

UPM Steyrermühl

ENVIRONMENTAL AND SOCIETAL RESPONSIBILITY 2022



UPM Steyrermühl

Founded in 1868, over the decades the paper mill has been a key factor in the industrialization of Laakirchen, Austria. The UPM-Kymmene Austria GmbH umbrella also includes Steyrermühl Sägewerksgesellschaft m.b.H. Nfg. KG, the biggest supplier of wood chips to the paper mill, a producer of sawn timber and sawing by-products and the wood fuel supplier to EEVG.

In cooperation with UPM Steyrermühl and another group outside the UPM Group, EEVG – Entsorgungs- und Energiewertungsgesellschaft m.b.H. provides the energy, in the form of electricity and steam, required for the production processes by operating a fluidized bed boiler. In addition to various waste materials from the fibre and paper production process, the company also uses discarded wood fibres. Everything at the site runs green and sustainably: obtained from a circular economy, Cinerit®, an EEVG product, is best used as a land stabilizing agent in road construction or flood protection (www.cinerit.at).

Efficient production processes are supported – from raw material preparation to the vehicle fleet and internal logistics. This is assured by SLR – Steyrermühl Logistik & Recycling GmbH (www.slr.co.at), whose involvement allows the other companies operating at the site to concentrate on their core competencies.

Finally, the wastewater treatment plant operated by UPM Steyrermühl at the site treats both operational and municipal wastewater before it is discharged into the Traun, a river with drinking water.

Important: this environmental statement relates exclusively to the UPM-Kymmene Austria GmbH paper mill and the plants it operates (EEVG – fluidized bed boiler, wastewater treatment plant).



Production capacity	Up to 290,000 tonnes per year
Employees	Approximately 210 including apprentices
Products	Standard and improved newsprint: UPM News UPM Prime UPM EcoBasic UPM Color UPM Brite
Certifications	EMAS – EU Eco-Management and Audit Scheme ISO 14001 – Environmental Management System ISO 9001 – Quality Management System ISO 50001 – Energy Management System ISO 45001 – Health and Safety Management System PEFC Chain of Custody – Programme for the Endorsement of Forest Certification FSC® Chain of Custody – Forest Stewardship Council All certificates can be found in the UPM Certificate Finder (available at www.upm.com/responsibility).
Ecolabels	“Blue Angel” ecolabel (RAL-UZ 72) for UPM News, UPM EcoBasic and UPM EcoPrime 68 EU Ecolabel for UPM News and UPM EcoBasic
NACS 17.12	



UPM Steyrermühl 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) 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



For more information about FSC certification visit www.fsc.org



For more information about PEFC certification visit www.pefc.org



EU Ecolabel : FI/011/001



www.blauer-engel.de/uz72

Review of the year 2022

Long tradition of environmental protection

As a member of the Finnish UPM Group, the Steyrmühl site places great importance on environmental protection. We are committed to our responsibility to the environment and to minimizing the impact of our production processes on the environment and our employees. The continuous improvement process at the Steyrmühl site includes the reduction in use of water and fossil fuels, as well as a reduction in odour emissions. The existing environmental management system in accordance with ISO 14001 guarantees that applicable environmental regulations have been complied with. There were no violations of legal environmental provisions, nor were there any Clean Run 3–5 incidents. The environmental aspects relevant for the Steyrmühl site, emissions from wastewater and air as well as waste recycling and fossil fuels are evaluated with the aid of a risk analysis. The key criteria are the probability of occurrence and the severity of the possible impacts. The probability of occurrence is categorized as unlikely, possible on very rare occasions, possible on rare occasions, occasionally possible and likely. A distinction is made between Clean Run 0–5 in terms of the severity of the possible impact. The necessary environmental measures are derived from the resulting matrix.

Challenges in 2022

The biggest challenge in 2022 was high energy prices. An Energy Crisis Unit was set up to closely monitor price developments and implement measures aimed at reducing natural gas consumption. Thanks to the excellent

cooperation of all people involved, natural gas consumption was reduced by 28% in 2022 compared to the previous year.

