

Environmental performance in 2016





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 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 19,300 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

UPM Steyrermühl

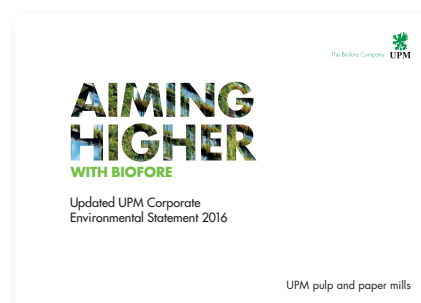
First established in 1868, the mill has developed into a determining factor for the industrialization of the community of Laakirchen in Upper Austria. Two modern paper machines produce up to 485,000 tonnes per annum of high-quality printing papers.

Our three-stage biological treatment plant cleans both the mill's effluents and the municipal wastewater of the Laakirchen area. Combined heat and power plants make sure that primary energy is used effectively. Process residues are incinerated in the fluidized bed boiler operated by Entsorgungs- und Energieverwertungsgesellschaft (EEVG), a subsidiary of UPM Steyrermühl and Laakirchen Papier AG (former SCA Grafik Laakirchen).

The sawmill is a 100 % subsidiary of UPM Steyrermühl and produces up to 400,000 m³ of sawn timber. Sawmill residues are used as a raw material for papermaking.

The Group's wood sourcing function supplies both the paper mill and the sawmill with wood from sustainably managed forests.

The Laakirchen pollution control association has set up a state-of-the-art landfill site which is operated according to the requirements of the new landfill regulation.



UPM Steyrermühl, Environmental Performance in 2016, is a supplement to the joint 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 2016. The annually updated supplement and the joint Environmental Statement together form the EMAS Statement. The next Environmental Statement and supplement will be published in 2018.

Production capacity	up to 485,000 tonnes per annum
Workforce in 2015	400 employees (full-time jobs incl. apprentices, as per 31 December 2016)
Products	Standard and improved newsprint: UPM Eco UPM News
Mill area	Approx. 26 hectares, of which 50 % is built or sealed
Certification	EMAS – EU Eco-Management and Audit Scheme 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 <i>All certificates can be found from UPM's Certificate Finder (available at www.upm.com/responsibility)</i>
Eco-labels	European eco-label (EU flower) for UPM Eco "Blue Angel" eco-label (RAL-UZ 72) for UPM News, UPM Eco and Eco Basic "Blue Angel" eco-label (RAL-UZ14) for UPM Eco and Eco Basic Austrian eco-label (UZ02) for UPM News and UPM Eco



For FSC products visit www.fsc.org



For PEFC products visit www.pefc.org



The environmental year in 2016

Environmental protection has a long tradition at Steyrmühl. When new production plants were built at the beginning of the 1980s, major investments were also made into environmental protection, especially in effluent treatment, energy supply and waste management. As far back as in 1994, Steyrmühl implemented a quality management system, which over the years has been developed into an integrated management system for quality, environment, energy, fire prevention and occupational health and safety. In 2015 the system was expanded to include energy management according ISO 50001. Our active mill fire brigade forms the basis for effective risk and emergency management. Staffed by specially trained volunteers, it is able to provide effective response in case of an emergency together with the fire and rescue services from the surrounding communities.

The wood sourcing organisation gained Chain-of-Custody and PEFC certification for sustainable forestry practices as far back as in 2001. Our products continuously meet the stringent requirements of European eco-logos. Most of our products have been FSC-certified since 2008.

Our environmental focus areas in 2016 can be summarised as follows:
(see Performance against targets)

We were able to significantly step up the use of fly ash, commercialised under the brand name Cinerit, as a soil stabiliser in earth works. Overall, the ash utilisation rate, including also material temporarily deposited in landfill, was 101 %. Due to the reduced production volume,

we did not achieve our water savings targets. The effluent treatment plant operated stably and there were no exceedances of limit values. Last year, there was a switch of external auditor, from TÜV Österreich to Quality Austria.

We will further improve our performance through on-going evaluation of our processes and consistent action.

Gaining product status for ash was prerequisite for permanently securing a high recovery rate. Maintaining the currently high level will be a

big challenge for us. The closure of the PM 3 paper machine at the end of March 2017 will make it difficult to maintain specific fresh water use and effluent volume from production on a stable level. In order to further reduce fresh water consumption and effluent generation, we will get continue to work intensively in group-wide projects.

The focus of our objectives for the coming years will continue to be on energy and water saving measures and reducing fibre losses in all areas of production.



Ernst Spitzbart

Dipl.-HTL-Ing. Ernst Spitzbart
General Manager

Christian Polzinger

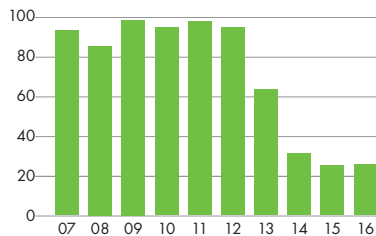
Christian Polzinger, MSc
Environmental Officer

Production and raw materials

Production decreased by 30,449 t in comparison with the previous year. Recovered paper consumption was down by nearly 24,848 t.

