

UPM Rauma

# ENVIRONMENTAL AND SOCIAL RESPONSIBILITY 2022



# UPM Rauma

UPM Communication Papers Oy's Rauma mill is located by the sea on the west coast of Finland, near Rauma's city centre. Metsä Fibre Oy's pulp mill, Forchem Oy's tall oil distillation plant and Rauman Biovoima Oy are also based at the same mill site. UPM Communication Papers Oy supplies raw and chemically purified water to the site, and is responsible for the joint treatment of the wastewater of industry and the city. The companies collaborate closely in energy production, and Rauman Biovoima supplies the city of Rauma's required district heating power. The operations of Rauman Biovoima and the Rauma paper mill support the city's Hinku project as a carbon-neutral municipality.

UPM Kymmene Oyj changed its corporate structure in the summer of 2016. Except for RaumaCell, the Rauma mill is part of UPM Communication Papers Oy, which is one of the subsidiaries of UPM Kymmene Oyj. RaumaCell continues to be part of UPM Kymmene Oyj.

Currently, the Rauma mill has two paper machine lines, a fluff pulp department, a twin-line debarking plant, two TMP plants, a water plant, a biological effluent purification plant and a disposal site for industrial waste.

The paper machines produce coated LWC papers used in magazines. The paper produced in Rauma is utilized in magazines, sales catalogues, and various types of print advertising products. Additionally, RaumaCell manufactures fluff pulp, serving as a raw material for hygiene and table-setting products.

Also located at UPM Communication Papers Oy's mill site is Rauman Biovoima Oy, which procures most of its usage, maintenance and environmental services from UPM Communication Papers Oy. Approximately 85% of the energy produced by Rauman Biovoima Oy for UPM is produced using renewable fuels. As the power plant is a separate company, its operations have only been included in this annual report with regard to vicarious liability.



<b>Production capacity</b>	665,000 tonnes of paper 100,000 tonnes of fluff pulp
<b>Personnel</b>	424
<b>Products</b>	<b>Coated magazine paper:</b> UPM Star, UPM Ultra, UPM Cote, UPM Valor, UPM Cote Silk, UPM Ultra Matt, UPM Star Silk
<b>Certificates</b>	EMAS (EU Eco-Management and Audit Scheme) ISO 14001 – Environmental Management System ISO 9001 – Quality Management System ISO 45001 – Occupational Health and Safety System PEFC Chain of Custody – Programme for the Endorsement of Forest Certification FSC® Chain of Custody – Forest Stewardship Council® ETJ+ energy efficiency scheme  All certificates can be found from UPM's Certificate Finder (available at <a href="http://www.upm.com/responsibility">www.upm.com/responsibility</a> )
<b>Environmental labels</b>	EU Ecolabel



UPM Rauma Environmental and Societal Responsibility 2022 is a supplement to the Corporate Environmental and Societal Responsibility Statement of UPM's pulp and paper mills (available at [www.upm.com](http://www.upm.com)) and provides mill-specific environmental and societal performance data and trends for the year 2022. 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 2024.

UPM delivers renewable and responsible solutions and innovates for a future beyond fossils across six business areas: UPM Fibres, UPM Energy, UPM Raflatac, 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 17,200 people worldwide and our annual sales are approximately EUR 11.7 billion. Our shares are listed on Nasdaq Helsinki Ltd. UPM Biofore – Beyond fossils. [www.upm.com](http://www.upm.com)



The mark of responsible forestry

For more information about FSC certification visit [fsc.org](http://fsc.org)



For more information about PEFC certification visit [pefc.org](http://pefc.org)



EU Ecolabel : FI/011/001

# Review of the year 2022

The year 2022 was significantly different from 2021. The reference year 2021 was a very normal production year, despite the COVID-19 pandemic, and therefore 2021 was mainly a year of normal maintenance and servicing shutdowns. Similarly, 2022 was particularly affected by the strikes at UPM's mills from January to April. Production at the paper mill did not start until the very end of April. During the strikes, only clean water and fibre were in practice diverted from the paper mill to the wastewater treatment plant to ensure the operation of the plant's pre-screener. This was reflected in higher than normal water consumption per tonne per year. Compared to a normal year, the paper mill was also down in early June during the integrated mill shutdown of the forest industry wastewater treatment plant, after which production levels returned to normal.

