

ENVIRONMENTAL performance in 2014





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

UPM Plattling

UPM Plattling is located north of Plattling, a small town at the foot of the Bavarian Forest, where the Isar flows into the Danube. With a workforce of some 550 people and three paper machines, UPM Plattling produces up to 790,000 tonnes annually of uncoated (SC) and coated (LWC) supercalendered printing papers in reels and sheets for magazines, newspaper supplements, advertising brochures and sales and mail order catalogues.

The organisation of UPM Plattling will in future include the two companies operating at the site, MD Papier GmbH and Rhein Papier GmbH. Production and administration of the two mills having already been closely interlinked for two years, they are reporting jointly on their environmental performance in 2014, too. The Plattling site was founded in the open countryside in 1982. It was originally comprised of the paper machine (PM) 10 to which the PM 11 was added in 1988. In 2007 the mill was expanded to include Rhein Papier GmbH's PM 1 paper machine.

The raw materials used for papermaking include groundwood pulp, recovered paper, chemical pulp and natural pigments. Groundwood pulp is mainly made from forest thinnings from the Bavarian Forest. All wood fibres used in our production come from sustainable forestry. More than 99% of the water required for papermaking is taken from the Isar and only to a very small extent from a well on the premises. Process effluents are cleaned in two on-site treatment plants before they are discharged back into the Isar.

All of the steam and the majority of the power for the production processes are generated in the mills' own combined heat and power plants running on natural gas. The remainder of the power is supplied via the public grid.

Production capacity	Up to 790,000 tonnes per annum		
Personnel	Ca. 550		
Products	Magazine papers (SC and LWC)		
	UPM Max	UPM Ultra	UPM Sol
	UPM Cat	UPM Cote	UPM Nova
	UPM Smart	UPM Star	
Certificates	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>		
Environmental labels	EU Ecolabel (EU Flower)		



UPM Plattling Environmental Performance in 2014 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 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

UPM Plattling has reported its environmental performance since as far back as 2000, when the site successfully gained certification to ISO 14001 and the EU Eco-Management and Audit Scheme (EMAS). As a company of the Finnish UPM – the Biofore Company – we want to demonstrate to our customers, suppliers, employees and the general public that responsible environmental protection is given high priority in our production processes. In 2010, the site's energy management system was additionally certified. Every year, we set ourselves ambitious new environmental goals. In the areas of water use and compliance with emission limits, we did not achieve our targets for 2014.

However, we were able to implement several measures to reduce our energy demand.

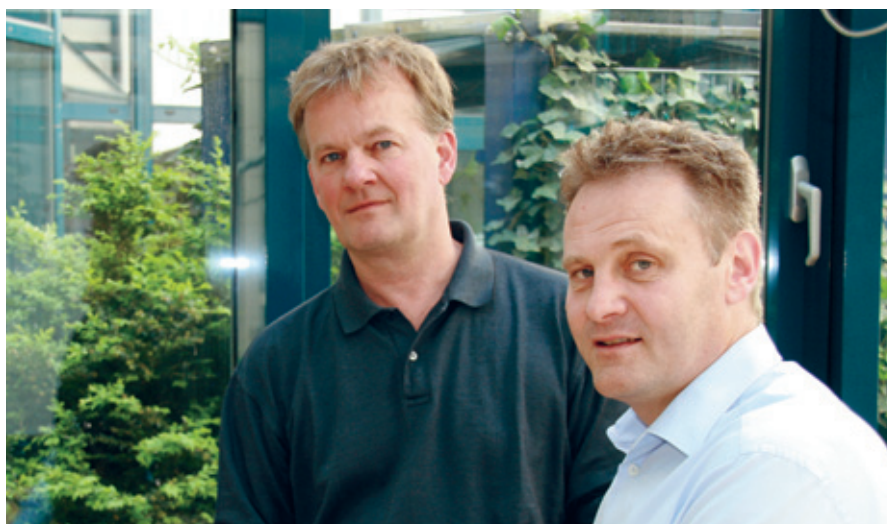
The Group-wide "Clean Run" project continued to be one of our focus areas in 2014. The campaign is aimed at ensuring environmentally sound production without environmentally relevant incidents. The mill was able to bring down "Clean Run"-relevant deviations by more than 80% in comparison with 2012.

In October and December, complaints about noise nuisance were phoned in from the other side of the motorway. Although the complaints were immediately investigated, it was not possible to identify a source of noise. Everything was found to be operating properly. Neither the complainant nor the mill notified the authorities.

