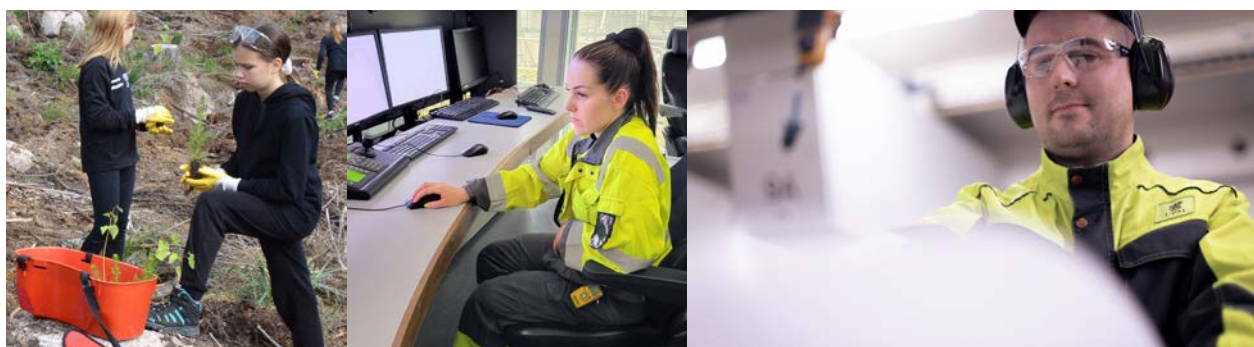




UPM Kymi

ENVIRONMENTAL AND SOCIETAL RESPONSIBILITY 2023



UPM Kymi

The UPM Kymi integrated mill site in the Kuusankoski quarter of Kouvola, produces pulp, paper and bioenergy. The mill site, located on the shore of the Kymijoki River, is home to the UPM Kymi pulp mill and UPM Communication Papers Oy's Kymi paper mill. The key products of these mills are bleached birch and softwood pulp as well as uncoated and coated fine and specialty papers. The pulp mill is also a significant producer of bioenergy. In addition, pulp production generates crude tall oil and turpentine, which are used in the production of bioeconomy products. Fine and specialty papers are made from 100% chemical pulp. Birch, pine and spruce are used as raw materials.

Kymi has had a significant role in the birth and development of the local community for over 150 years. Even today, our impact on the region is significant, both as a taxpayer and as an employer.

The production plants receive the heat energy and most of the electricity they need from the pulp mill's energy production and Kymin Voima Oy's biofuel power plant located on the mill site.

Schaefer Kalk Finland Oy's PCC plant is also located on the Kymi integrated mill site. Kymin Voima Oy's biofuel power plant and the PCC plant are not included in this report.



Production capacity	715,000 t of coated and uncoated fine and speciality paper 870,000 t of birch and conifer pulp
Personnel	693
Products	Fine papers: UPM Finesse, UPM Fine, UPM PrePersonal, UPM Poste, UPM Script, UPM Office, New Future Specialty papers: UPM Vellum, UPM Sollum, UPM LabelCoatPrime, UPM JetLabel Pulp: UPM Betula and UPM Conifer
Bioenergy	Heat energy and electricity
Side products	Lime sludge and sodium bisulphite
Residues	Tall oil and turpentine
Certificates	EMAS (EU Eco-Management and Audit Scheme) – Environmental management and audit system ISO 14001 – Environmental Management System ISO 9001 – Quality Management System ISO 22000 – Food Safety Management System ISO 45001 – Occupational Health and Safety System ISO 50001 – Energy Management System (pulp mill) EES+ – Energy efficiency system (paper mill) PEFC Programme for the Endorsement of Forest Certification FSC® wood origin monitoring system – Forest Stewardship Council All certificates can be found from UPM's Certificate Finder (available at www.upm.com/responsibility)
Environmental labels	EU Ecolabel UPM pulp products are approved for use in EU Ecolabel and Nordic Ecolabel paper products.



UPM Kymi Environmental and Societal Responsibility 2023 is a supplement to the Corporate Environmental and Societal Responsibility Statement of UPM's pulp and paper mills (available at www.upm.com) and provides mill-specific environmental and societal performance data and trends for the year 2023. The annually updated mill supplements and the UPM Corporate Environmental and Societal Responsibility Statement together form the joint EMAS Statement of UPM Corporation. The next Updated UPM Corporate Environmental Statement and also this supplement will be published in 2025.

We deliver renewable and responsible solutions and innovate for a future beyond fossils across six business areas: UPM Fibres, UPM Energy, UPM Raflatrac, UPM Specialty Papers, UPM Communication Papers and UPM Plywood. As the industry leader in responsibility, we are committed to the UN Business Ambition for 1.5°C and the science-based targets to mitigate climate change. We employ 16,600 people worldwide and our annual sales are approximately EUR 10.5 billion. Our shares are listed on Nasdaq Helsinki Ltd. UPM Biofore – Beyond fossils. www.upm.com



The mark of responsible forestry

For more information about FSC certification visit fsc.org



For more information about PEFC certification visit pefc.org



EU Ecolabel : FI/011/001

Review of the year 2023

The year 2023 was marked by geopolitical uncertainty and strong global economic cycles that affected our operations.

Kymi's environmental performance in 2023 was at a good level. The wastewater treatment plant operated efficiently and air emissions were at normal, low levels. The entire integrated mill operation was material efficient and the raw materials were carefully used. All of the waste generated in the processes was recovered, except of the green liquor dregs from pulp production.

Operations in compliance with the environmental permit

Obligations related to environmental protection have been taken care of systematically and in accordance with the environmental permit.

The wastewater treatment plant worked efficiently throughout the year. There were three non-compliances with environmental permits: one from a pulp mill and two from a paper mill. During a maintenance shutdown, alkaline filtration water from the lime storage tank of the pulp mill leaked into the river via a rainwater drain. In both paper mill incidents, fine fibres and calcium carbonate were released into rainwater drains. The mill's emissions for all other areas were under the permit limits.