From the middle of the year, more, longer-lasting plant shutdowns led to problems in the maintenance of trouble-free wastewater treatment plant operation. Due to the size and structure of the wastewater treatment plant in Steyrmühl, it was possible to store production wastewater in empty tanks before a shutdown. During the shutdown, the stored wastewater was gradually discharged into the aeration tanks in order to keep the “biology” alive. However, the storage of production wastewater led to increased odour emissions, especially in the warmer months.

Fire safety training

Due to the Coronavirus pandemic, fire safety training was suspended in 2020 and 2021. In autumn 2022, plant-wide fire safety training by the works fire brigade resumed. Spread across several sessions, participants refreshed their basic knowledge of fire safety, including internal emergency numbers, assembly points, types of extinguishing agents, etc. Following the theoretical part, there was also a practical exercise, involving simulations of various fire scenarios (cable fire, waste bin, etc.), which were successfully fought by the participants with various extinguishing agents.

H₂S emissions

The H₂S emissions that occur on a case-by-case basis continue to be closely controlled. These have led to repeated odour complaints

from the neighbourhood. The implementation of a programme of measures to combat odour emissions began back in 2019: ventilation measures, improvements in process-chemical conditions, reduction of dwell times for the water circuits as well as defined cleaning measures were implemented. In order to document the effects of all these measures, continuous measurements were taken across the entire site using both mobile and permanently installed H₂S probes. In addition, meteorological measurements and H₂S emission measurements were carried out in 2019 and 2021 by the Office of the State Government of Upper Austria. The evaluation of the measurements at the end of 2021 shows a significant reduction in H₂S emissions and thus proves the effectiveness of the measures taken. Another indicator that the measures taken are having an effect is the decreasing number of complaints from neighbours.

Legal compliance

At the Steyrmühl site, all essential legal standards and requirements were met in the reporting year. Regular checks of the legal register ensure that all the notification requirements are complied with on time. Particular attention is paid to environmental requirements (wastewater analysis, waste reports, etc.) and email notifications have been set up for the employees responsible. With regard to changes in plant operation, the site is in constant contact with the responsible authorities.



Thomas Detzhofer
Environmental Officer

Jasmin Kempfner
Deputy Environmental Officer

Ernst Spitzbart
Managing Director

Contribution to UN Sustainable Development Goals in 2022



Waste

100%

of the production waste at site reused for either heat or raw materials.

Overall,

92%

of fluidized bed boiler ash produced in 2022 recycled.

75%

of fly ash produced in 2022 recycled as Cinerit®.



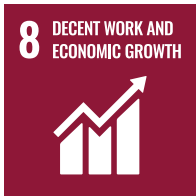
Air

89%

of CO₂ emitted comes from regenerative fuels (fibre sludge and waste wood). The Steyrmühl site is therefore making a sustainable contribution to reducing fossil CO₂ emissions.

Specific nitrogen oxide emissions from power plants in the period 2012 to 2022 reduced by

73%



Safety

In 2022, employees submitted

797

safety observations. This is an important contribution to increasing safety at the site.

In 2022, management conducted

759

safety inspections. This leads to a significant increase in safety across all departments.



Energy

Reduction in natural gas consumption between 2021 and 2022 of a further

28%

The specific energy consumption (kWh per tonne of paper) of biogenic fuels rose over the 2012–2022 period by

141%

100%

of purchased external power comes from hydropower.



Certified fibre

In 2022, the share of PEFC/FSC-certified fibres (wood chips and waste paper) was

90%

Recycled fibres

In 2022, the share of recycled fibres was

39%

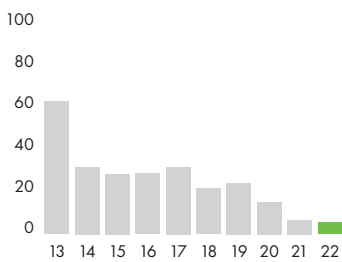
Air



The energy generation facilities at the Steyrermühl site are state of the art. Both NO_x emissions and all other emissions from the energy generation facilities were kept well below the required thresholds. In 2022, the half-hour and daily mean values were not exceeded. The fluidized bed boiler (FBB) was fuelled in 2022 primarily with internal production waste from UPM-Kymmene Austria GmbH and wood waste from the sawmill, which