In October, November and December there were four complaints from the neighbourhood about odour nuisance from the effluent plant. The typical odour of the effluent from PM 1 in the primary sedimentation tank was identified as the source of the nuisance. At no time were there any deviations from the permit limits. During 2015, we are going to look into possible measures to prevent odour emissions in this area, liaising with the authorities in charge.

The innovative third treatment stage installed in the LWC effluent treatment plant in 2013, which consists of a two-stage ozone treatment with subsequent biofiltration, underwent further technical

optimisation in 2014. The effluent treatment plant worked satisfactorily. We were able to considerably reduce the amount of flotation sludge from the third treatment stage of the LVC line, whose dewatering and disposal involves a great deal of effort. The operation of the hydro-technical installations, which had been outsourced to an external partner, was reintegrated at the end of 2013. The integration into production allowed much improved communication on the operation of the effluent treatment plant, both during regular and difficult operating conditions. The return to a fully continuous shift system also increased the level of safety in preventing critical situations.



Wolfgang Haase, Manager Environment

Wolfgang Ohnesorg, General Manager

Air

Energy generation is the primary source of airborne emissions from the paper mills. Through improving the energy efficiency of our production lines and using nothing but natural gas as a fuel we were able to reduce emissions over the years.

In April of 2010, a new gas and steam turbine power plant servicing the whole site went on line, replacing eight gas fired steam boilers which are now used as a backup source in the event of a power plant failure. Thanks to the efficiency of combined power and steam generation, the new power plant is much more efficient (by up to 85% in terms of primary energy use) than steam-only boilers.

As the method for calculating the NO_x load of the power plant was revised in 2012, this was set as the new reference year. The further reduction of the CO value was achieved by operating the plant in more favourable load conditions and without major disturbances. All other parameters, such as CO₂, NO_x, SO₂ and particulate emissions, are computed from the amount of gas burnt, rather than measured.

There were no deviations from the permit limits. In 2014, a special classification was applied for the first time to CO and NO_x emissions. Under this procedure, which has been customary at other UPM sites for some time, the authorities do not longer treat deviations during the start-up phase as permit violations.

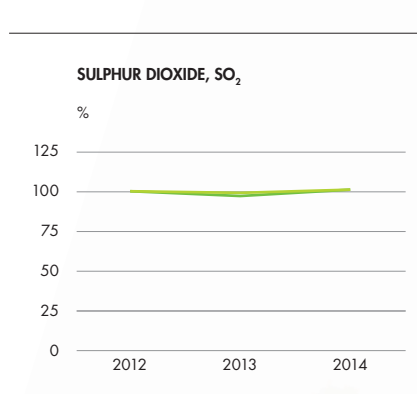
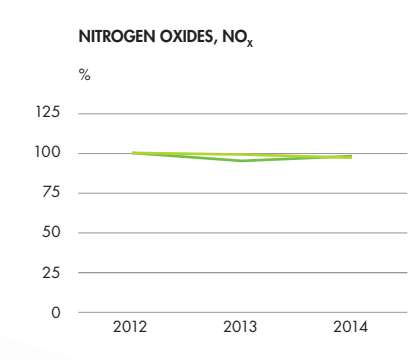
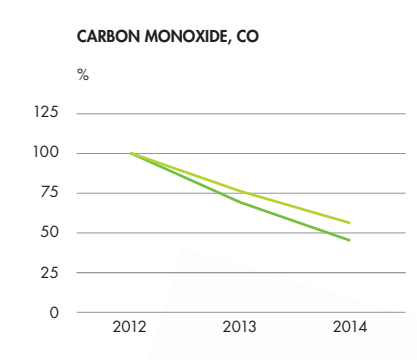
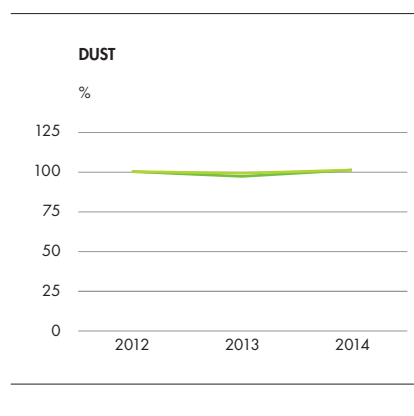
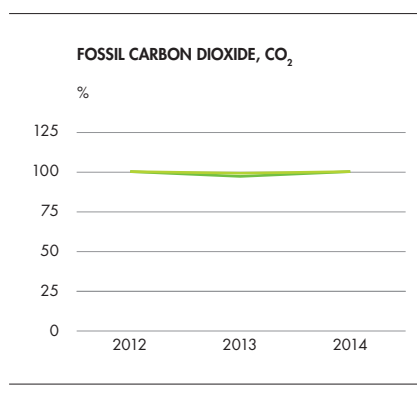
UPM Plattling has set itself the goal to further reduce specific CO₂ emissions by efficient energy use. To this effect several measures were implemented in 2014. For instance, we reduced energy consumption in groundwood pulping and do no longer use some steam boilers in holding mode.