The integrated mill site's environmental objectives included activities under the Clean Run programme launched in 2011, reducing abnormal emissions, increasing environmental awareness among employees, decreasing water consumption and wastewater discharges, decreasing odour emissions and lime kiln particle emissions, increasing the reuse of process waste and reducing the amount of solid waste going to a landfill as well as active participation in studies on the beneficial use of green liquor dregs.

The Clean Run programme was part of the Kymi mill site's normal operations in 2023. All abnormal emissions were recorded using the One Safety tool and their underlying causes were studied. An environmental review was arranged once a week during the pulp and paper mill morning meetings to review environmental issues and the events of the previous week in more detail.

Two pieces of stakeholder feedback were received during the year, one related to an odour in the centre of Kuusankoski and the other to a process malfunction in the pulp bleach washer

causing white spots to land on cars in a nearby residential area.

In 2023, several investments were made to reduce the environmental impact. We upgraded the collection of fumes from the birch line chipping silo, improved the operation of the scrubber for the bleaching gases, made improvements to the pine oil discharge point and renovated the yard area of the woodyard contractor's hall.

Proactive safety work

Our goal at UPM is to be the industry leader in health and safety. We require all our employees and contractors to use the global One Safety reporting tool to report all near misses and safety and environmental observations. Reports are dealt with daily and corrective action is taken without delay.

We actively encourage our personnel to have safety discussions and to conduct safety walks around the mill. The targets set for proactive safety reports were exceeded at the paper mill.



Vesa Volmari
General Manager
Kymi Pulp Mill



Päivi Hyvärinen
Environmental Manager
Kymi Pulp Mill



Saila-Sisko Vartti
Safety and Environmental Manager
Kymi Paper Mill



Matti Laaksonen
General Manager
Kymi Paper Mill

Contribution to UN Sustainable Development Goals in 2023



Water

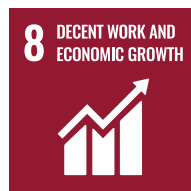
COD emissions were reduced between 2014 and 2023 by

37%

Nitrogen emissions were reduced between 2014 and 2023 by

37%

Figures apply to the Kymi pulp mill production.

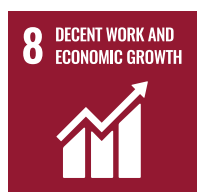


Employment

UPM Kymi directly employed

693 employees and

111 summer workers



Community

In work placement or apprenticeship, there were

61 students and

9 thesis workers



Energy

In 2023, energy from renewable fuels accounted for

89%

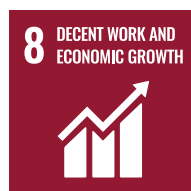
The pulp production used black liquor as main fuel.



Waste

0 t

process waste was sent to a landfill from the paper mill. From the pulp mill the only waste fraction taken to a landfill was green liquor dregs.



Safety

Proactive safety work resulted in

3,151

safety and environmental observations recorded by pulp and paper mill employees and contractors. In addition, safety walks and discussions reached a total number of

1,986



Certified fibre

74%

of fibre used in pulp production was FSC and/or PEFC certified. UPM's target is to use only certified fibre by 2030.

100%

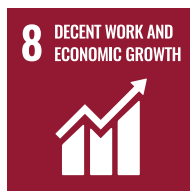
of fibre used in paper production was FSC and/or PEFC certified. UPM's target is to use only certified fibre by 2030.



Supply chain

95%

of raw material spend covered by UPM Supplier and Third Party Code (wood not included).



Taxes

The local tax impact of the integrated mill is approximately

EUR 14 million

Real estate tax: EUR 0.5 million

Estimate of tax on salaries: EUR 0.8 million

Estimate of corporate income tax: EUR 12.4 million based on the number of employees*

The tax impact on wages, and therefore the overall tax impact, will be significantly lower than in previous years (EUR 31 million in 2022). This is due to the introduction of social welfare regions. Welfare regions are financed by the state, which means that the municipal tax rates on wages are lower than in the past.

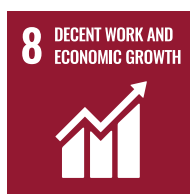
*share for all the municipalities approx. 24%. Each municipality receives a share of this depending on the ratios calculated based on business and forest operations in the municipality.



Air

Sulphur dioxide emissions from the Kymi pulp mill were reduced between 2014 and 2023 by

71%



Training

At the paper and pulp mill, there were personnel training hours, a total of

8,103

All air emissions in Kymi were below the environmental permit limits. In May 2023, a major mechanical improvement was made to one field of lime electrostatic precipitator during a maintenance shutdown, replacing the emission and filtration equipment. As a result, particle emissions from the lime kiln have been reduced from their previous levels.

It was also recorded that 98.7% of mild malodorous gases and 100% of strong malodorous gases were recovered and burnt.

TRS emissions measured at the city's environmental services station in the centre of Kuusankoski were lower than in the previous year. In 2023, the concentration limit of $5 \mu\text{g}/\text{m}^3$ was not exceeded at all. The number of hours above $5 \mu\text{g}/\text{m}^3$ has decreased in 2022 and 2023. The positive development is due to improvements in the collection of

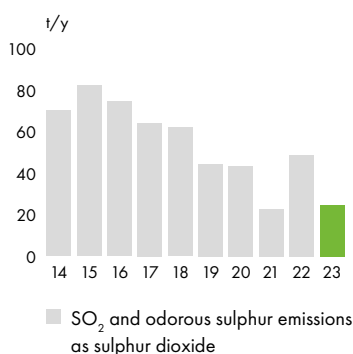
dilute odorous gases from the pulp mill's fibre line during the 2021 and 2023 maintenance shutdowns.