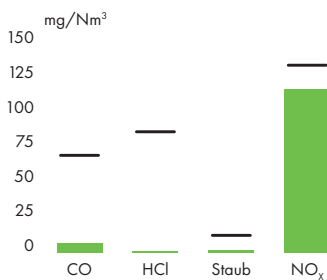
is also located on site. Waste materials from the neighbouring Laakirchen Papier AG paper mill and waste timber from the building trade were also used as fuel. In 2022, the use of natural gas as a fuel in the fluidized bed boiler was greatly reduced thanks to the recovery of thermal energy from this biogenic waste. This led to a sustainable reduction in fossil CO₂ emissions.

Carbon dioxide emissions (fossil), CO₂



Compared to the year 2000 (± 100 %).

Air emissions FBB



FBB = fluidized bed boiler
 — Limit value

Waste



As part of a contribution to the circular economy, no non-recyclable waste is generated at the Steyrermühl site. The largest material flow – fibrous residue – is used as fuel in the fluidized bed boiler. In order to keep the proportion of fossil fuels as low as possible, fibrous residues from other paper mills are also subjected to thermal energy recovery at the site. The majority of the resulting fly ash is used in the construction industry as a stabilizing agent under the product name Cinerit®. Seasonal and weather-related sales fluctuations are cushioned by the use of interim storage. In addition, our fly ash is used as a filler in the cement industry. Other waste is passed on exclusively to specialist waste management companies. They recycle the waste in compliance with legal provisions.

Water

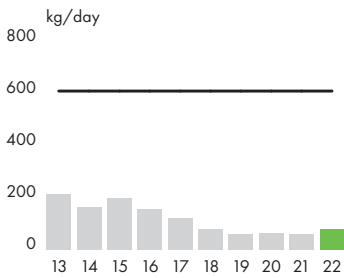


Bank filtrate water from the Traun is used both as the process water required for paper production and the cooling water for the fluidized bed boiler. Wastewater is purified at the company's four-stage treatment plant on site. The capacity of the wastewater treatment plant is equivalent to that of a plant serving a city of 333,333 inhabitants. The quality of the purified wastewater is regularly monitored both by the company's own laboratory and the competent authority. In 2022, all the prescribed thresholds for

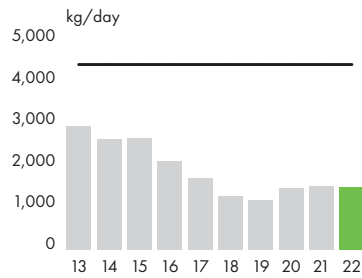
the discharged wastewater were again met.

One declared environmental goal of the Steyermühl site is sustainable reduction in the volumes of fresh water required. Due to the slight decline in annual production of PM4, specific fresh water consumption rose to 0.42 m³/t in 2022. However, in absolute terms, we were able to continue the successful trend of saving fresh water.