2022 was also an exceptional year for the forest industry wastewater treatment plant compared to a normal year. In January, while UPM workers were on strike, the wastewater treatment plant was run by UPM's supervisors. On 21 January, the District Court of Helsinki granted UPM's application for an injunction to safeguard heat production and water treatment at the mill sites during the Paperworkers' Union strike. The security measure ensured these critical operations even during the strike and prevented any harm to bystanders caused by the strike. The personnel operating the Rauma forest industry wastewater treatment plant returned to work on 27 January 2022. During the UPM strike (January–April 2022), less wastewater than normal was discharged to the plant. Discharges to the sea from the wastewater plant remained slightly below normal.

In 2022, measures to reduce environmental impacts continued. In the pulp mill and paper machine areas, a change in the way process water is run required piping modifications. The change will allow additional purification of the circulating water with a disc filter, enabling the purified circulating water to be used in various applications instead of chemically treated water. An advanced top-level control system was introduced for the production of TMP and the bleaching of PK4, optimising the overall pulp production. The system achieved specific savings in chemical and energy

consumption, reducing the environmental impact of the plant.

There was an integrated mill shutdown at the forest industry wastewater treatment plant in week 23. The forest industry wastewater treatment plant was shut down due to both the replacement of the automation system and other planned shutdowns. In addition to the closure of both mills, the wastewater from the city of Rauma was discharged to the Maanpäänniemi wastewater treatment plant for treatment. No wastewater was discharged to the treatment plant between 6 and 10 June. In connection with the shutdown, the Rauma forest industry wastewater treatment plant's automation system was upgraded to ensure safe operation of the plant for the next 15 years. The environmental impact of the integrated mill sewage treatment plant was limited to discharges to the marine area, with no additional emissions to air, noise, etc. Waste was mainly generated from construction materials used during the shutdowns, which were small in quantity. Emissions from the shutdowns were at their highest during the run down of the plant. The emissions to the sea area due to the downtime of the treatment plant were negligible. The most significant daily difference from the average discharge was observed for solids immediately at the beginning of the shutdown. Nitrogen and phosphorus emissions were higher than normal just before and after the shutdown. The shutdown was well implemented. The shutdowns were planned well in advance,

as they included an exceptionally important work to replace the control system of the treatment plant.

Active preventative safety work with regard to environmental matters continued in 2022. Personnel have been encouraged to make observations related to environmental matters and notifications of deviations. According to the personnel safety objectives, at least one notification per year should be related to the environment. During 2022, 1 Cat 3 (moderate) and 3 Cat 2 minor (no environmental impact) environmental deviations occurred. In the Cat 3 case, the daily CO limit for Rauma Biovoima Oy's steam boiler 5 was exceeded. The high CO level was caused by an unexpected shutdown of the paper machine in a situation where the steam boiler load was already low due to a turbine shutdown. As a result, the combustion event in the boiler was incomplete. The situation was brought under control as the boiler load returned to normal. Although Rauma Biovoima is a legal company with its own environmental permit, a deviation was also recorded in UPM's system due to the operational link between UPM and Rauma Biovoima.

In the first Cat 2, oil from the Rauma Biovoima standby oil boiler escaped into the engine leakage basin due to a fault in the fuel oil machine and further into the surrounding areas. The discharge was limited to the catch basins. The oil (approx. 5 m<sup>3</sup>) was recovered and delivered to a hazardous waste treatment plant for disposal. In ▶



  
Jari Mäki-Petäys  
Mill Manager



  
Pasi Varjonen,  
Safety and Environmental Manager

▶ another Cat 2 case, oil was found in the oil separator tank of the HK4 canal, which had also leaked into the canal. The dams in the canal prevented the oil from flowing forward and the oil did not reach the water. In the third Cat 2 incident, the hydraulic oil system of a truck bringing fuel to the mill site failed and hydraulic oil was spilled on the ground. The oil was cleaned off with sawdust and absorbent cloth.

