



UPM Nordland Papier

Environmental and societal responsibility 2025



UPM Nordland Papier

UPM Nordland Papier is based in Dörpen, Emsland in Lower Saxony. The paper mill was founded in 1967 and is now one of the world's largest paper mills.

Three paper machines and two coating machines are used to produce wood-free graphic writing and printing papers, known as fine papers, as well as specialty papers. Pulp is the main raw material used in paper production. Calcium carbonate is used as a filler. Kaolin is additionally used as a pigment for coated papers.

Process wastewater is treated in the mill's own wastewater treatment plant before being discharged into the River Ems. Freshwater is extracted from deep wells, taking into account the sustainable regeneration of groundwater. 100% of the electricity required is drawn from the public grid. Part of the steam required for drying the paper is generated from natural gas in the mill's own combined heat and power plant.

An in-house cogeneration power plant was commissioned in 2022. The highly efficient 84 MW gas-fired power plant has improved the environmental footprint and covers a large percentage of the paper mill's heat demand while actively participating in the increasingly volatile German electricity market.



UPM Nordland Papier Environmental and Societal Responsibility 2025 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 2025. The annual mill supplements and the UPM Corporate Environmental and Societal Responsibility Statement together form the joint EMAS Statement of UPM Corporation.

UPM is a material solutions company, renewing products and entire value chains with an extensive portfolio of renewable fibres, advanced materials, decarbonization solutions, and communication papers. Our performance in sustainability has been recognized by third parties, including EcoVadis and the Dow Jones Sustainability Indices. We operate globally and employ approximately 15,100 people worldwide, with annual sales of approximately €9.7 billion. Our shares are listed on Nasdaq Helsinki Ltd.

UPM – we renew the everyday

Production capacity	Up to 843,000 tonnes per year	
Personnel	Approx. 1,106 employees total inc. trainees, as of December 31, 2025	
Products	Fine Papers: UPM Fine UPM Preprint UPM Office UPM Sollum UPM Finesse UPM Digi UPM Poste UPM PrePersonal	Specialty papers: UPM Brilliant™ UPM Brilliant™ Forte UPM Honey™ Plus UPM Honey™ Plus Forte UPM Honey™ Plus Recycled UPM Honey™ Plus Recycled Forte UPM Golden™ UPM Golden™ Forte UPM Golden™ Recycled Forte UPM Asendo Pro UPM Confidio Pro
Certificates	EMAS – EU Eco-Management and Audit Scheme ISO 14001 – Environmental Management System ISO 9001 – Quality Management System ISO 50001 – Energy Management System ISO 45001 – Occupational Health and Safety Management System PEFC™ Chain of Custody - Programme for the Endorsement of Forest Certification FSC® Chain of Custody – Forest Stewardship Council ISO 22000 – Food Safety Management System (for specific parts of the mill) All certificates can be found from UPM's Certificate Finder (available at www.upm.com/responsibility)	
Environmental labels	EU Ecolabel for copy and graphic paper	



For more information about FSC certification visit fsc.org



For more information about PEFC certification visit pefc.org



Our environmental year 2025

Environmental protection is an integral part of our processes at UPM Nordland Papier. Since 1998, we have participated in the European Eco-Management and Audit Scheme (EMAS). Through this framework, we continuously develop our environmental work and document our environmental performance in a transparent and traceable manner.

The year 2025, like the years before it, was marked by a challenging order situation. The shutdown of our paper machine 3 at the end of 2024, which resulted from this situation, also had an impact on our specific emissions and our water circulation systems.

Clean Run Initiative

In 2025, the Clean Run Initiative once again received significant attention. Its objective is to ensure environmentally responsible production without environmentally relevant incidents. Within the group-wide database, employees can record deviations according to predefined categories ranging from 0 (not significant) to 5 (serious environmental damage).

The majority of reported cases were minor observations, reflecting the high level of employee awareness regarding environmental safety. For lower categories (0–2), root cause analyses are conducted regularly in order to systematically eliminate recurring Clean Run issues.