FOSSIL CARBON DIOXIDE, CO₂

kg/t paper, development since 2006



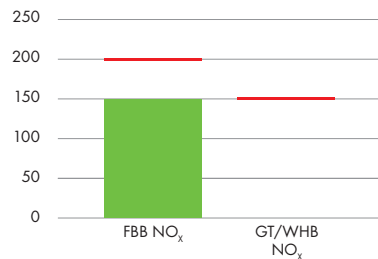
100% basis = year 2000

Air

The gas turbine with downstream heat recovery boiler was not put into service during the whole year and the required power was purchased externally. As a result, natural gas consumption as well as site specific CO₂ and NO_x emissions were stable on a very low level.

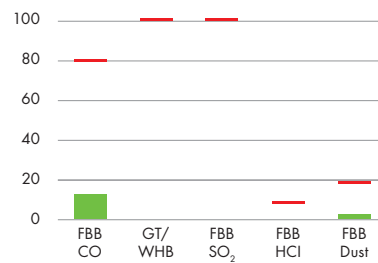
AIRBORNE EMISSIONS FROM ENERGY GENERATION

mg/Nm³



AIRBORNE EMISSIONS FROM ENERGY GENERATION

mg/Nm³



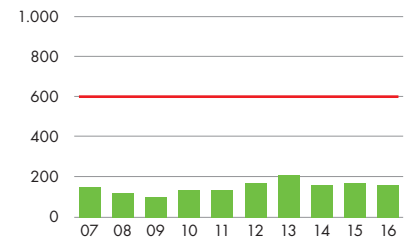
FBB = Fluidised bed boiler
GT = Gas turbine
WHB = Waste heat boiler

Water

The total effluent volume decreased by 210,690 m³ in comparison with the previous year. The annual COD load discharged from the treatment plant decreased further to 0.33 kg/t.

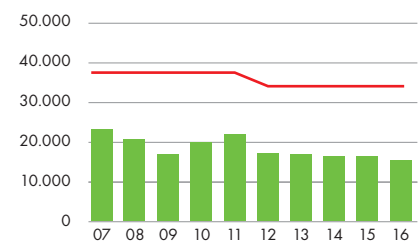
BIOLOGICAL OXYGEN DEMAND, BOD₅

kg/d



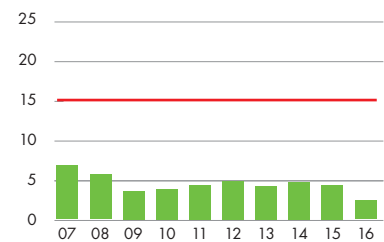
EFFLUENT VOLUME

m³/d



PHOSPHORUS, P

kg/d

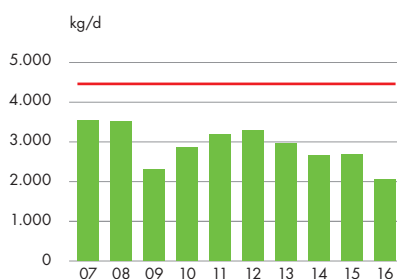


■ Annual average — Limit value

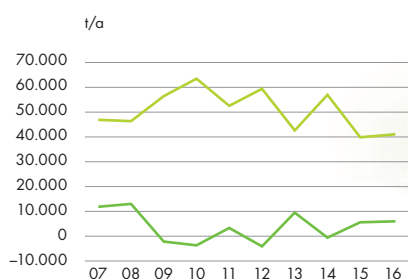
Waste

We were able to increase the use of fluidised bed boiler ash as a soil stabiliser. The recovery rate (including also material temporarily deposited in landfill) was 101 %.

CHEMICAL OXYGEN DEMAND, COD

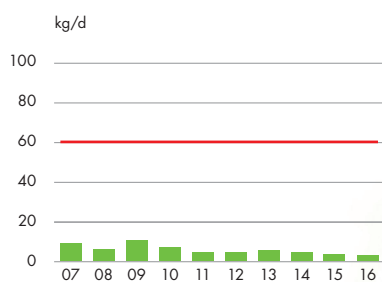


WASTE

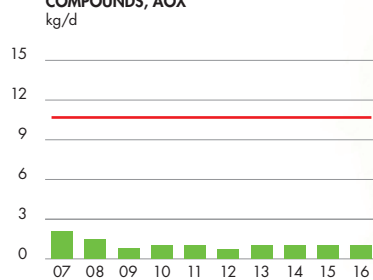


— Annual average recovery
— Annual average external disposal

NITROGEN (INORGANIC), N



ADSORBABLE ORGANIC HALOGEN COMPOUNDS, AOX



Environmental parameters 2016

Data on production volumes and raw material and energy consumption as well as specific indicators per tonne of paper are given as a total figure. They can be found in the joint Environmental Statement of UPM's paper and pulp mills.

