

UPM Augsburg

Environmental and Societal Responsibility 2017



UPM Augsburg

Founded in 1849, UPM Augsburg is sited near the city centre of Augsburg. In accordance with its operating permit, the mill with a workforce of some 300 people produces up to 385,000 tonnes per annum of uncoated and coated supercalendered printing paper in reels, which is mainly used for magazines, advertising supplements, publicity booklets, sales literature and mail order catalogues.

In addition to recovered paper and pigments, virgin fibres such as ground-wood pulp and chemical pulp from sustainable forestry are used as raw materials for paper production. The water required for the production process comes from deep wells on the mill site. The effluents are cleaned in Augsburg's municipal treatment plant. The steam required for the paper-making process is generated in a combined heat and power plant operating on natural gas. The mill's power needs are supplied via the national grid.

The Augsburg site is also home to the head office of Paper ENA and its units.



UPM Augsburg Environmental and Societal Responsibility 2017 is a supplement to the Corporate Environmental Statement of UPM's pulp and paper mills (available at www.upm.com) and provides mill-specific environmental performance data and trends for the year 2017. The annually updated mill supplements and the UPM Corporate Environmental Statement together form the joint EMAS Statement of UPM Corporation. The next Corporate Environmental Statement and also this supplement will be published in 2019.



UPM leads the forest-based bioindustry into a sustainable, innovation-driven, and exciting future across six business areas: UPM Biorefining, UPM Energy, UPM Raflatac, UPM Specialty Papers, UPM Paper ENA and UPM Plywood. Our products are made of renewable raw materials and are recyclable. We serve our customers worldwide. The group employs around 19,100 people and its annual sales are approximately EUR 10 billion. UPM shares are listed on NASDAQ OMX Helsinki. UPM – The Biofore Company – www.upm.com

Production capacity	Up to 385,000 tonnes per annum
Personnel	Augsburg mill: approx. 300 / Augsburg Office: approx. 350 (full time employees including apprentices, as at 31.12.2017)
Products	Magazine paper (LWC) UPM Ultra UPM Matt UPM Cote UPM Valor
Certificates	Augsburg mill: ISO 14001 – Environmental Management System ISO 9001 – Quality Management System ISO 50001 – Energy Management System OHSAS 18001 – Occupational Health and Safety System PEFC™ Chain of Custody – Programme for the Endorsement of Forest Certification FSC® Chain of Custody – Forest Stewardship Council Augsburg mill and Augsburg Office: EMAS – EU Eco-Management and Audit Scheme All certificates can be found from UPM's Certificate Finder (available at www.upm.com/responsibility)
Environmental labels	EU Ecolabel for copying and graphic paper



The mark of responsible forestry

For FSC products, visit www.fsc.org



For PEFC products, visit www.pefc.org



EU Ecolabel : FI/011/001

Review of the year 2017

Environmental care is an integral part of the papermaking processes at UPM Augsburg. We have been working since 1997 with an integrated management system covering, by now, quality, environment and occupational health and safety and we are additionally reporting under EMAS (the EU's Eco-Management and Audit Scheme) in order to further develop our environmental work responsibly and document it in a transparent and traceable manner.

UPM "Clean run" campaign

In order to further improve its environmental performance, UPM is promoting its group-wide "Clean Run" campaign. All UPM mills are audited to assess the quality of their environmental work and determine any necessary action. In addition, all staff are informed about environmental issues relating to the mill.

Contribution to the energy turnaround

Working with the public utility company Stadtwerke Augsburg, we are contributing towards the energy turnaround by rehabilitating a hydropower plant. Two new turbines were installed in an existing turbine building on the mill premises.

Changes at the Augsburg mill

At the end of 2016, Paper Machine 2 (PM 2) was closed, reducing the mill's workforce during the year 2017 to about 300 employees and the mill's organisation was restructured. A number of adjustments were necessary to respond to the changed operating conditions. Optimisations are still underway to stabilise the processes.

Working jointly to achieve goals

Each year, we set ourselves detailed new quality, environmental and occupational health and safety targets. We actively involve our employees both in the setting of goals and the implementation of targets. We consistently work on improving our environmental performance not just within the company, but also in our co-operation with customers, suppliers, authorities and the general public.

Environmental protection is a priority

As a company of the Finnish UPM Corporation we are committed to conserving the environment, continually optimising our production processes in order to minimise the impact of our operations on the environment and, very importantly, on the local community around our mill. Also in 2017 we undertook regular measurements of

airborne emissions from the mill and we are happy to report once again that our discharge levels were not just in compliance with, but usually well below the limit values.

All complaints were followed up immediately. In 2017 there were no complaints about tangible environmental impacts.



Gerhard Mayer,
General Manager

Eva Männer,
Manager OHS and Environment

Responsibility figures 2017

Waste



0 kg/t paper

Process waste to landfill

Air



Reduction of specific CO₂ emissions since 2008 by

37%

Water



Fresh water is used in production
Specific fresh water consumption

-55%

since 2008



Energy

Specific energy efficiency improved by

7%

since 2008

Safety



Occupational safety is a high priority

0 accidents

There were no reportable accidents at UPM Augsburg for the second consecutive year.