However, we did not achieve our goal of reporting no category 3 Clean Run incidents in 2025. This was largely due to the changed operating mode of the mill following the shutdown of Paper Machine 3. Immediate corrective measures were implemented in each case, and optimization concepts were developed accordingly.

Investing Energy in Energy Savings

Our active energy management system, certified under ISO 50001, once again led to energy savings in 2025. In particular, an additional series of heat exchangers was installed in the exhaust air tower of PM4.

In the area of electrical energy, measures included the use of new motors, the continued systematic elimination of compressed air leaks, and reductions in overall air consumption.

Furthermore, numerous conventional light fixtures were replaced with LED technology, and operational modes were optimized across various areas.

Protecting the Resource We Depend On

When purchasing pulp, we support sustainable forestry by operating in accordance with PEFC and FSC standards. In September 2025, our site participated in UPM's external multi-site audit and thereby actively contributed to maintaining our certifications.

We are participating: ScanStar is a Nordic packaging competition organized annually since 1969 by the Scandinavian Packaging Association (SPA). It recognizes packaging that is practical, sustainable and visually appealing.

In the field of sustainable products, we developed the grade UPM Asendo Pro in a six-month pilot project together with UPM R&D at our mill. This new paper-based packaging was designed for Panda milk chocolate. It is certified for food safety, recyclable within existing fiber recycling streams, and is compatible with Orkla Suomi's existing flowpack packaging machines.

We are proud that this product received the ScanStar 2025 Award. The jury highlighted the attractive design of the solution and the potential of paper for chocolate packaging. In their view, it opens up new opportunities to replace plastic in an important product category while promising improvements in packaging waste management and recyclability.

Water savings are always taken into account in our considerations

A mill-wide project with significant water-saving potential is the reduction of seal water consumption through the use of optimized mechanical seal technology on pumps and other rotating equipment. Launched in 2023, this project continues to this day.

Upcycling Instead of Recycling

In 2025, we successfully completed the conversion project in our wastewater treatment plant to separate the material streams of primary and secondary sludge. By the fourth quarter, initial quantities of primary sludge were already used as a by-product in a nearby board mill.

The commercialization of primary sludge as a by-product will be evident in 2026 in the form of significantly reduced waste volumes.



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Eva Kriegbaum,
General Manager



A handwritten signature in black ink.

Barbara T. Köster,
Manager Environmental Affairs



Contribution to UN Sustainable Development Goals



Water

45 %

Reduction of the total inorganic nitrogen concentration in the discharge into the river Ems compared to 2015.



Waste

99.5%

total recovery rate

81.8%

material recovery



Energy

8888 MWh/a

thermal energy savings through targeted measures in 2025



Air

22%

CO₂ savings (Scope 1 + Scope 2) compared to 2024



Health

2924

employee participation in 2025 health programs



Certified fiber

100%

fibers from controlled sources

98%

certified according to PEFC/FSC (sustainable forestry)

Water



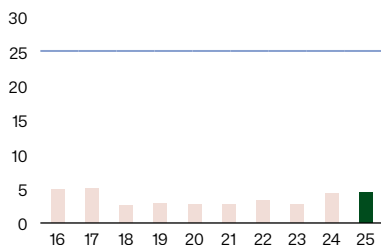
After shutting down our Paper Machine 3 at the end of 2024, we had to adapt our wastewater treatment plant to new operating conditions. This resulted in a total of six Clean Run Category 3 incidents in which discharge limits were temporarily exceeded during internal monitoring. These incidents were processed promptly and thoroughly in close coordination with the authorities.

Despite these events, the annual average discharge values remained well below the statutory requirements.

Due to the new conditions, slight increases in COD, BOD₅ and phosphate levels were observed in 2025 compared to the previous year.