Carbon dioxide emissions from the pulp mill in 2023 were elevated compared to the normal level in Kymi. The increase was caused by the use of fuel oil as a fuel for the lime kiln in the early part of the year, due to the impact of global political factors on the availability of natural gas. As of 2019, CO_2 consumed by the PCC plant is now deducted from our CO_2 emission figures in accordance with the EU Emission Trading Scheme.

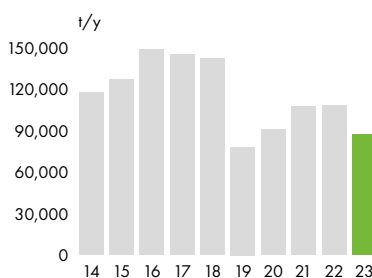
Air emissions represented the best available technology in relation to the emission levels set by the BAT conclusions on the paper and pulp industry.



Gaseous sulphur emissions
 SO_2^*

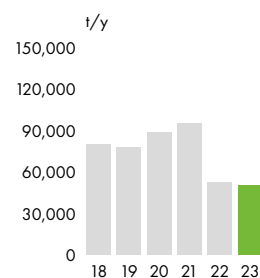


Fossil carbon dioxide, CO_2^*
(fossil emissions from own energy production, scope 1)
 CO_2 sequestered in PCC reduced in 2019–2023

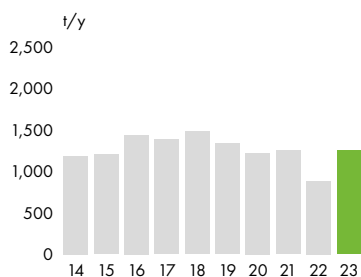


* Includes Kymin Voima Oy's emissions with regard to the energy consumed by Kymi.

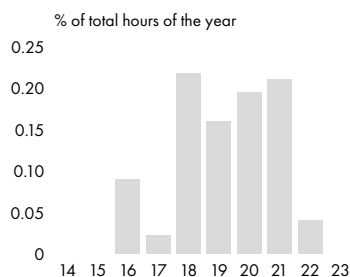
Fossil carbon dioxide, CO_2
(fossil emissions from purchased energy, scope 2)



Nitrogen oxides, NO_2^*



Percentage of TRS hourly average concentrations above $5 \mu\text{g}/\text{m}^3$ per year



Waste



The total amount of waste in 2023 was 29,900 tonnes, of which 9,035 tonnes were disposed of as dry solid matter at the Lamminmäki landfill. No process waste from the paper mill was taken to a landfill, only green liquor dregs were disposed of at Lamminmäki.

Green liquor dregs from pulp production is a challenging waste fraction to recycle. We are working hard to find a sustainable use for it, but as there were no ongoing beneficial uses, all the green liquor dregs generated by the mill had to be dumped in landfills.

A new joint project between UPM's Finnish pulp mills and an external operator is exploring the processing of green liquor dregs into building products. The first test run was conducted in spring 2023. Based on the results of the tests, further measures or studies will be decided.

Around 4,700 tonnes of ash have been delivered for reuse in 2023. As before, ash created during bioenergy production was delivered for granulation, after which it was applied to forests owned

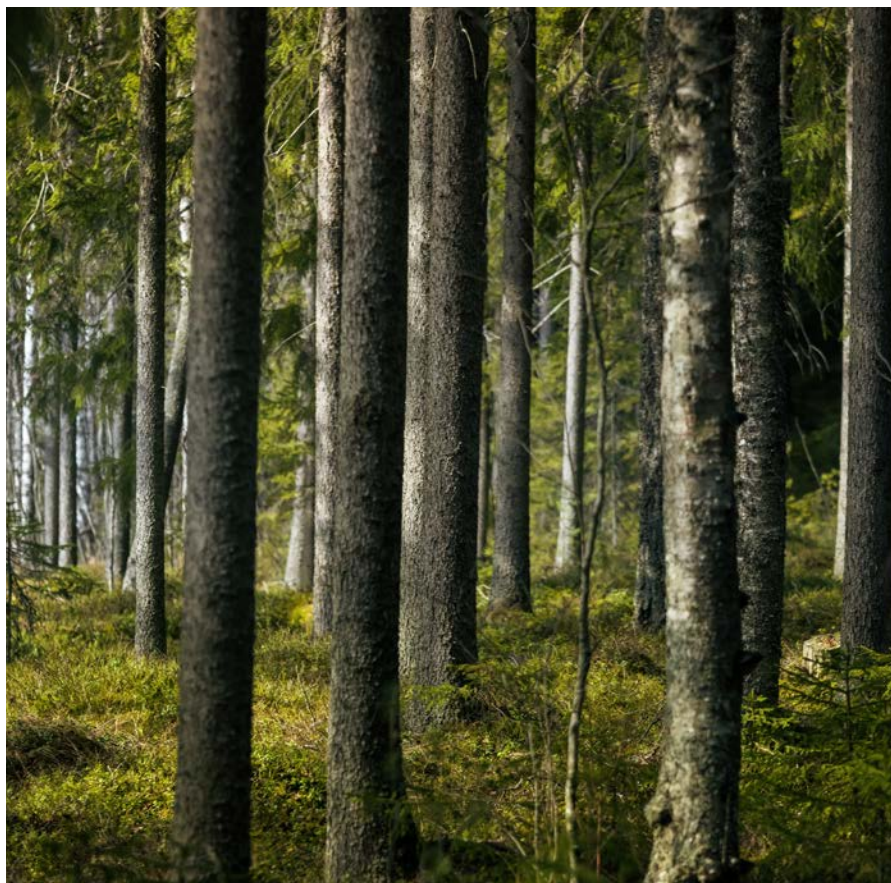
by UPM. The idea is to recycle the nutrients from the wood that is brought to the mill back into the forest. Another use was the binding of green liquor dregs in the Lamminmäki landfill structures. In 2023, 608 tonnes of ash remained in temporary storage.

During 2023, around 7,200 tonnes of bark waste was delivered to be reused as raw material for growing media and landscaping.

