

# ENVIRONMENTAL performance in 2014



UPM Augsburg



Through the renewing of the bio and forest industries, UPM is building a sustainable future across six business areas: UPM Biorefining, UPM Energy, UPM Raflatac, UPM Paper Asia, UPM Paper Europe and North America and UPM Plywood. Our products are made of renewable raw materials and are recyclable. We serve our customers worldwide. The group employs around 20,000 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](http://www.upm.com)

## UPM Augsburg

UPM Augsburg is sited near the centre of Augsburg, a Southern German town at the confluence of the Lech and Wertach rivers.

The site was founded in 1849. With a workforce of approximately 450 people at the mill, UPM Augsburg produces up to 490,000 tonnes per annum of uncoated and coated supercalendered printing paper in reels for magazines, advertising supplements, publicity booklets, sales literature and mail order catalogues. The mill still has two paper machines, just like at the time it obtained its operating permit.

Groundwood pulp, recovered paper, chemical pulp and pigments are used as raw materials for paper production. The virgin fibre raw materials in use are exclusively from sustainable forestry.

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 Augsburg site is also the headquarter of UPM Paper ENA and home to a part of UPM's head office (Augsburg Office).

The steam required for the papermaking process and a corresponding amount of power are generated in a combined heat and power plant operating on natural gas. The remainder of the mill's power needs is supplied via the national grid.

<b>Production capacity</b>	Up to 490,000 tonnes per annum
<b>Personnel</b>	Augsburg Mill approx. 450/Augsburg Office approx. 350 (full time employees including apprentices as at 31 December 2014)
<b>Products</b>	Magazine papers (SC and LWC): UPM Ultra    UPM Matt UPM Cote    UPM ReCat UPM Max    UPM Base 1.1.
<b>Certificates</b>	ISO 14001 – Environmental Management System Standard ISO 9001 – Quality Management System Standard ISO 50001 – Energy Management System Standard OHSAS 18001 – Occupational Health and Safety System Standard 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  <i>All certificates can be found from UPM's Certificate Finder (available at <a href="http://www.upm.com/responsibility">www.upm.com/responsibility</a>).</i>
<b>Environmental labels</b>	EU Ecolabel for copying and graphic paper German Blue Angel (RAL-UZ 72) for UPM ReCat



UPM Augsburg Environmental Performance in 2014 is a supplement to the Corporate Environmental Statement of UPM's pulp and paper mills (available at [www.upm.com](http://www.upm.com)) and provides mill-specific environmental performance data and trends for the year 2014. 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 2016.



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# Environmental year 2014

In papermaking, environmental care is an integral part of our day-to-day working lives. UPM Augsburg has been working with an integrated management system for quality, environment and occupational health and safety since 1997 and we have been reporting under EMAS (the EU's Eco-Management and Audit Scheme) since that year in order to systematically promote responsible environmental work and document it in a transparent and traceable manner.

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.

In 2014 the German Blue Angel ecolabel (RAL-UZ 72) for UPM ReCat was reapplied for and granted. The Blue Angel ecolabel has been awarded since 1978 to products and services that are particularly beneficial to the environment.

Each year, we set ourselves detailed new quality, environmental and occupational health and safety targets. We especially welcome suggestions for improvement from the ranks of our employees. Their long-time experience thus contributes actively to the achievement of our targets and to the further development

of the management system. We actively work on regularly improving our environmental performance not just within the company, but also in our co-operation with customers, suppliers, authorities and the general public.

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 2014 we undertook regular measurements of noise and airborne emissions from the mill and we are happy to report that our discharge levels were not just in compliance with, but usually well below the limit values.

All complaints were followed up immediately. In 2014 there were no substantiated complaints from neighbours.



Wolfgang Ohnesorg, General Manager

Eva Männer, Manager OHS and Environment



## Air

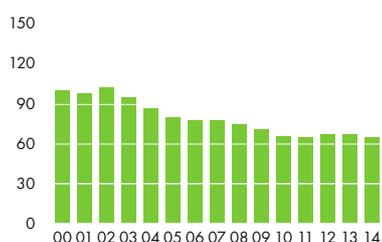
Energy generation is the main source of emissions from paper mills. Emissions can be reduced by the appropriate choice of fuels and combustion technology as well as flue gas purification.

In 2014 there was a short-term deviation from a permit limit during the start-up operation. We then applied to the authorities in charge and were granted a special permit for the start-up and shut-down phase of the power plant.

UPM Augsburg has set itself the target of further reducing CO<sub>2</sub> emissions by efficient energy use.

### FOSSIL CARBON DIOXIDE, CO<sub>2</sub>

kg/t paper, development in %



### EMISSIONS FROM THE CHP PLANT 2014

	Limit value (mg/Nm <sup>3</sup> )	Mean value measured (mg/Nm <sup>3</sup> )
CO	50	0.17
NO <sub>x</sub>	150	80

## Water

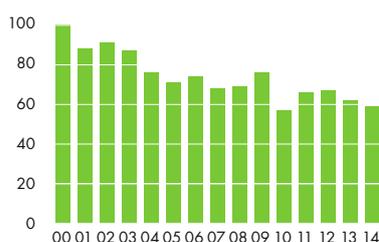
The water for the production process is drawn from deep wells on the mill premises. Virtually continuous water recycling within our systems reduces water use. Cooling water is taken from the Lech river.

Part of the process water evaporates as the paper sheet 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. Mill effluents are discharged to the municipal treatment for purification.

In 2014 there were minor short-term deviations from the effluent permit limits (filterable substances). Appropriate counter-measures were taken in agreement with the authorities.