Biological oxygen demand, BOD₇

mg/l



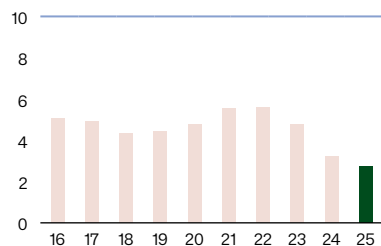
Chemical oxygen demand, COD

mg/l



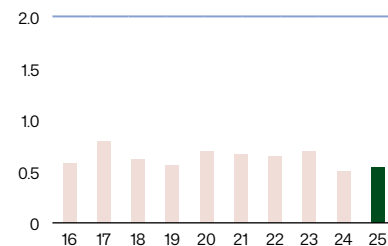
Nitrogen (inorganic), N

mg/l



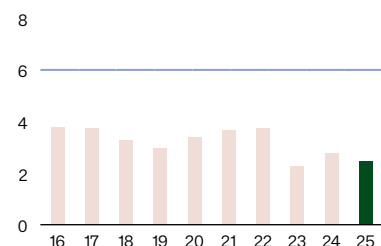
Phosphorus, P

mg/l



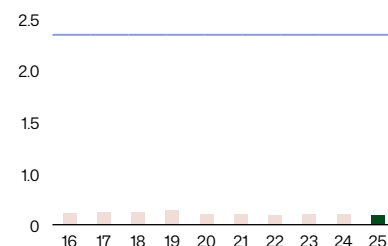
Process wastewater volume

million m³/year



Adsorbable organic halogen compounds, AOX

mg/l



— Limit value
■ Annual average

Waste



Waste volumes in 2025 were below the previous year's level. The main waste fraction continues to be fiber and paper sludge, which was significantly reduced compared to 2024.

Following completion of the conversion project at the wastewater treatment plant to separate the primary and secondary sludge streams, initial quantities of primary sludge were already utilized as a by-product at a nearby board mill in the fourth quarter. The commercialization of primary sludge as a by-product will lead to a substantial reduction in overall waste volumes in 2026.

The waste recovery rate in 2025 exceeded 99%, maintaining our consistently high level of material utilization.

All waste is disposed of exclusively through certified waste management companies, and waste classified as hazardous is avoided wherever possible.

In 2022, our new cogeneration power plant was commissioned. Under full-load operation, it replaces approximately half of the steam required for production with steam generated by the plant itself. The remaining steam demand continues to be supplied by the existing gas-fired boiler systems.

Due to the use of pure, low-sulfur natural gas, no sulfur measurements in the exhaust air are required. In addition, since commissioning of the power plant, fuel inspections

regarding sulfur content and the lower heating value of the natural gas have been carried out semi-annually, with the results submitted to the relevant supervisory authority.

In December 2025, a minor exceedance of the NO_x parameter occurred at Boiler 7 in the combined heat and power plant. The limit value of 100 mg/Nm³ was exceeded with a daily average value of 100.67 mg/Nm³.

The absolute NO_x emissions at our site for 2025 also include NO_x emissions resulting from electricity generation at the power plant.

The daily average value is calculated based on the calculated half-hour average values, which are normalized using the measured and reference oxygen content. During the shutdown process in the last half hour of the respective day, only the NO_x values up to the shutdown were included in the calculation. However, the measured oxygen values were taken into account over the entire shutdown process. This resulted in a computationally increased average oxygen value, which influenced the NO_x normalization and led to a very high half-hour average value in the final half hour. As a result, the daily limit value was slightly exceeded.

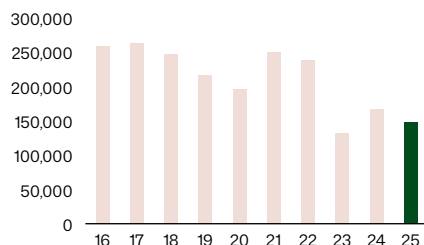
The “Carbon Dioxide” chart shows Scope 1 emissions (excluding electricity generation).

	Limit value (mg/m ³)		Measured annual average values (mg/m ³)						
	Boilers 1-7	Power plant	Boiler 1	Boiler 3	Boiler 4	Boiler 5	Boiler 6	Boiler 7	Power plant
CO	50	*	0.0	out of operation	0.8	0.6	0.9	3.6	48
NO _x	100	*	0.0		66.8	87.7	83.4	88.1	24.3

* As with NO_x, the limit values for CO for the power plant are also defined separately for the gas turbine and the supplementary firing, and are calculated as a moving average based on the current thermal input.