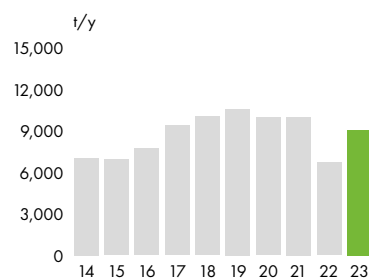
Separate collection of packaging glass and plastic was conducted in Kymi during the past year. Packaging glass was collected in all three personnel canteens at the integrated mill, as well as in the pulp mill recovery and fibre line break rooms. Plastic is collected at several collection points in the mill's departments, which receive clear and coloured film plastic in the packaging of incoming shipments. The plastic waste collected from the mill is taken to a recycling plant, where it is processed to produce recycled plastic pellets, mainly for the domestic plastics industry.



One of UPM's global 2030 sustainability targets is to recycle or reuse all its process waste. One of the most difficult by-products to recycle is green liquor dregs, for which UPM has long sought resource-efficient circular economy solutions.



Solid waste taken to a landfill dry*



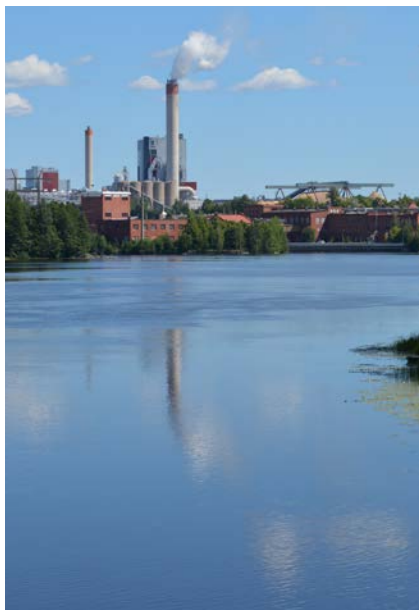
* Includes Kymin Voima Oy's ash corresponding to the energy used by Kymi.

The ash from bioenergy production is used as forest fertiliser after granulation. This way, the trace elements that came with the wood to the mill are returned to the forest.

The wastewater treatment plant operated steadily and efficiently throughout the year. The reduction levels indicating the efficiency of the treatment plant were 99% for biological oxygen demand (BOD) and 78% for chemical oxygen demand (COD). Solids were reduced by 96%.

In 2023, the total water consumption at Kymi was around 80 million m³. The total amount of water used was at the level of normal production years.

The paper mill's waste water volume per tonne of production, as well as solids losses, were elevated throughout the year. The increased levels were due to line shutdowns and washing caused by temporary adjustments in production. There were two exceptional emissions at the paper mill, the first in May and the second in June. In both cases, process water containing fine fibres and calcium carbonate was mixed with the cooling water in the paper machine, allowing the cloudy water to enter the rainwater drain. In May, the situation arose when the process water from the suction pump used to drain the paper machine's press



section could not drain normally due to a blockage. In June, the discharge into the sewer was caused by a failure in the surface measurement of the lockwater pit, which prevented the process water from draining into the lockwater pit due to the high level. Corrective measures

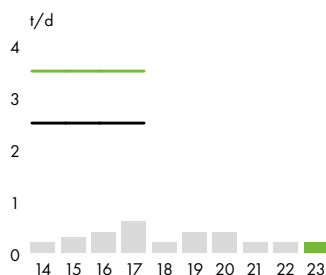
have been taken and visual monitoring of the water has been increased.

The pulp mill's specific consumption of wastewater and solids losses was at a good low level because the wastewater treatment plant operated well throughout the year.

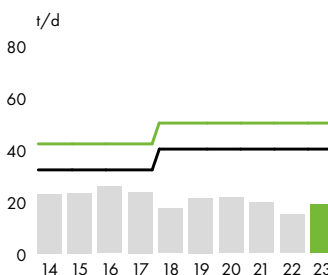
During the annual maintenance shut-down of the pulp mill, about 6 m³ of alkaline filtration water from the lime storage tank of the pulp mill leaked into the river through a rainwater drain. As a remedial measure, the felling in front of the manhole of the lime storage tank was changed to fall towards the alkaline drain, from where the water is diverted to the wastewater treatment plant. The site survey did not identify any other risk areas in the pulp mill area where alkaline or acidic water could enter the rainwater drainage system.

The water consumption and water emissions of the pulp and paper mill represented the best available technology in relation to the emission levels set by the BAT conclusions on the paper and pulp industry.

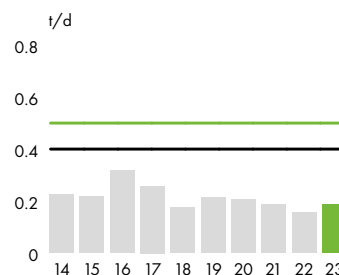
Biological oxygen demand, BOD



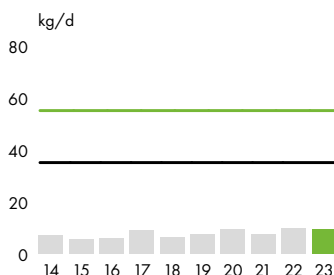
Chemical oxygen demand, COD_{Cr}



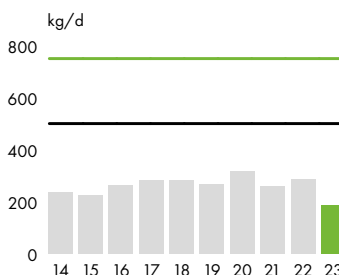
Adsorbable organic halogen compounds, AOX



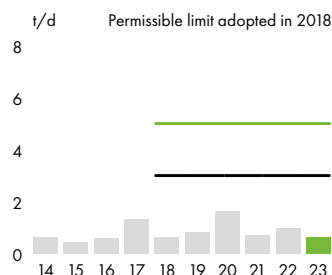
Phosphorus, P



Nitrogen, N



Total suspended solids



— Permissible limit, monthly mean value
— Permissible limit, annual mean value

Management of crises and exceptional situations

The following types of events are included within the management of crises and exceptional situations and communications at the Kymi mill property and surrounding area:

- Serious accidents and near-miss situations (major fires, explosions, chemical accidents etc.)
- Environmental damage
- Serious work injuries (including accidents on the way to or from work) and traffic accidents at the mill site
- Serious interruptions in production
- Other exceptional situations such as sabotage, demonstrations, work health and safety risks, pandemics, risks that could harm UPM's reputation, cyber threats and network destruction, and threatening situations not within Kymi, e.g., at other industrial plants.