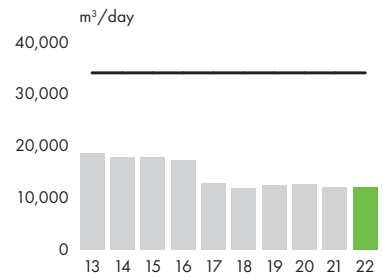
Biological oxygen demand, BOD₅



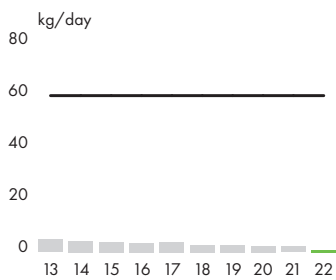
Chemical oxygen demand, COD



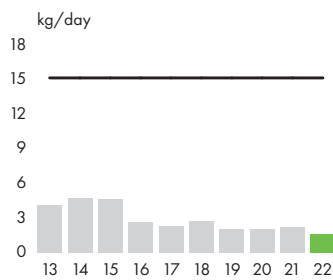
Wastewater volume



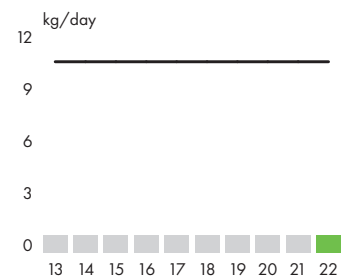
Nitrogen (inorganic), N



Phosphorus, P



Adsorbable organic halogen compounds, AOX



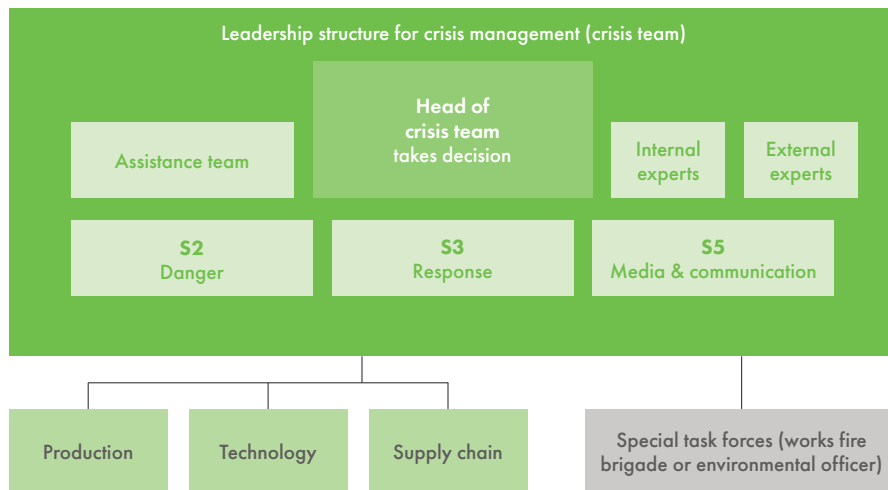
— Limit value

Organizational structure and emergency organization

Crisis team

There is a crisis team in place at Steyrermühl to ensure that the site is able to respond effectively in times of crisis. The team is made up of representatives from all areas and across the entire business structure. This ensures that the company is still in a position to make decisions even in exceptional circumstances.

Since the start of the COVID-19 pandemic in March 2020, the crisis team has met at least twice a week. The aim is to always be up to date with the latest legal regulations, to recognize regional developments and to prevent illness at the site.



Societal responsibility

Occupational safety

Safely to work – and safely back home afterwards!
Occupational health and safety is a priority at UPM. In the reporting year 2022, for example, the focus was on a number of current issues regarding occupational safety. An accident involving a UPM employee working with a heavy load resulted in lost time of the employee. As a result of this accident, a training course on “attaching and transporting heavy loads” was held at the Steyrermühl site in 2022.

In 2022, we again achieved our ultimate goal, which was not to record any serious or fatal accidents at the Steyrermühl site. However, despite the numerous measures and protective equipment in place, there were several accidents involving employees of contracting companies.

Another focus was regular training on the chemical standard at the entire Steyrermühl site. The purpose of this standard is to ensure the health and safety of people who work with or are in areas in which chemicals are used or stored. The standard includes principles

of hazardous substances: hazardous substances should not be used. If it is not possible to substitute the hazardous substance, other protective measures, such as technical protection or PPE, must be taken. The chemical standard also includes work instructions for filling, storing and handling chemicals, as well as guidelines for procuring chemicals.

Health protection

Employee health protection is a high priority at the Steyrermühl site. In 2022, Covid-19 tests – both antigen tests and PCR tests (until August 2022) – were offered to employees. In addition, employees were given the opportunity to have the Covid vaccination or the flu vaccination administered by the company doctor.

In autumn 2022, an audiometry examination was conducted on all employees. This must be carried out every five years.

Engaging with communities:

For many years, UPM Steyrermühl has provided the Papermakers Museum with exhibition space (including electricity and heating) for a symbolic value. Adjoining the museum is ALFA, a





culture and events centre that can also be booked for seminars and meetings. The operators are anxious to exceed the well over 100 events a year that were held there before COVID-19 as soon as possible.