In 2022, noise control continued to focus primarily on preventive maintenance activities. In addition, an annual noise measurement was carried out at agreed off-site locations and a separate report will be submitted. There were no external reports on noise/vibration. The noise model for the mill site has been updated to reflect the situation after the closure of PK2 and the mills in 2020. Based on the results, noise caused by the forest industry facilities is below permitted limits.

#### Waste

There were no significant changes in the treatment of waste in 2022, compared to 2021. Since 2017, mill waste has not been deposited in the Suiklansuo landfill, although in the permit sense, the Suiklansuo landfill is still in use. In 2022, waste management continued as in previous years, with all solid waste being recovered either as material or energy. Ash produced at the Rauman Biovoima power plant was completely repurposed as a construction material for the Sampaanalantahti field. The aim is to continue using ash and other recycled materials from the forest industry in 2023.

#### Certificates

The paper mill has shifted to a so-called multisite model (ISO certificates, ETJ+) as far as the quality management system's certification is concerned, which covers all paper mills in Finland. Both internal and external audits are integral parts of the Multisite model. Internal audits are conducted by auditors from other units, which also gives us a solid perspective on the development of operations. Kiwa Inspecta is responsible for the external audits.

#### Environmental permit situation

The current environmental permit for the joint treatment plant of the wastewater is the environmental permit issued by the Southern Finland Regional State Administrative Board on 8 May 2018, to which the Supreme Administrative Court added the obligation to clarify by its decision of 11 November 2021. The study must consider the conditions at the treatment plant to achieve good treatment performance at all permit values in the new permit. On 7 December 2016, the Southern Finland Regional State Administrative Agency granted the current permit for the paper mill, which was amended by the Administrative Court of Vaasa in its decision of 20 September 2018.

## UPM Rauma

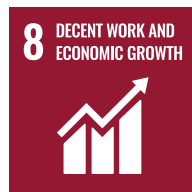
# Contribution to UN Sustainable Development Goals in 2022



## Supply chain

# 94.9%

of raw materials spend qualified against UPM Supplier and Third Party Code (wood not included)



## Taxes

Mill's tax impact approx.

# EUR 9 million

Real estate tax EUR 0.3 million

Estimate of tax on salaries EUR 3.4 million

Estimate of corporate income tax EUR 16.8 million based on the number of employees\*

\*Approximately 30% of corporate income tax goes to municipalities, which is split between each municipality according to their share of business activities and forests operations.



## Water

Percentage of recycled nutrients of the effluent purification plant's additional nutrients:

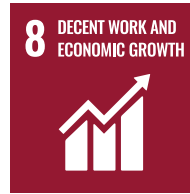
# 99.7%



## Energy

Share of biomass-based fuels in the plant:

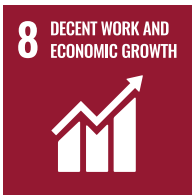
**85%**



## Health

Sick leaves

**3.61%**



## Consumption impact

The mill's local consumption impact consumption impact in 2021 of around

**EUR 20 million**

Consumption impact in the whole of Finland in 2021: approximately\*

**EUR 38 million**

\*Generated through the private consumption of commodities from internal and indirect employees' net wages.



## Employment

Mill employed

**419 people**

Indirect employment effect in region

**428 persons**

Summer workers and trainees

**69 persons**



## Safety

**1,182**

safety and environmental observations, hazard situation reports, safety inspections and discussions logged by the personnel at UPM Rauma.



## Waste

Reused ash

**100%**

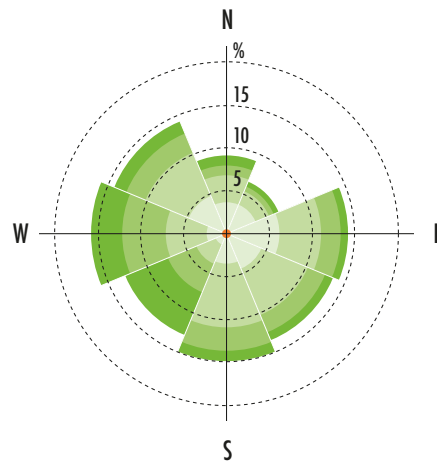
# Air



Sulphur emissions, nitrous oxide emissions and CO<sub>2</sub> emissions in 2022 decreased compared to 2021.