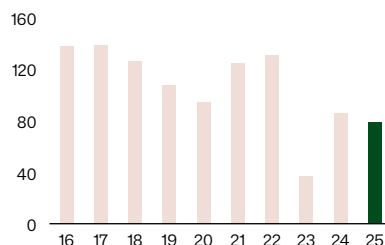
Fossil carbon dioxide, CO₂,
scope 1

t/year



Nitrogen oxides, NO_x

t/year



Organizational structure and emergency management

Legally appointed officers advise the plant management and technical departments in the areas of water protection, emissions control, waste management, hazardous materials, radiation protection, fire safety, laser safety, and data protection. Specific individuals are appointed for operational implementation, in addition to the operator's responsibility of the respective mill. This also includes requirements related to emission control, hazardous substances, and the Ordinance on Industrial Safety and Health (BetrSichV).

In addition, there are internal auditors for the integrated management system (quality, environment, energy, and occupational safety) as well as safety officers.

Current organizational charts are available for all of these roles.

Emergency Organization:

Comprehensive emergency plans are available for all types of emergencies, such as fires, occupational incidents, and environmental incidents. The emergency manual of

the in-house mill fire department contains alarm plans and detailed instructions on how to respond to emergencies and disasters. Follow-up is carried out using the UPM “One Safety” tool.

Societal responsibility

At our site, we take our social responsibility seriously! We define this through the three pillars of sustainability: environmental, social, and economic responsibility. Our vision is to act as a value-creating, value-preserving, and forward-looking company.

Social sustainability

Our numerous activities in the field of social responsibility go hand in hand with occupational safety and health management. For us, corporate social responsibility does not end at the factory gate. As part of the UPM Share & Care program, we support volunteer work in the social sector.

As a training provider for seven different apprenticeship programmes in technical and commercial fields, and with internships for technical college students and places for Bachelor's and Master's theses, we responsibly nurture the next generation and give young people a chance in the labour market.

In 2025, 18 graduates successfully completed their training at our site. In addition, we welcomed 12 new apprentices to our site last year.

In April 2025, as part of the nationwide Future Day, 46 pupils from Years 5 to 7 of general education schools in the Emsland and East Frisia regions took the opportunity to learn about the different vocational fields and gain practical insights.

We offered a further insight into the professional world in the first quarter of the year with our "Apprenticeship Night." Around 170 interested young people accepted this invitation, during which they had the opportunity to learn about the various apprenticeships available at our company.

On two Saturdays in September, children and grandchildren had the chance to visit the workplaces of their parents and grandparents at UPM Nordland Paper. In total, 308 children, 335 adults, and 60 helpers each registered.

Under beautiful sunny weather and equipped with protective gear such as high-visibility vests, hearing protection, and safety goggles, children aged six and older explored the plant in groups and enjoyed a varied programme of activities.

Environmental sustainability

Environmental sustainability means biodiversity, closing water and material cycles, and saving energy and CO₂.

Biodiversity is a central concern for UPM as a forestry company. At the beginning of 2023, we planted vegetation around our new employee car park, designed according to biodiversity criteria. In 2025, we continued to observe the growth and development of the plants.

A closed loop can refer to any number of resources. Many of our projects aimed at





closing the loop further have already been outlined in this publication under the heading “Our Environmental Year 2025” and are also anchored in our target process.

UPM aims to replace fossil-based products with wood-based products and develop new, innovative products. At UPM Nordland, we are proud to have played a major role in the development of the “UPM Confidio” and “UPM Confidio Pro” barrier products. This product offers an alternative to conventional plastic packaging used in the food sector.

Our gas-fired power plant, commissioned in 2022, not only makes a significant contribution to our independence from the electricity grid but also results in substantial CO₂ savings through efficient combined heat and power generation. In addition, two electric boilers have now been installed to support the flexible use of renewable energies. This provides CO₂-free heat to the mill during these periods, as natural gas, a fossil fuel, is being replaced.

