How will consumer behaviour impact water management? How about the effects of digitalization? What will the status of climate action and sustainability development be? How will regulation change? The scenarios are a way of exploring these kinds of questions and the possible outcomes of developments that are already recognizable today.

Explore the scenarios **in detail**.

KEMIRA is a global leader in sustainable chemical solutions for water intensive industries. We provide best suited products and expertise to improve our customers' product quality, process and resource efficiency. Our focus is on pulp & paper, water treatment and energy industry. In 2021, Kemira had annual revenue of around EUR 2.7 billion and around 5,000 employees. Kemira shares are listed on the Nasdaq Helsinki Ltd.

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