The lower air emissions are due to the lower amount of energy purchased from Rauman Biovoima plant. This is due to the strikes in early 2022. Renewable fuels were the source of 79% of all of UPM Rauma's CO<sub>2</sub> emissions. Due to Rauma Biovoima exceeding the daily CO permit limit, a Cat 3 environmental deviation was also recorded in UPM's system.

The air-quality measurement point nearest to the Rauma mill is located in Sinisaari, approximately 0.5 kilometres (towards the city) from the mill. The wind rose shows the direction that the wind comes from.

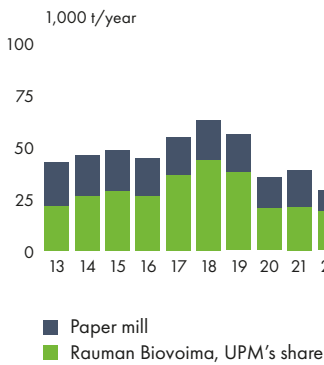


Wind rose

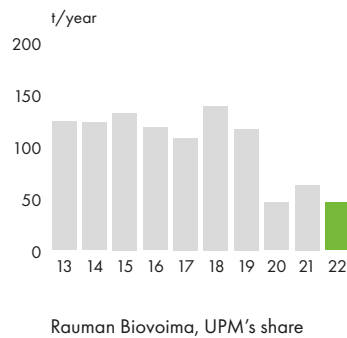
- Calm
- 0.5–3 m/s
- 3–5 m/s
- 5–7 m/s
- > 7 m/s

Wind direction and speed at Sinisaari for the measurement period 1 January 2022–31 December 2022. Source Meteorological Office.

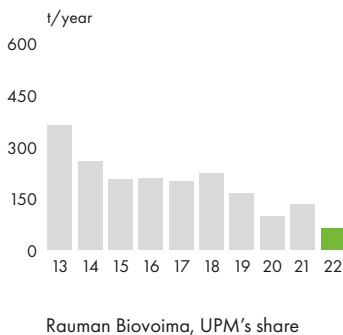
## Fossil carbon dioxide, CO<sub>2</sub>



## Sulphur dioxide, SO<sub>2</sub>



## Nitrogen oxides, NO<sub>x</sub>



# Waste

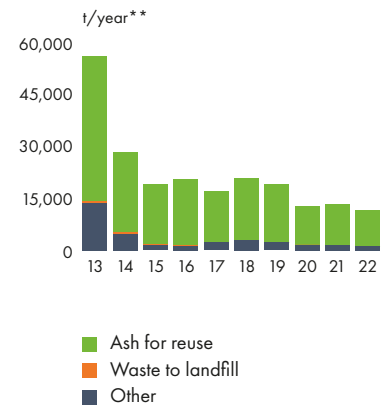


Ash from the power plant was reused in the construction at the Sampaanalantahti site, as in previous years. The rest of the generated waste was mill waste, recycled fibre, metal and hazardous waste, and combustible waste.

All solid waste is reused either as materials or energy. The ash is produced at the Rauma Biovoima power plant and all the ash produced was used as building material in the construction of the Sampaanalantahti site. The aim is to continue utilising ash and other recycling materials from the forest industry in 2023. Possible options include the surface structures of the landfills and construction of storage fields. New utilisation possibilities in land construction are also being investigated. Ash will be used to replace other construction materials, such as cement.

The use of the Suiklansuo landfill area already ended in 2017. The last deposits to the site before it was closed down were soda sediment from Metsä Fibre Oy and mill waste from UPM.