We work closely with our suppliers to ensure that our sustainability activities, and therefore our social responsibility, are as effective as possible. This is the only way to ensure that they understand and meet our requirements regarding sustainability and

responsibility. UPM requires its suppliers to comply with the UPM Code of Conduct for Suppliers and Third Parties, which sets out minimum standards for responsibility in the areas of environmental impact, human rights, labor practices, occupational safety, product safety, and the prevention of corruption and bribery. We monitor the environmental and social performance of our suppliers by regularly collecting and analyzing data. On the basis of annual risk assessments, we decide which suppliers will undergo closer review. In cases of non-compliance, suppliers are required to take corrective action. We track the outcomes of these measures and are happy to share our expertise with suppliers to help improve their performance.

Economic sustainability

For us, being economically sustainable means offering products that are both market-compliant and profitable. This enables us to pursue innovations in ecological sustainability while ensuring our continued market compliance and profitability. In our daily work, we strive to balance these two aspects of sustainability with our measures in social sustainability, ensuring that we fulfill our corporate responsibility to society both now and in the future.



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.

		2023	2024	2025
Production capacity	Paper	Up to 1,170,000 t	Up to 843,000 t	Up to 843,000 t
Raw materials and additives	Chemical pulp Pigments Process chemicals Operating supplies	See UPM Corporate Environmental and Societal Responsibility Statement for more information		
Energy	Fossil fuels Purchased power	See UPM Corporate Environmental and Societal Responsibility Statement for more information		
Emissions to air	Carbon dioxide, CO ₂ (on-site fossil emissions, scope 1)* Carbon dioxide, CO ₂ (fossil emissions from purchased energy, scope 2) Nitrogen oxides, NO _x	131,355 t 197,304 t 37 t	166,723 t 207,788 t 86 t	147,604 t 144,969 t 79 t
Water intake	Process water and cooling water	3,326,321 m ³	4,044,019 m ³	3,834,053 m ³
Discharges to water	Effluent volume Chemical oxygen demand, COD Biological oxygen demand, BOD ₅ Phosphorus, P Nitrogen, N (inorganic) Total nitrogen bound, TN _b Adsorbable organic halogen compounds, AOX Total organic carbon (TOC)	2,271,636 m ³ 61 t 6 t 2 t 11 t 15 t 0.5 t	2,755,311 m ³ 72 t 12 t 14 t 9 t 11 t 0.4 t 25 t	2,465,274 m ³ 89 t 11 t 1,3 t 7 t 10 t 0,3 t 46 t
Waste	Total waste volume (excluding hazardous) of which: – Fiber and paper sludge (volume inc. moisture) – Secondary sludge (volume inc. moisture) – Wood – Metal – Paper, cardboard, cores – Waste for disposal (volume inc. moisture) – Other Hazardous waste of which for disposal: Recovery rate (based on total waste volume)	18,597 t 13,598 t 754 t 47 t 806 t 2,890 t 143 t 359 t 131 t 82 t 98.80%	28,497 t 18,250 t 0 t 44 t 1,050 t 8,665 t 41 t 447 t 139 t 52 t 99.7%	26,754 t 14,688 t 0 t 49 t 868 t 10,622 t 51 t 476 t 162 t 75 t 99.5 %
Land use	Total use of land Total sealed area Total nature-oriented area Green roofing	60 ha 28 ha 32 ha 1.35 ha	60 ha 28 ha 32 ha 1.35 ha	60 ha 28 ha 32 ha 1.35 ha

* The operation of the CHP plant is based on energy prices, and the electricity produced is fed into the public power grid. This mode of operation helps to stabilize the German power grid. The site's electricity demand is covered by the public power grid. The CO₂ quantity reported here for UPM Nordland for Scope 1 does not include emissions from the electricity fed into the grid, as these are attributed to the power grid. The CO₂ emissions including the electricity fed into the grid amounted to 226,934 t (2023), 247,995 t (2024), 244,453 t (2025).