Rescue operations are always led by the rescue authorities. The operational management of emergencies is the responsibility of the production organisation. Operational management means, for example, the controlled shutdown of production and other measures to bring the exceptional situation under control. Investigation of the incident and the flow of information proceed in accordance with the organisation's chain of command and agreed roles. The crisis communication group either consists of members of the mill's management group



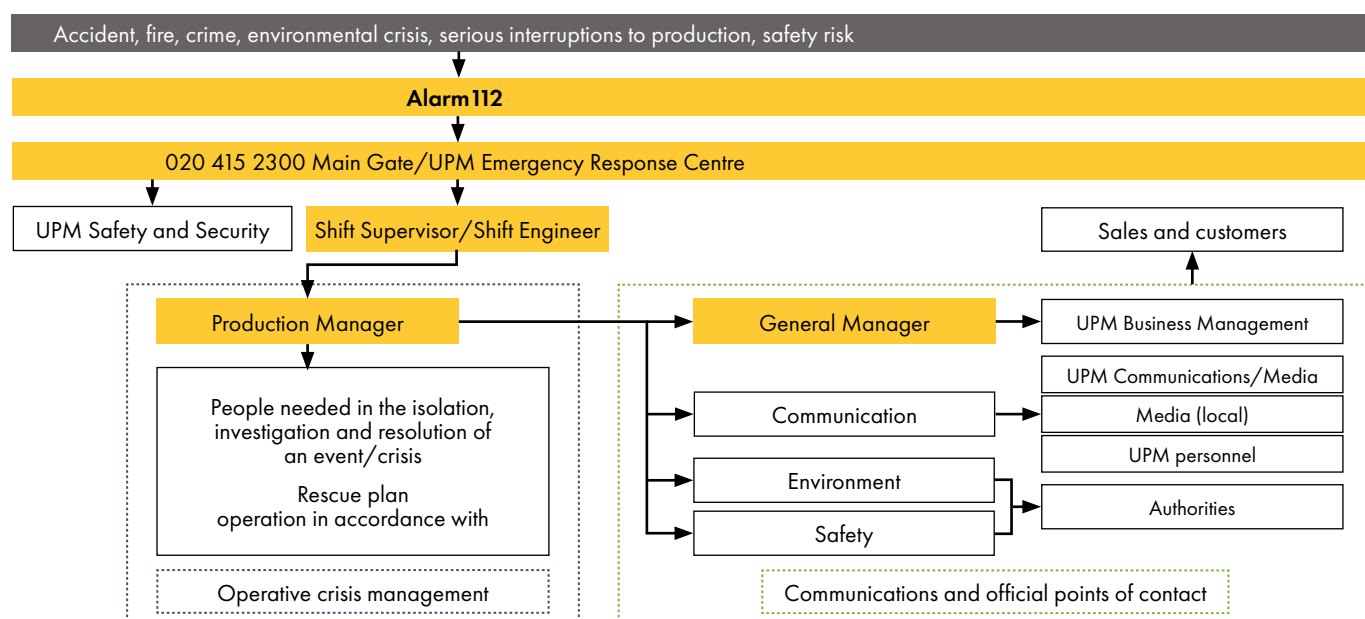
Joint exercises with the Kymenlaakso Rescue Department are part of maintaining operational readiness.

or is agreed on separately on a case-by-case basis.

Exceptional situations concerning Kymin Voima Oy and projects being run at the Kymi mill site will be dealt with in accordance with the Kymi guidelines and organisational actions. External companies operating on the mill site will follow their own guidelines. However, all emergencies will be reported as per the Kymi mill emergency policy.

The Kymi mill fire brigade primarily takes care of fire and rescue operations at the mill site and as a contract fire brigade of the Kymenlaakso Rescue Department. To maintain operational readiness, the mill's fire brigade trained regularly on a weekly basis. Fire brigade equipment such as measuring equipment and chemical suits was replaced during the past year.

The crises management chain of command – communications and flow of information at UPM Kymi



Societal responsibility

Through continuous improvement, proactive safety work and effective risk management, we aim to prevent accidents. We are committed to safety and our permanent goal is zero accidents. Occupational, process and environmental safety are fully embedded in our daily activities and are not considered less or secondary than any other interest. Our employees, as well as business partners and their employees, are required to adopt safe work practices and to comply with the rules and standards we have established.

2023 was an excellent year for safety in Kymi. Throughout the year, there were no lost time accidents at the paper mill or the pulp mill. In addition to normal mill operations, a major maintenance shutdown was conducted at the integrated mill in the spring, with more than 1,600 employees from external companies working alongside our own employees.

It is now eight years since the last lost time accident (LTA) at the paper mill. Proactive safety reporting is also actively conducted, with 94% of the paper mill's personnel recording safety observations, walks and discussions last year, totaling more than 3,500.

UPM also monitors safety developments with the TRI accident frequency indicator, which considers not only accidents resulting in absence, but also accidents requiring medical treatment or temporary work. There was one TRI accident at the pulp mill involving an external operator and the TRIF for the full year was 1.22. During the year, there were 3 TRI accidents at the paper mill and the TRI accident frequency rate was 4.2. The figures include TRI cases for contractors, visitors and mill's own personnel.