## Waste and reuse\*

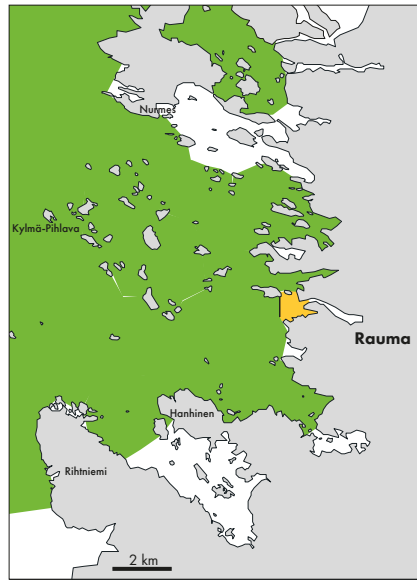


\* ash, Rauman Biovoima's share  
 \*\* calculated as dry weight

An operational committee made up of representatives from UPM Communication Papers Oy, Metsä Fibre Oy and the city of Rauma is in charge of developing the joint purification and directing its success. The responsibility for wastewater treatment remains with UPM Communication Papers Oy.

The wastewater treatment results were at the normal and good level. In 2022, no exceedances of the permit limit were recorded for wastewater treatment. The future integrated mill sewage treatment plant was notified in advance to the Authority's YLVA system.

The annual total discharges were in compliance with the best available technical requirement level, BAT. The wastewater effluent load from the lumber industry and joint purification is now so low that the state of the water system can no longer be significantly improved by making treatment more efficient. In line with UPM's 2030 targets, the wastewater treatment plant uses recycled nutrients, which accounted for 99.7% of all nutrients used.

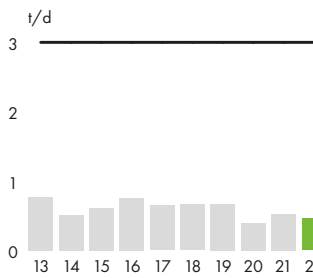


Source: Lounais-Suomen vesi- ja ympäristötutkimus Oy

- Excellent
- Good
- Satisfactory
- Passable
- Poor

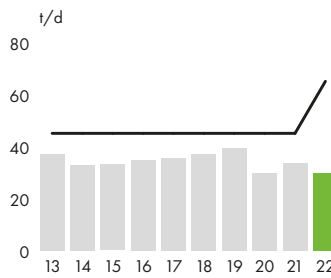
The general usability of the Rauma sea area in 2022. The classification is based on the phosphorus and chlorophyll content in the production layer, and the amount of E. coli bacteria in the surface layer between June and September. The classification was determined based on the lowest quantity compared with the highest.

### Biological oxygen demand, BOD<sub>5</sub>



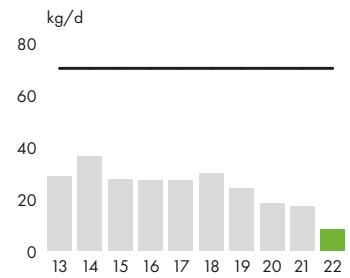
— Permit, three-month moving avg.

### Chemical oxygen demand, COD<sub>Cr</sub>



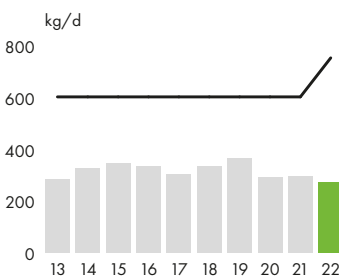
— Permit, three-month moving avg.

### Phosphorus, P



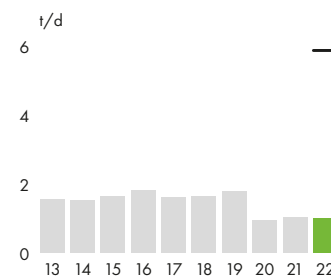
— Permit, three-month moving avg.

### Nitrogen, N



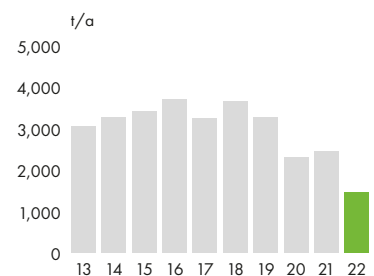
— Permit, three-month moving avg.