UPM Steyrmühl also provides the premises for the Steyrmühl public library (ÖBST) free of charge.

Sustainability and environmental protection are high on the agenda. We are in regular communication with the Environmental Advisory Council of the municipality of Laakirchen, which is made up in equal measure of representatives from the political parties of the municipal council and of the Laakirchen LUI environmental initiative.

For historical reasons – namely to accommodate skilled workers recruited in Austria’s crown lands – a housing estate was built around the factory; the estate boasted social facilities such as a school, a company nursery, bathing facilities, a hospital and a library. Some of the apartments are regularly rented to foreign employees.

Knowledge is also imparted in the immediate vicinity of these residences:



the Papiermacherschule, the training centre for the Austrian paper industry, offers education and further training to become a foreman/industrial foreman in paper technology. “Die Steyrmühl,” as the site is known colloquially, of course also invests in young talent from within its own ranks. Young men and women can take apprenticeships to train as a paper technician, metal technician (main module mechanical engineering), electrical technician (main module automation and process control technology,

plant and operating technology) as well as laboratory technician (main module chemistry).

Environmental parameters

Data on production volumes and the consumption of raw material and energy, as well as all specific indicators per tonne of paper, are published as an aggregated figure. This information can be found in the group-level UPM Corporate Environmental Statement for pulp and paper mills.

		2020	2021	2022
Production capacity (UKA)	Paper	Up to 295,000 t	Up to 290,000 t	Up to 290,000 t
Raw materials and additives	Recovered paper Process chemicals Consumables	See the group-level UPM Corporate Environmental and Societal Responsibility Statement for more information		
Energy (EEVG)	Renewable fuels	78%	83%	87%
	Fossil fuels External power supply	See the group-level UPM Corporate Environmental and Societal Responsibility Statement for more information		
Emissions to air (UKA and EEVG)	Carbon dioxide, CO ₂ (fossil, scope 1)	21,688 t	10,777 t ¹⁾	7,993 t
	Carbon dioxide, CO ₂ (fossil from external power supply, scope 2)	0 t ²⁾	0 t ²⁾	0 t ²⁾
	Nitrogen oxide, NO _x	134.0 t	119.0 t	130.9 t
	Sulphur dioxide, SO ₂	0.0 t	0.0 t	0.2 t
	Particulates	1.5 t	2.6 t	1.7 t
	Carbon monoxide, CO	12.1 t	7.8 t	7.7 t
Water intake (UKA and EEVG)	Process water and cooling water	5,514,264 m ³	5,173,103 m ³	4,814,026 m ³
Discharges to water (Site total)³⁾	Wastewater volume	4,574,760 m ³	4,381,052 m ³	4,365,491 m ³
	COD	543 t	561 t	548 t
	BOD ₅	23.5 t	24.6 t	28.8 t
	Phosphorus	0.72 t	0.8 t	0.6 t
	Nitrogen (inorganic)	0.95 t	0.83 t	0.29 t
	AOX	0.4 t	0.4 t	0.3 t
Waste (UKA and EEVG)⁴⁾	Non-hazardous waste and by-products			
	– Cinerit®	30,536 t	28,380 t	25,150 t
	– Ash (fly ash and bottom ash)	15,331 t	16,213 t	15,381 t
	– Others	363 t	466 t	448 t
	Hazardous waste	49.8 t	51.4 t	80.5 t
Land use (UKA)	Total use of land	101.5 ha	101.5 ha	101.5 ha
	Sealed area	41.2 ha	41.2 ha	41.2 ha
	Nature-oriented area on site	0 ha	0 ha	0 ha
	Nature-oriented area off site	60.3 ha	60.3 ha	60.3 ha

¹⁾ The gas turbine was not needed as an energy supplier for paper production.

²⁾ 100% of external power comes from hydropower

³⁾ The additional wastewater volume of the sawmill and SLR is not recorded separately because it only amounts to smaller quantities of domestic wastewater.