We regularly organise safety-related training for our employees, such as Occupational Safety Card or Hot Work Certificate training. Process safety awareness was increased through online training at Finnish pulp mills at the end of the year.

Last year, UPM's Finnish pulp mills started a project to harmonise lockout (LoTo) practices. During the spring, the project produced a set of guidelines, that were trained at the mill level for all personnel and are now in use.

Five evacuation drills were organised at the paper mill. In addition to our own employees, contractors and visitors participated in the exercises.

In 2023, UPM launched a new safety project, which involved group discussions on safety at different sites. In Kymi, the discussions took place in November and December. The aim was to discuss with our employees what is currently working well from a safety perspective and what changes would help us to work more safely. The project will continue in 2024.

Towards good health and well-being

UPM supports the well-being of its employees in a holistic way, covering physical, psychological and social aspects. Employees have at their disposal an ePassi, the balance of which can be used for various sports, cultural and welfare services. Occupational health services are available 24 hours a day, 7 days a week. During 2023, UPM decided that employees in Finland are able to take the new bicycle benefit into use from the beginning of January 2024. We encourage our staff to ride their bicycles, enjoy the outdoors and reduce their carbon footprint at the same time.

A project called Kyminvointi was launched at the Kymi paper mill to find ways to increase well-being and job satisfaction in the mill environment. The project focuses on the prevention of musculoskeletal disorders, keeping people aged 55+ well at work and supporting the work community. The project will be carried out in partnership with personnel, occupational health and the pension insurance company and will run for three years.

In the annual EES employee survey carried out in September, in the paper mill the question "Do my colleagues and I work together for a safe workplace?" received the highest score, 81 points on a scale of 0–100. In the pulp mill results, the key survey indicator of engagement improved by 6% compared to the previous year.

Encouraging learning

Our long-term goal at UPM is to ensure optimal performance and continuous professional development. In Kymi, skill development has been prioritised in the

pulp and paper mill production worker positions and is promoted through shift based training plans.

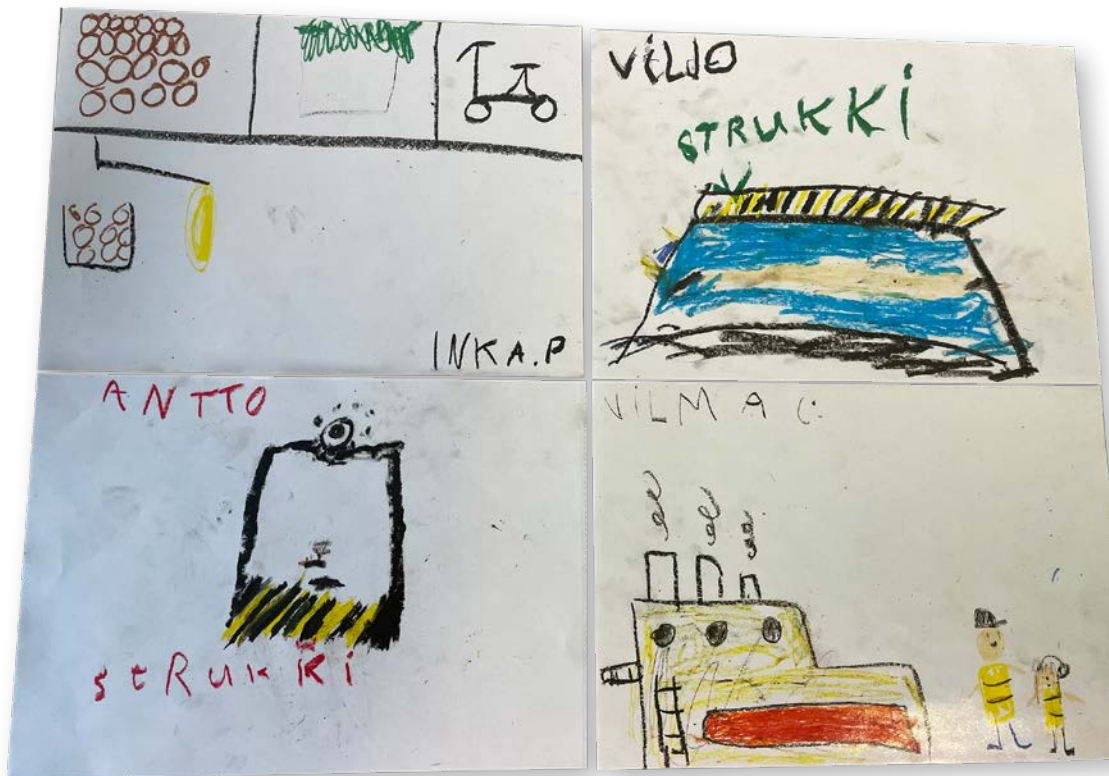
At the pulp mill, job rotation was introduced, which allows employees to expand their skills and maintain their qualifications by rotating through the different jobs in the department. Diversity and inclusion training was provided to all pulp mill employees and forepersons were trained in the Fibres Leaders programme. The total number of personnel training hours in 2023 was 3,596 at the pulp mill and 4,507 at the paper mill.

A pilot team from Kymi pulp mill participated in UPM's Digi-enabled operator project. The project aims to develop digital solutions to help employees learn and share alongside work.

Our apprenticeship programmes ensure that our future employees have the necessary skills. A total of 61 people studied in our training programmes, mainly in production and maintenance.



Invasive species, such as giant weevils, are regularly controlled on the site.



The interest in the My Workplace visit days at the paper mill exceeded expectations and the feedback received was positive. On the tour route, there was a drawing point for children, where they were invited to draw what they remembered from the tour.