### Solid load into the sea



— Permit, three-month moving avg.

### COD load into the sea, UPM's share



# Management of crises and exceptional situations

Prevention of exceptional situations and management of crises at the Rauma mill is the responsibility of the mill management and the safety and environmental organisation, as well as the fire-fighting and mill protection organisation. Both guidelines for exceptional situations and rescue and fire extinguishing plans have been made for the Rauma mill.

A crisis management group has been established for the management of exceptional situations, which is responsible for the operative management of

exceptional situations. The mill manager spearheads the crisis management group, supported by two deputies. In addition, members have been appointed to the crisis management group from different parts of the mill organisation.

An exceptional situation refers to an unforeseen chain of events that has a significant impact on the functions of the organisation and the potential to escalate quickly. Exceptional situations include serious accidents (large fires, explosions and chemical and traffic

accidents on the mill site), environmental damage, serious work-related injuries, cyber security threats and information attacks. The operations of the mill safety organisation cover expert duties in occupational safety, mill security, fire-fighting and rescue operations, and the control of hazardous substances. Drills related to exceptional situations are an important part of the preventative safety work. Firefighting and rescue operations are always led by the rescue authorities.

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## Social responsibility

Interaction with stakeholders that works well is a key factor in the success of UPM. We are committed to promoting the vitality of the communities near our facilities through active collaboration and open dialogue with different stakeholders, as well as through different sponsorship projects and employee volunteering.

As a company, we generate economic prosperity. We influence local communities and societies in a multitude of ways. Comprehending the extent of our impact is a critical element in our business success. In many locations, we are a significant employer, taxpayer and partner to local entrepreneurs, making positive contributions to the local economy. The employment impact of UPM Communication Papers Oy in the Rauma area is significant and, in terms of figures, the indirect employment impact of the mill is 428 persons. We apply several precautionary measures to mitigate and remedy potential adverse environmental and social impacts on our surrounding communities.

The tax revenue generated by UPM's operations has a significant social impact. We contribute to the economies of the countries where we operate by paying corporate income taxes, reflecting the added value and profits we generate there. Due to our corporate and operational structure, we mainly report and pay corporate income taxes in the coun-

tries of production and in the countries where innovations are being developed. In addition to the income taxes that we pay, our various production inputs and outputs are also subject to taxation. Taxes are paid in accordance with the local tax decrees and regulations.

In 2022, UPM's corporate income taxes paid and property taxes were approximately EUR 247 million in total (EUR 235 million in 2021).

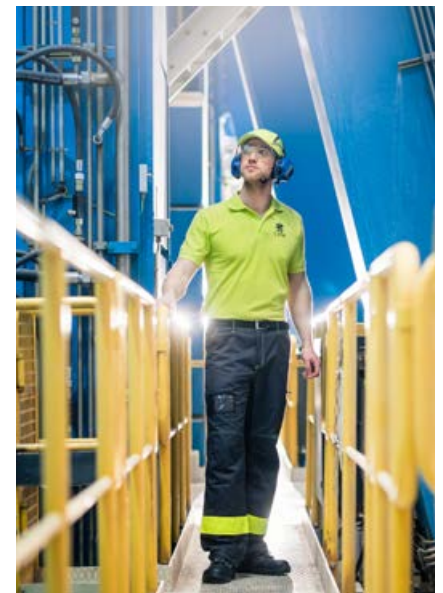
The operations of our mills also support local communities in many ways. The property taxes paid and the municipal share of corporate income taxes support the local economy. In addition, the municipal taxes and social security contributions that the employees pay from their wages have a significant local impact. Furthermore, the purchasing power of UPM's employees and subcontractors maintains and boosts the vitality of local communities.

We support sustainable development and promote the financial and mental well-being of the communities around us by participating in numerous community projects as a company. Our work in this arena is clearly connected to our Biofore Strategy and responsibility targets. It is coordinated under the umbrella of our Biofore Share and Care programme.

The Biofore Share and Care programme comprises three forms of support:

sponsorships, donations and employee volunteering. The support can be a monetary contribution, products, materials or pro bono work in projects agreed upon locally. The Rauma mill has supported local sports clubs financially. Local sponsorship projects comprise target-oriented, long-term involvement in the communities where UPM operates.