Community involvement



UPM Augsburg has for many years been supporting its corporate sports club (BSG) financially and in kind.

The BSG UPM Augsburg has departments in various sports such as ice hockey, bowling, yoga and mountaineering. It operates a mountain shelter in the Allgäu region which can be used by BSG members and UPM staff.

Health



UPM Augsburg implemented a Occupational Health Management System in 2014. Intraocular pressure measurements are offered as part of a health-check programme. Since September of 2017, mineral water is provided to the mill employees free of charge.

Certified fiber



Forest certification schemes like FSC and PEFC guarantee that wood, our most important raw material, comes from sustainable sources. UPM's target is to have all fibres used for papermaking certified by 2030.

87%

certified fibres used for papermaking

Employee commitment



Every month UPM employees donate the cent amounts of their salaries to the "Cent Parade", supporting two charities on a regular basis.

"Der bunte Kreis" and the St. Nikolaus children's hospice take care of children in need and help them and their families in difficult situations.

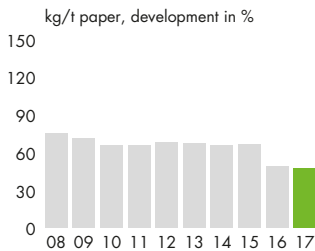
Air



Energy generation is the main source of emissions from paper mills. Emissions can be reduced by the appropriate choice of fuels and combustion technology as well as flue gas purification. UPM Augsburg has set itself the target of further reducing CO₂ emissions by efficient energy use.

In 2017 there were no exceedances of the emission limits.

Fossil carbon dioxide, CO₂



EMISSIONS FROM THE CHP PLANT 2017

	Limit value (mg/Nm ³)	Mean value measured (mg/Nm ³)
CO	50	2
NO _x	100	69

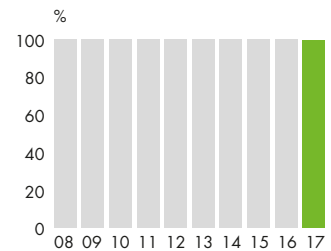
Waste



In line with the principle of closed-loop recycling, the majority of production residues is recycled. Hazardous wastes are forwarded to licensed waste disposal contractors and disposed of in compliance with the relevant statutory requirements.

UPM Augsburg strives to maintain the recovery rate of solid residue, which presently stands at 99.0%, on its current level.

Recovery rate



Water



The water for the production process is drawn from deep wells on the mill premises. Virtually continuous water recycling within our systems reduces water use.

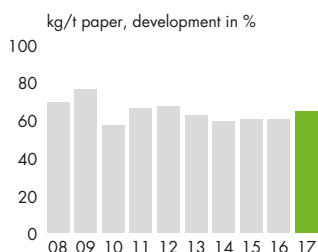
Part of the process water evaporates as the paper web dries. We recover and reutilise as much as possible of the thermal energy contained in the exhaust air. The remainder is discharged into the air as water vapour. Cooling water

is taken from the Proviant, Schaeffler and Stadtbach canals.

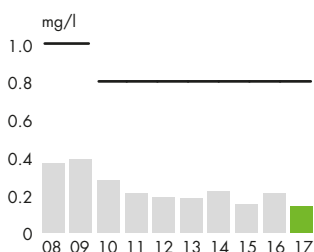
The process water is recycled several times before it is discharged as effluent to the municipal treatment for purification.

In 2017 the legionella bacterial load was for a short while too high. Appropriate counter-measures were taken in agreement with the authorities.

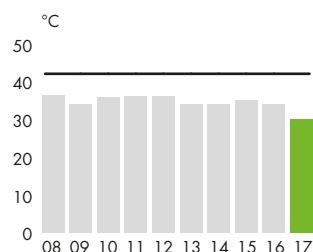
Process wastewater volume



Adsorbable organic halogen compounds, AOX



Temperature



- Limit value
- Annual mean value

Societal responsibility

Engaging with communities

Building and maintaining good relations with local communities close to our operations is essential for us and our business success. Through our societal engagement activities, for instance in the form of sponsorships and donations, we encourage these communities to develop positively and vibrantly.

UPM Share and Care programme

We build a sustainable, innovation-driven future by sharing our expertise and assets for causes we care about. The focus areas of the UPM Share and Care Programme are: Reading & learning, responsible water use and boosting bio-innovations.

UPM – a reliable partner

Depending on the project in question, there are various forms of support by UPM, for instance, financial assistance, membership in local organisations, product or in-kind donations or employee commitment. We aim towards long-term involvement in order to be a reliable partner.



UPM employee commitment

The Augsburg site is looking back on a long tradition of support for children in need. Last year, the Cent Parade made donations to "Der bunte Kreis" and the St. Nikolaus children's hospice. Both organisations take care of seriously ill children and their families and help them in their difficult everyday life.

Working with the Cent Parade, UPM employees donate the cent amounts on their monthly salary statements for charity.