Evaluations to support operational development

We are regularly assessed by external independent experts. The external audits of the ISO 14001 Environmental Management System, ISO 9001 Quality Management System, ISO 22000 Food Safety Management System, ISO 45001 Occupational Health and Safety Management System and ISO 50001 Energy Management System carried out at the pulp and paper mill in 2023 did not identify any serious nonconformities. Corrective measures and schedules their implementation have been set for the minor nonconformities. We received positive feedback on the cleanliness of the mill and on the good knowledge of our personnel on issues related to occupational safety, environmental protection, food safety, quality and energy efficiency.

The so-called Multisite assessments between UPM mills are conducted according to a separate plan. Internal assessments apply to all certified systems. The aim is to ensure that practices are as consistent as possible across mills. The extensive expertise of auditors from other UPM units and divisions brings new insights to operational development.

Stakeholder engagement

Our aim is to raise awareness of jobs in the sector and encourage young people to enter the forestry sector. We participated in local networking and recruitment events and visited the Kotka and

Mikkeli campuses of the South-Eastern Finland University of Applied Sciences – Xamk. As in previous years, forestry ambassador activities continued.

In August, about 140 pupils in the sixth grade from six different schools in Kouvola participated in a forest trip in Valkeala, organised in cooperation with the Finnish Forestry Association and 4H. The “Economic Forest – Development and Sustainable Use” tour explored the forest and its regeneration, wood growth and carbon cycle, wood based products and game management. In addition, each pupil had the chance to plant a sapling for a future forest and to finish the trip with a picnic lunch at the campfire.

In December, the paper mill hosted “My Workplace” visit days, giving paper mill personnel the opportunity to bring their family and friends to visit the mill. Visitors were given a tour around the mill by their own family member, a member of the personnel.

Value creation generates tax revenue

The tax revenues generated by UPM’s operations have a significant social impact at both national and local level. In 2023, UPM’s corporate income taxes paid and property taxes were approximately 221 million euros in total (349 million euros in 2022).

At the local level, the municipal share of corporation tax and property taxes

paid support the economy. In addition, the municipal taxes paid by workers on their wages have a significant regional impact. The purchasing power of UPM’s employees and subcontractors also develops and maintains the vitality of the sub-regional communities. In 2023, the local tax impact of the Kymi integrated mill would be around 14 million euros.

We use nearly four million cubic metres of wood in our mill every year, most of which is sourced locally. This brings income not only to forest owners, but also to forest professionals and operators in the logistics chain.

UPM is the fourth largest employer in Kouvola. In 2023, the Kymi mill and other UPM operations in the city employed approximately 820 people. A total of 693 people worked in the Kymi integrated mill, and we also hired 111 summer workers.

Responsible sourcing

UPM is committed to responsible sourcing practices throughout the entire supply chain. We require all suppliers to comply with the UPM Supplier Code and Third Party Code. The target is to have 100% of raw material spend and 80% of all spend covered by UPM Supplier and Third Party Code by 2030. In 2023, 95% of the value of raw material purchases in Kymi came from such suppliers.

Environmental parameters

The figures related to production as well as raw material and energy consumption are published as aggregated figures on group level in the UPM Corporate Environmental and Societal Responsibility Statement.

		2021	2022	2023
Production capacity	Coated and uncoated fine paper	715,000 t	715,000 t	715,000 t
	Pulp	870,000 t	870,000 t	870,000 t
Raw materials	Timber Purchased pulp Chemicals	See UPM Corporate Environmental and Societal Responsibility Statement for more information		
Energy	Biomass-based fuels	87%	87%	89%
	Fossil fuels	13%	13%	11%
	Purchased energy ¹⁾			
Emissions to air	Sulphur, SO ₂	22.9 t (SO ₂ and malodorous sulphur emissions as sulphur dioxide)	48.6 t (SO ₂ and malodorous sulphur emissions as sulphur dioxide)	24.7 t (SO ₂ and malodorous sulphur emissions as sulphur dioxide)
	Nitrogen oxides	1,249 t	878 t	1,243 t
	Carbon dioxide, CO ₂ (fossil emissions from own energy production, scope 1)	107,043 t	108,075 t	87,143 t
	Carbon dioxide, CO ₂ (fossil emissions from purchased energy, scope 2)	94,905 t	52,147 t	50,186 t
	Particles	382 t	176 t	141 t
Water intake	Process and cooling water	85,197,993 m ³	68,789,718 m ³	79,664,613 m ³
Discharges to water	Cooling water	47,910,108 m ³	37,875,566 m ³	44,380,707 m ³
	Effluent	37,237,443 m ³	30,914,152 m ³	35,283,906 m ³
	COD _{Cr}	6,963 t	5,420 t	6,755 t
	BOD ₇	85 t	97 t	85 t
	AOX	67.4 t	52.9 t	68 t
	Phosphorus	2.71 t	3.61 t	3.5 t
	Nitrogen	94.7 t	105.3 t	68.5 t
Side products	Lime sludge	3,559 t	2,633 t	2,892 t
	Sodium bisulphite	2,350 t	337 t	1,321 t
	Total	5,909 t	2,970 t	4,213 t
Waste ²⁾	Landfill			
	– green liquor dregs	9,972 t	6,666 t	9,035 t
	– lime sludge	–	–	–
	– mixed waste	–	–	–
	– process waste	–	–	–
	– construction waste	3 t	–	–
	Reused waste			
	– ash	4,910 t	4,533 t	4,692 t
	– green liquor dregs	121 t	–	544 t
	– sludge	–	548 t	226 t
	– lime, lime sludge	129 t	204 t	495 t
	– bark and wood waste	3,261 t	2,100 t	7,186 t
	– cores and wrapping	5,303 t	3,996 t	1,979 t
	– waste paper and cardboard	118 t	151 t	428 t
	– metal	274 t	341 t	648 t
	– combustible waste	–	–	–
	– construction waste	1,447 t	825 t	556 t
	– biowaste	19 t	15 t	20 t
	– soil	–	939 t	1,150 t
	– other waste	1,130 t	203 t	336 t
	Temporarily stored waste intended for reuse			
	– ash	–	29 t	608 t
Hazardous waste		123 t	103 t	1,951 t
Land use	Total amount of land use	255 ha	255 ha	255 ha
	Area impermeable to water	110 ha	110 ha	112 ha
	Area directed towards nature conservation	145 ha	145 ha	143 ha

The figures include Kyrmin Voima Oy's waste and emissions with regard to the energy consumed by the Kymi site.