Our focus is on activities and projects that are related to our business, support innovation and sustainable development, or promote local vitality and well-being. The Biofore Share and Care programme's three priority areas are







Reading and learning, Local engagement and Beyond fossils.

### **We procure responsibly**

UPM is committed to responsible procurement practices throughout the procurement chain. We work closely with our suppliers to ensure that they understand and meet all of the company's requirements for sustainable development and responsibility.

UPM requires its suppliers to comply with the UPM Supplier Code and Third Party Code (Code) that defines suppliers' minimum requirements in terms of responsibility with regard to matters such as environmental impact, human rights, labour practices, health and safety, product safety and zero tolerance to bribery and corruption.

UPM's aim is that by 2030 100% of the value of raw material procurements and 80% of the value of all procurements come from suppliers who have committed to UPM's Code. In 2022, 94.9% of the value of raw material purchases came from such suppliers.

Suppliers' environmental and social performance is tracked through regular data collection and analysis. Based on the annual risk assessments, we select the suppliers whose performance we want to study more closely. If any non-conformity is found, the supplier is obligated to take corrective actions. We

actively keep track of the results of these actions and support our suppliers with our know-how so that they can enhance their performance.

### **We want to be the industry leader in safety**

Our goal in UPM is to be the industry leader in health and safety. Our target is to avoid serious and fatal accidents completely. Safety is an inseparable part of our daily activities and is not seen as secondary to anything else. We strive to reduce and eliminate accidents through continuous improvements and effective risk management.

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.

Before access to UPM's production sites, contractors participate in UPM safety training, which presents the basic safety requirements. This is complemented by job-specific safety induction and a work permit.

### **We are committed to the surrounding society**

The Rauma mill operates closely with society. UPM Communication Papers Oy supplies the raw water for the city and forest industry. The wastewater co-treatment plant simultaneously purifies the wastewaters of both the forest industry and the

community. The operations started in 2002, and the results have been completely positive. The Rauma production facility of the meat foods and products manufacturer company HKScan became operational at the end of 2017, and since then, its wastewater has also been purified at the joint purification plant.

Rauman Biovoima provides the paper mill with all of the process steam needed and, in practice, all of the district heating power used by the city of Rauma. Of the fuel used to produce energy, 85% is biomass-based.

The total wood use of the mill was around 594,000 cubic metres in 2022, the majority of which comes from the vicinity of the mill.

### **Our preventative safety work is active**

With regard to occupational safety, 2 minor lost-time accidents happened to UPM personnel at the mill site in 2022. There were no accidents to contractors in the area. We have taken proactive safety measures. The personnel were extensively involved, making a total of 671 safety observations and notifications of hazardous situations. Additionally, they participated in 511 safety discussions and inspections. Their activities spanned a wide range of areas. In 2022, training had to be limited due to both the strike at the beginning of the year and the COVID-19 pandemic.