By collecting used CDs and DVDs, UPM employees help a good cause in two ways. Valuable raw materials are recovered and reintroduced into the economic cycle. The proceeds from the sale go to the Duanne Moeser foundation who, amongst other things, sponsors children's homes.

Children's Christmas party and corporate sports club

Another long-standing tradition is the Christmas party for children of UPM staff. Every year, three to twelve year olds are invited to watch a performance of the Augsburg Puppenkiste puppet theater, followed by a visit of Father Christmas. Additionally, UPM Augsburg has for many years been supporting the activities of the corporate sports club (BSG) and the operation of the so-called Haindl shelter.

Occupational Health Management System

Health is a valuable asset. UPM Augsburg is working intensively to protect and promote the health of its employees. Recent years have seen significant improvements in the field of occupational health. For more than two years, the mill has been operating without a single reportable accident and was also able to considerably reduce the number of minor injuries and incidents. Since the implementation of a Occupational Health Management System, disease prevention and health promotion have become increasingly important. UPM Augsburg offers its employees preventive health checks in the form of intraocular pressure measurements and skin cancer screening. Since September of 2017, mineral water is provided to the mill employees free of charge.



Environmental parameters 2017

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 Statement.

Production capacity	Paper	Up to 385,000 t
Raw materials and additives	Recovered paper Round wood Chemical pulp Pigments Process chemicals Operating supplies	See UPM Corporate Environmental Statement for more information
Energy	Fossil fuels Purchased power	See UPM Corporate Environmental Statement for more information
Emissions to air	Carbon dioxide (fossil), CO ₂ Nitrogen oxides, NO _x Carbon monoxide, CO Sulphur dioxide, SO ₂	68,200 t 12.2 t 7.2 t 0.7 t
Water intake	Process water Cooling water	4,298,916 m ³ 6,528,307 m ³
Discharges to water	Effluent volume Chemical oxygen demand, COD Biological oxygen demand, BOD ₅ Phosphorus, P Nitrogen, N (inorganic) Adsorbable organic halogen compounds, AOX	2,570,000 m ³ 6,735 t 3,199 t 10.1 t 36.8 t 0.4 t
Waste*	Total waste volume (including mixed waste), of which – Fibre residues – Deinking residues – Wood residues** – Other residues*** Hazardous waste Recovery rate	108,772 t 87,793 t 1,806 t 17,278 t 1,811 t 84 t 99 %
Size of mill area		22 ha

* All figures incl. moisture

** Since September of 2013, wood residues have been classified as by-products under section 4 of the German Closed Cycle Management Act (Kreislaufwirtschaftsgesetz, KrWG).

*** Primarily residual waste for recycling and disposal, metal, construction waste, other recyclable fractions



Performance against targets in 2017

TARGETS	TARGET ACHIEVED?
Energy Reduce specific gas consumption for steam generation by 0.5% in relative terms (consumption in 2016: 0.677 MWh gas/tonne of steam (Hu)) Reduce specific energy consumption by 10% per tonne of paper (specific energy consumption of PM 3 in 2016: 1,317 kWh/tonne of paper)	Achieved: 2017: 0.655 MWh/tonne of steam Reduction by 0.022 MWh/t or 3.2% Not achieved: 2017: 1,231 kWh/tonne of paper Reduction by 86 kWh/t or 6.5%
Waste Increase DIP volume on PM 3 to 400 t/d on average	Not achieved: 2017: 387.4 t/d
Water Maintain specific effluent volume at 7 l/kg	Not achieved: 2017: 7.45 l/kg
CleanRun No category 3 and 4 deviations	Not achieved (one deviation of category 3)

Targets for 2018

TARGETS AND MEASURES	DEADLINE	DEPARTMENT RESPONSIBLE
Energy Use boiler no. 10 as "back-up" saving 500 MWh of gas per annum and, consequently, reducing CO ₂ , fresh water consumption and effluent volume Reduce specific power consumption to 1,220 kWh per tonne of paper	12/2018	Energy Production
Waste a) Increase DIP volume on PM 3 to 400 t/d on average b) Reduce packaging paper use by 15% per tonne of paper (by using two instead of three layers of packaging for deliveries within EU)	12/2018	Production Production
Water Reduce specific effluent volume to 7.1 l/kg	12/2018	Production
CleanRun No category 4 and 3 deviations	12/2018	Mill management



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 17.12 (papermaking), declares to have verified whether the site UPM GmbH, Augsburg mill, in 86153 Augsburg, Georg-Haindl-Strasse 4+5, Germany, as indicated in the updated Environmental Statement 2017 of the mentioned site (registration number FI-000058), meets all requirements of Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 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 updated Environmental Statement 2017 of UPM GmbH, Augsburg mill, reflect a reliable, credible and correct image of all the activities of UPM GmbH, Augsburg mill, within the scope mentioned in the updated Environmental Statement 2017.

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.

Augsburg, 30 April 2018


 Astrid Günther
 Environmental verifier
 DE-V-0357
 TÜV NORD CERT Umweltgutachter GmbH



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