### EFFLUENT VOLUME

m<sup>3</sup>/t paper, development in %



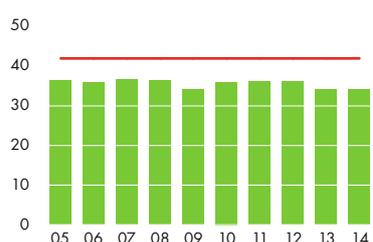
### ADSORBABLE ORGANIC HALOGEN COMPOUNDS, AOX

mg/l



### TEMPERATURE

°C



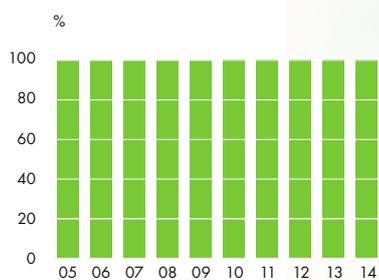
— Limit value

# 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 99.9%, on its current high level.

RECOVERY RATE

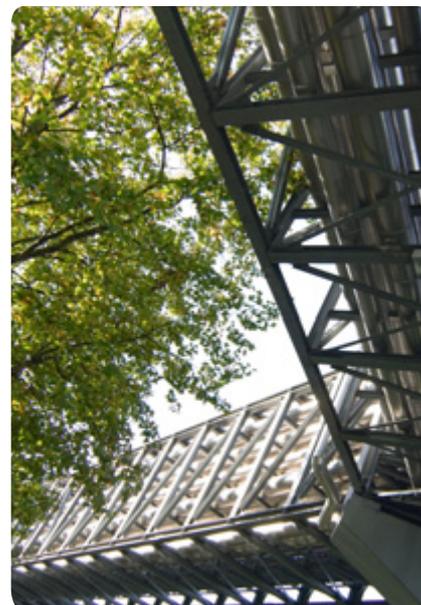




# Environmental parameters 2014

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.

<b>Production capacity</b>	Paper	Up to 490,000 t
<b>Raw materials and additives</b>	Recovered paper Round wood Chemical pulp Pigments Process chemicals Operating supplies	See UPM Corporate Environmental Statement for more information
<b>Energy</b>	Fossil fuels Purchased power	See UPM Corporate Environmental Statement for more information
<b>Emissions to air</b>	Fossil carbon dioxide, CO <sub>2</sub> Nitrogen oxide, NO <sub>x</sub> Carbon monoxide, CO Sulphur dioxide, SO <sub>2</sub>	118,691 t 51 t 6 t 1 t
<b>Water intake</b>	Process water Cooling water	5,023,000 m <sup>3</sup> 22,015,000 m <sup>3</sup>
<b>Discharges to water</b>	Effluent volume Chemical oxygen demand, COD Biological oxygen demand, BOD <sub>5</sub> Phosphorous, P Nitrogen, N (inorganic) Adsorbable organic halogen compounds, AOX	2,996,000 m <sup>3</sup> 8,851 t 4,458 t 13.7 t 43.7 t 0.65 t
<b>Waste*</b>	Total waste volume of which: – Fibre residues – Deinking residues – Wood residues** – Other waste Hazardous waste Recovery rate	142,286 t 107,854 t 2,347 t 31,083 t 850 t 151 t 99,9%
<b>Size of mill area</b>		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).

# Performance against targets in 2014

TARGETS	TARGET ACHIEVED?	COMMENTS
<b>Energy</b> Reduce specific energy consumption by 9 kWh of thermal energy per tonne of paper with similar operating rate as in 2013. (Measures: optimise operation of reject refiners, close recirculation loops, etc.).	Yes	Specific energy consumption reduced by 9.87 kWh of thermal energy per tonne of paper.
<b>Waste</b> Reduce fibrous sludge by 5% with similar operating rate as in 2013. (Reduce filler and fibre losses from PM 3, e.g. recirculated water from press section).	No	2013: 235 kg/t paper / 2014: 247 kg/t paper
<b>Chemical use</b> a) Use coating colour without wet strength agents from Q2/2014 onwards b) Reduce use of synthetic binding agent in coating by 10% in relative terms and replace it by starch (in comparison with 2013)	a) Yes b) Yes	a) No wet strength agents used since 27 February 2014. b) Use of synthetic binding agent reduced from 4.32% to 3.89%.
<b>Water</b> Reduce specific effluent volume by 0.2 l/kg to 7.1 kg with similar operating rate as in 2013. (Optimise integrated water management)	Yes	Specific effluent volume reduced by 0.4 l/kg to 6.9 l/kg.

## Current targets

TARGETS AND MEASURES	DEADLINE	DEPARTMENT RESPONSIBLE
<b>Energy</b> Reduce specific energy consumption by 8 kWh of thermal energy per tonne of paper with similar operating rate as in 2014. (Measures: optimise process water use on PM 3, etc.)	12/2015	Production
<b>Waste</b> a) Increase yield from DIP plant by 2% in absolute terms b) Reduce fibre losses from PM 2 by 350 t/a with similar operating rate as in 2014.	12/2015	Production
<b>Chemical use</b> Reduce use of antifoaming agent on PM 3 by 10% in absolute terms.	12/2015	Production
<b>Water</b> Reduce specific effluent volume by 0.1 l/kg to 6.8 l/kg with similar operating rate as in 2014. (Optimise integrated water management)	12/2015	Production
<b>CleanRun</b> No category 4 and 3 deviations.	12/2015	Mill Management



### Environmental verifier's declaration on verification and validation 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 Environmental Statement 2014 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 Environmental Statement 2014 of UPM GmbH, Augsburg mill, reflect a reliable, credible and correct

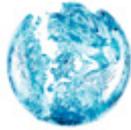
image of all the activities of UPM GmbH, Augsburg mill, within the scope mentioned in the Environmental Statement 2014.

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.

28. April 2015

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

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