¹⁾ See the Group's Corporate Environmental and Societal Responsibility Statement for more information (e.g. energy indicators)

²⁾ Dry weight

The pulp mill's performance against targets in 2023

OBJECTIVES AND INDICATORS	ACHIEVED	COMMENTS
No permissible limits exceeded – classes 3–5	No	Alkaline filtration water from a lime storage tank leaked into the rainwater drain during a maintenance shutdown.
Solid waste to landfill < 12.5 kg of dry matter/tonne of pulp	Yes	Actual figure below target. Green liquor dregs remains high.
Water consumption < 37 m ³ /tonne of pulp	Yes	Actual figure below target. Fibre line washing optimised for maximum production.
COD emissions < 9 kg/tonne of pulp	Yes	Fibre line washing optimised for maximum production and wastewater treatment plant operated effectively.
AOX emissions < 0.10 kg/tonne of pulp	Yes	Optimisation of fibre line washing and chlorine dioxide doses, and steady, good performance of the wastewater treatment plant.
Solids to river < 1.0 t/d	Yes	The wastewater treatment plant has been running smoothly and efficiently.
CO₂ emissions < 50 kg of CO ₂ /tonne of pulp	No	Natural gas and fuel oil were used to fuel the lime kiln.
SO₂ + TRS emissions < 0.1 kg of sulphur/tonne of pulp	Yes	Actual figure below target. Minimising unplanned shutdowns.
NO_x emissions < 1.40 kg/tonne of pulp	No	Re-optimisation of lime kiln running parameters for the switch from fuel oil to natural gas.
Lime kiln particles < 0.05 kg/tonne of pulp	Yes	The electrostatic precipitator worked effectively..

The paper mill's performance against targets in 2023

OBJECTIVES AND INDICATORS	ACHIEVED	COMMENTS
No abnormal emissions – classes 3–5	No	Two class 3 discharges: in both cases, process water was mixed with cooling water and this turbid water was discharged into the rainwater drain.
Reducing water consumption at the paper mill < 10 m ³ /tonne of paper	No	The higher than targeted levels were due to line shutdowns and washing caused by temporary adjustments in production.
Solids loss at the paper mill < 10 kg/tonne of paper	No	The higher than targeted levels were due to line shutdowns and washing caused by temporary adjustments in production.
Number of environmental observations 60 observations/year	Yes	Improving environmental awareness.

Pulp mill targets for 2024

OBJECTIVES AND INDICATORS	SCHEDULE	RESPONSIBILITIES BY DEPARTMENT
No permissible limits exceeded – classes 3–5	2024	Stable, good performing of the wastewater treatment plant. Implementation of planned maintenance work.
Solid waste to landfill < 12.5 kg of dry matter/tonne of pulp	2024	Actively participating in research seeking reuse applications for green liquor dregs. Finding a beneficial use for green liquor dregs.
Water consumption < 36,5 m ³ /tonne of pulp	2024	Optimisation of the washing process with maximum production.
COD emissions < 8,5 kg/tonne of pulp	2024	Optimisation of fibre line washes for maximum production and good, steady operation of the wastewater treatment plant.
AOX emissions < 0.10 kg/tonne of pulp	2024	Optimisation of fibre line washing and chlorine dioxide doses for maximum production and steady operation of the wastewater treatment plant.
Solids to river < 1.0 t/d	2024	Maintaining steady operation and proceeding with scheduled maintenance work at the wastewater treatment plant.
CO₂ emissions < 70 kg of CO ₂ /tonne of pulp	2024	Optimisation of the run and fuel selection of the lime kiln. Attaining a good paper mill operation rate.
SO₂ + TRS emissions < 0.1 kg of sulphur/tonne of pulp	2024	Minimising unplanned shutdowns.
NO_x emissions < 1.40 kg/tonne of pulp	2024	Explanation of the cause of the higher NO _x levels in the lime kiln. Minimising unplanned shutdowns.
Lime kiln particles < 0.05 kg/tonne of pulp	2024	Efficient operation of electrostatic precipitators.



From a safety point of view, the integrated mill's large-scale maintenance shutdown was a great success. Maintenance work was carried out, including inside the lime kiln.

Paper mill targets for 2024

OBJECTIVES AND INDICATORS	SCHEDULE	RESPONSIBILITIES BY DEPARTMENT
No abnormal emissions – classes 3–5	2024	Continuous improvement of environmental awareness and risk identification.
Reducing water consumption at the paper mill <10 m³/tonne of paper	2024	Improving paper machine runnability. Thesis on reducing the use of process water.
Solids loss at the paper mill <10 kg/tonne of paper	2024	Improving paper machine runnability. Explore the possibility of using more rejected paper in the paper machine.
Number of environmental observations 60 observations/year	2024	Improving environmental awareness.



Revalidation statement

As an accredited environmental verifier (FI-V-0001), Inspecta Sertifiointi Oy has examined the environmental management system and UPM Kymi Environmental and Societal Responsibility 2023 statement as well as the information concerning UPM Kymi in the Updated UPM Corporate Environmental and Societal Responsibility Statement 2023.

On the basis of this examination, the environmental verifier has herewith confirmed on 2024-04-15 that the environmental management system, the Finnish UPM Kymi Environmental and Societal Responsibility 2023 statement and the information concerning UPM Kymi in the Finnish Updated UPM Corporate Environmental and Societal Responsibility Statement 2023 are in compliance with the requirements of the EMAS Regulation (EC) No 1221/2009.



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