Production capacity	Paper	Up to 485,000 t
Raw materials and additives	Recovered paper	see joint Environmental Statement
	Process chemicals	
	Consumables	
Energy	Renewable and fossil fuels	57 % renewable fuels
	External power supply	see joint Environmental Statement
Airborne emissions in t	Carbon dioxide, CO ₂ (fossil)	68,613 t
	Nitrogen oxide, NO _x	158.2 t
	Sulphur dioxide, SO ₂	0 t
	Dust	1.8 t
	Carbon monoxide, CO	10.7 t
Mill water use in m³	Process and cooling water	7,356,995 m ³
Emissions to water in t	Effluent volume	6,308,317 m ³
	COD	779 t
	BOD ₅	57 t
	Phosphorus	0.93 t
	Nitrogen (inorganic)	1.32 t
	AOX	0.37 t
Waste in t*	Total waste volume of which:	32,194 t
	- ash + bed sand	30,350 t
	- Fibrous process residue to brick works	0 t
	- metal	82 t
	- other	1,762 t
	Waste recovery rate	99.7 %
	Hazardous waste	73.5 t
Mill area		26 ha

* wet t



Effluent treatment operative measuring visible depth in the secondary sedimentation basin of the treatment plant.

COD: chemical oxygen demand
BOD₅: biological oxygen demand
AOX: adsorbable organic halogen compounds

Performance against targets in 2016

TARGET	TARGET ACHIEVED?
Waste – Maintain ash recovery rate at 100% – Reduce metal wastes from DIP – Reduce reel pin waste	– The recovery rate of Cinerit® increased again. The ash recovery rate in 2016 was 101 % (84 % in 2015). Additional storage capacity was created by installing new silos. Targets achieved. – All metal wastes were recycled free of charge. – 29.5 t of reel pin waste was burnt in the fluidised bed boiler (149 t recovered externally/181 t in 2015). Targets partly achieved.
Occupational health and safety – Reduce number of workplace accidents. Target: "Zero accidents" in 2016, maximum 1,7 accidents (per 1 million working hours) – Reduce illness-related absences to < 3.5 %	Result: 1.43 accidents. Target achieved. Result: 4.40 %. (2015: 3.88 %). Target missed.
Water – Reduce fresh water use in production to < 12 m ³ /t – Complete measures to promote fish migration	Due to the reduced production volume, fresh water consumption increased from 14.1 to 15.2 m ³ /t. Target not achieved. The fish passes have been completed. Target achieved.
Water/Airborne emissions Prevent Clean Run category 3 – 5 deviations	No category 3 – 5 deviations throughout the whole year. Target achieved.

Current targets

TARGETS	MEASURES/deadlines 12/2017	DEPARTMENT(S) responsible
Waste – Maintain ash recovery rate at 100 % – Reduce reel pin waste	Secure use of ash as a stabiliser in earth works (dam construction, road bedding) Investigate alternative recovery options and optimise business model Promote internal incineration in the fluidised bed boiler	Environment, Energy
Occupational health and safety – Reduce number of workplace accidents. Target: „zero accidents in 2017“, maximum 1.5 accidents per 1 million working hours) – Reduce illness-related absences to < 3,5%	Rigorously implement actions derived from audits, internal standards and group guidelines Rigorously implement actions derived from the list of targets	All
Water – Reduce fresh water use in production to < 14 m ³ /t	Optimise water management taking into account closure of PM 3 (new fibre/clear filtrate concept)	Production Technical Departement/ Environment
Water/Airborne emissions Prevent Clean Run category 3 – 5 deviations	Further optimise start-up and shut-down plans for standstills	Production/Environment



VERIFIERS DECLARATION ON VERIFICATION AND VALIDATION ACTIVITIES

Quality Austria – Training, Certification and Evaluation Ltd., Zelinkagasse 10/3, A- 1010 Wien, with EMAS verifier registration number AT-V-0004, accredited for the scope NACE 17.12. "Production of Paper, Board and Pulp", declares to have verified whether the site Fabriksplatz 1, A – 4662 Laakirchen, as indicated in the corporate environmental statement of the organization: UPM Pulp and Paper with the Reg.No FI-000058 meets all requirements of Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on 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 this 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 report 2016 (supplement) of the site reflect a reliable, credible and correct image of all the

sites activities, within the scope mentioned in the corporate environmental statement of UPM Pulp and Paper.

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.

Done at Vienna on 11/04/2017

Werner Schönggrundner

Dipl.-Ing. Dr. Werner Schönggrundner
 Managing Environmental Verifier



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