# 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.

		2020	2021	2022
<b>Production capacity</b>	Paper	665,000 t	665,000 t	665,000 t
	Rauma Cell	100,000 t	100,000 t	100,000 t
<b>Raw materials</b>	Pulp and chemicals	See UPM Corporate Environmental and Societal Responsibility Statement for more information		
<b>Energy</b>	Biomass-based fuels	86%	87%	85%
	Fossil fuels	14%	14%	15%
	Purchased electricity (UPM) <sup>1)</sup>			
<b>Emissions to air</b>	Particulates	3 t	3 t	1 t
	Sulphur dioxide, SO <sub>2</sub>	46 t	63 t	46 t
	Nitrogen oxides, NO <sub>x</sub>	98 t	142 t	69 t
	Fossil, CO <sub>2</sub> (own energy production, scope 1)	35,079 t	38,692 t	29,102 t
	Fossil, CO <sub>2</sub> (purchased, scope 2)			0 t
<b>Water intake</b>	Process and cooling water	8,107,382 m <sup>3</sup>	9,875,690 m <sup>3</sup>	8,000,197 m <sup>3</sup>
<b>Discharges to water</b>	Clean cooling water and rainwater in the area	116,514m <sup>3</sup>	84,025 m <sup>3</sup>	32,988 m <sup>3</sup>
	Process effluent	9,268,682m <sup>3</sup>	9,115,062 m <sup>3</sup>	7,265,260 m <sup>3</sup>
	Biological oxygen demand, BOD <sub>7</sub>	42 t	52 t	38 t
	Chemical oxygen demand, COD <sub>Cr</sub>	2,286 t	2,447 t	1,464 t
	Solids	96 t	100 t	86 t
	Phosphorus, P	2.0 t	1.7 t	1.5 t
	Nitrogen, N	31 t	29 t	23 t
<b>Waste<sup>2)</sup></b>	Kaatopaikkajätteet	0 t	0 t	0 t
	Recovered waste			
	– Ash	9,641 t	11,782 t	8,934 t
	– Metal	483 t	445 t	343 t
	– Energy waste	393 t	574 t	383 t
	– Recycled fibre etc.	343 t	369 t	273 t
	– Construction waste			53 t
– Others	76 t	64 t	97 t	
<b>Hazardous waste</b>		14 t	44 t	12 t
<b>Land use</b>		153 ha	153 ha	153 ha
	Area impermeable to water	127 ha	127 ha	127 ha
	Area directed towards nature conservation	26 ha	26 ha	26 ha
	Area directed towards nature conservation outside the place of business	90 ha	90 ha	90 ha

<sup>1)</sup> See UPM Corporate Environmental and Social Responsibility Statement for more information (e.g. energy indicators)

<sup>2)</sup> Dry weight



# Performance against targets in 2022

TARGET	ACHIEVEMENT	COMMENTS
Preventing environmental deviations and achieving the Clean Run objectives by ensuring the uninterrupted operation of the wastewater plant by, amongst other things, ensuring aeration capacity in shut down situations.	Partially	No Cat 3 deviations at the wastewater plant, but carbon monoxide limit was exceeded at Rauma Biovoima
Paper machine solids loss to the purification plant less than 1.5% of production	No	Actual outturn 3.33%. Disrupted production year. Fibrous material fed into the wastewater treatment plant to ensure the operation of the front sedimentation system during the strike
Paper machine water consumption less than 11.5 m <sup>3</sup> /t	No	Disrupted production year.
Further improvement of energy efficiency by identifying and implementing energy-saving measures	Yes	Process changes to improve water recycling implemented
Ash re-use rate 100%	Yes	Replacing cement with ash reduces the amount of CO <sub>2</sub> that is created in the production of cement.

## Targets for 2023

TARGET
Preventing environmental deviations and achieving the Clean Run objectives by ensuring the uninterrupted operation of the wastewater plant by, amongst other things, ensuring aeration capacity in stoppage situations.
Reducing water consumption and solids loss by implementing changes to water connections on the paper machines – water consumption less than 11.5 m <sup>3</sup> /t – solids loss to the purification plant less than 1.7% of production
Further improvement of energy efficiency by identifying and implementing energy-saving measures.
100% reuse of ash by using ash in the construction of the storage area.
UPM Rauma Cell: Reduction of water consumption in the drying machine (monitoring started).
UPM Rauma Cell: Further improvement of energy efficiency by identifying and implementing energy-saving measures.



### Revalidation

As an accredited environmental verifier (FI-V-0001), Inspecta Sertifiointi Oy has examined the environmental management system and UPM Rauma Environmental and Societal Responsibility 2022 statement as well as the information concerning UPM Rauma in the Updated UPM Corporate Environmental and Societal Responsibility Statement 2022.

On the basis of this examination, the environmental verifier has herewith confirmed on 2023-04-14 that the environmental management system, the Finnish UPM Rauma Environmental and Societal Responsibility 2022 statement and the information concerning UPM Rauma in the Finnish Updated UPM Corporate Environmental and Societal Responsibility Statement 2022 are in compliance with the requirements of the EMAS Regulation (EC) No 1221/2009.



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