Performance against targets in 2025

Targets and measures	Achievement	Comments
1 Water Implement one water-saving measure per line/department as in 2024	Yes	Various measures at PM4, SM2, and SM1 resulted in a total savings of approximately 8 m³/h.
2 Environmental incidents No category 3–5 environmental incidents	No	In 2025, there were six Clean Run category 3 incidents. All of these were related to changed conditions in the water cycle due to the shutdown of PM3.
3 Energy - Converting drive for VacRoll blowers 2 and 3 on PM4 (new motor and frequency converter) → expected savings in electrical energy approx. 70% - Connecting an additional heat exchanger array in exhaust air tower 4 of PM4 to the heat recovery level PM4/SM2 → reduction of heat losses - Replacing old light fixtures with new LEDs in various areas of the administration buildings and in the hood lighting on PM1 → expected savings in electrical energy approx. 70%	Yes Yes Yes	Drive conversion completed, current electrical energy savings approx. 60%. Ongoing optimization of operational mode. Heat exchanger installed and connected; further adjustments are still required. First lighting areas replaced, resulting in savings of approx. 71%.
4 UPM sustainability goal: Replacing conventional chemicals with products from recycled sources - Converting nitrogen source in wastewater treatment to a recycled alternative as a new standard - Conducting a trial with recycled phosphorus source in the wastewater treatment plant	Yes No	Nitrogen source successfully switched to a recycled product. No suitable recycled phosphorus source was available in 2025.
5 Raw material savings - Using waste-paper-based fibers - Further reducing oil-based PE content in film implemented - New disposal concept developed for clothing	No Yes Yes	Trials conducted and materials qualified; currently no implementation due to business decision. 100% of shrink films used now contain 30% recycled material. Concept developed and implemented since August 2025.
6 Waste Separate recovery of biosludge and fiber sludge in the wastewater treatment plant as a new standard.	Yes	Fiber sludge has been used as a raw material since the end of 2025. Bio sludge is sent for energy recovery.

Targets for 2026

Targets	Deadline	Department responsible
1 Water - Reduction of seal water by a total of 1.4 m³/h through: - Conversion of 8 additional pumps (SM1/SMA1, PM2, PM4) - Automatic group shut-off at PM2 during downtime	December 31, 2026	Production
2 Environmental incidents No category 3–5 environmental incidents	December 31, 2026	All
3 Energy - Improvement of specific energy consumption (EnPI) by 1% per year - Replacement of old lighting with new LEDs in various areas and hall lighting at SM2 & PM2 → expected savings in electrical energy approx. 70%. - Heating of domestic water at PM2 using condensate to save fresh steam.	December 31, 2026	Production
4 Raw material savings Conduct trial with recycled phosphorus source in the wastewater treatment plant.	December 31, 2026	Production
5 Waste 100% separate collection and disposal of label carrier paper, followed by reintegration into the cycle.	December 31, 2026	Equipment



Environmental verifier's declaration on verification and revalidation activities

Environmental verifier Astrid Günther (DE-V-0357), acting for TÜV NORD CERT Umweltgutachter GmbH, licensed for the scope NACE Code 1712 (papermaking), declares to have verified whether the site Nordland Papier GmbH, in D-26892, Dörpen, Nordlandallee 1, as indicated in the UPM Corporate Environmental and Societal Responsibility Statement 2025 of the mentioned site (registration no. FI-000058), meets all requirements of Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 as amended by Regulation (EU) 2017/1505 and Regulation (EU) 2018/2026 of the commission on the voluntary participation by organisations in a Community Eco-Management and Audit Scheme (EMAS).

By signing this declaration, I declare that:

- the verification and validation has been carried out in full compliance with the requirements of Regulation (EC) No 1221/2009,
- the outcome of the verification and validation confirms that there is no evidence of non-compliance with applicable legal requirements relating to the environment,

– the data and information of the Environmental Statement 2025 of Nordland Papier GmbH, reflect a reliable, credible and correct image of all the activities of Nordland Papier GmbH, within the scope mentioned in the Environmental Statement 2025.

This document is not equivalent to EMAS registration. EMAS registration can only be granted by a Competent Body under Regulation (EC) No 1221/2009. This document shall not be used as a stand-alone piece of public communication.

Essen, 12.06.2026

Astrid Günther
Environmental Verifier
DE-V-0357
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