⁴⁾ Weight when dry

COD: chemical oxygen demand

BOD₅: biological oxygen demand

AOX: adsorbable organic halogens



Performance against targets in 2022

TARGET	STATUS
1 Health and safety <ul style="list-style-type: none"> Reduction in accidents at work: TRIF* 6 (accidents per one million working hours) Proactive reporting: 3 documented safety observations per employee 	TRIF 3.3 Target achieved 797 safety observations were carried out Target achieved
2 Fossil energy sources <ul style="list-style-type: none"> Reduction in natural gas consumption 	28% reduction compared to 2021 Target achieved
3 Energy <ul style="list-style-type: none"> Reduction in the required energy for all refiners incl. pretreatment by at least 67 kWh/t (= guaranteed value) 	Energy reduction for all refiners was 73.6 kWh/t Target achieved
4 Energy efficiency <ul style="list-style-type: none"> Switch off starch cooking Installation of a new control system at the wastewater heat exchanger Improvement of cooling tower control 	<ul style="list-style-type: none"> In operation, 0.35 t/h of steam was saved at 10 bar Heat retention of 0.89 MW Saving of 90 MWh/year
5 Water <ul style="list-style-type: none"> Reduction of fresh water consumption in production by 0.5 m³/t. 	Increase of 0.42 m ³ /t Target not achieved
4 Water/air emissions <ul style="list-style-type: none"> Prevent Clean Run category 3–5** deviations Prevent odour emissions 	0 Target achieved

Current targets

TARGET	MEASURES FOR 2023	RESPONSIBLE
1 Health and safety <ul style="list-style-type: none"> Reduction in accidents at work: TRIF* 6 (accidents per one million working hours) Proactive reporting: 3 documented safety observations per employee 	<ul style="list-style-type: none"> Safety inspections and safety observations Consistent implementation of measures resulting from audits, internal standards and group guidelines Implementation of key issues Order and cleanliness at the facility 	All All
2 Water <ul style="list-style-type: none"> Switch to municipal cleaning operations Keep fresh water consumption to a minimum 	<ul style="list-style-type: none"> Implementation of developed processes Coordinating with authorities Compliance with and optimization of internal processes and specifications 	Production/wastewater treatment plant Environmental management Production/technology
3 Fossil energy sources <ul style="list-style-type: none"> Further reduction in the use of natural gas 	<ul style="list-style-type: none"> Optimization of the use of existing waste heat potentials Optimization of the FBB operation during plant shutdowns Introduction of smart energy and fuel management 	All/EEVG
4 Water/air emissions <ul style="list-style-type: none"> Prevent Clean Run category 3–5** deviations Prevent odour emissions 	<ul style="list-style-type: none"> Continuous site operation Compliance with and optimization of internal processes and specifications 	Production/environment/ fire prevention

* TRIF = total recordable injury frequency (total number of all recorded accidents without need for first aid)

** Clean Run deviation: event with harmful effects on the environment



Validation statement

The present supplement document for the year 2022 of UPM Kymmene Austria GmbH, Fabrikplatz 1, A – 4662 Steyrermühl, working in scope NACE 17.12. "Production of Paper, Board and Pulp", was assessed according to the EMAS regulation by

Quality Austria – Training, Certification and Evaluation GmbH
 Zelinkagasse 10/3, 1010 Wien
 AT-V-0004

The managing auditors of Quality Austria – Training, Certification and Evaluation Ltd. herewith confirm, that the environmental policy, the environmental programme, the environmental management system, the environmental review and the internal environmental audit of the organization are in accordance with the regulation (EC) Nr. 1221/2009 of the European Parliament and of the Council of 25 November 2009 (EMAS regulation), in consideration of the changing regulation (EU) 2017/1505 and (EU) 2018/2026. Further on the relevant contents of this supplement document, drawn up in compliance with annex IV, chapter B, lit a – h, are validated in the framework of the corporate registration Reg.No FI-000058.

The next validated environmental statement will be published in the second quarter of 2025, including data until the end of 2024.

Updated environmental statements will be published annually.

Steyrermühl, on 12.5.2023

Werner Schönggrundner

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