EMISSIONS FROM THE POWER PLANT

	Limit value (mg/Nm ³)	Mean values measured (mg/Nm ³)		
		2012	2013	2014
CO	100	11.0	7.2	3.6
NO _x (variable depending on supplementary firing)	50	26.0	24.8	23.2

EMISSIONS FROM THE STEAM BOILER

	Limit value (mg/Nm ³)	Mean value measured (mg/Nm ³)		
		2012	2013	2014
CO	50	2.4	2.5	2.7
NO _x	110	84.0	77.6	71.6



— LWC
— SC

All graphs show the specific emissions per tonne of paper, in comparison with 2012.

Water

UPM Plattling draws 99.3% of the water required for the production process from the Isar, with the remaining 0.7% to cover temporary demand peaks coming from a well on the mill premises. In a modern process water treatment plant, particulate contaminants are removed from the river water and water hardness is reduced. The process water is first used for cooling and then for the paper production process. Our specific water consumption remained on a similar level as in previous years.

The mill's joint effluent treatment plant for the LWC and SC production lines operated stably for most of the year. The permissible limits were exceeded as follows:

In March, the limit value for AOX was exceeded once. However, no changes were made regarding chemical use in production or recovered fibre use. The verification of the analyses carried out by external bodies by taking parallel measurements showed that the results were broadly spread between different laboratories.

We identified the causes and agreed appropriate action with the authorities to prevent deviations from permit limits in future.

Following changes in terms of permit and technical issues the year 2012 was set as the reference year for reporting emissions.

EMISSIONS FROM THE JOINT EFFLUENT TREATMENT PLANT



Waste

In keeping with the concept of circular economy, the majority of production waste is recycled locally. Hazardous wastes are forwarded exclusively to specialised waste management companies to be disposed of in accordance with legal requirements. The specific volume of waste corresponded to that of the previous year. With 99.98% the recovery rate in 2014 reached the same high level as in 2013. No waste went to landfill.

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.

		MD Papier GmbH (LVC)	Rhein Papier GmbH (SC)
Production capacity	Paper	Up to 790,000 tonnes (3 paper machines)	
Raw materials and additives	Recovered paper Roundwood Chemical pulp Pigments Process chemicals Operating supplies	See UPM Corporate Environmental Statement for more information	
Energy	Fossil fuels Purchased power	100% See UPM Corporate Environmental Statement for more information	
Emissions to air	Carbon dioxide, CO ₂ (fossil) Nitrogen oxides, NO _x Carbon monoxide, CO Sulphur dioxide, SO ₂ Particulate matter	219,649 t 68.5 t 18.3 t 2.2 t 0.14 t	158,157 t 46.3 t 9.23 t 1.6 t 0.10 t
Water intake	Process water Cooling water	5,702,172 m ³ 0 m ³	3,933,940 m ³ 0 m ³
Discharges to water	Effluent volume Chemical oxygen demand, COD Biological oxygen demand, BOD ₅ Phosphorus, P (total) Nitrogen, N (inorganic) Adsorbable organic halogen compounds, AOX	8,291,019 m ³ 1,691 t 88.3 t 3.6 t 20.4 t 1.9 t	
Waste*	Total volume of which – Deinking sludge – Fibre residues – Biosludge – Bark and wood residues – Others Hazardous waste Recovery rate	99,314 t 30,278 t 5,782 t 18,144 t 41,941 t 3,092 t 76.2 t 99.97%	113,340 t 0 t 4,133 t 20,251 t 87,918 t 998 t 40.7 t 99.99%
Size of mill area	Built on or sealed	156,400 m ²	147,300 m ²

* Including moisture



Performance against targets in 2014

TARGETS	TARGET ACHIEVED?	COMMENTS
Water Reduce specific process water consumption of paper machines and auxiliary equipment until the end of 2014 by 5% in comparison with 2010. Implement various sub-projects relating to internal water management.	No	Specific fresh water consumption increased by approx. 10%.
Water and air Ensure permanent compliance with permissible discharge limits also under difficult operating conditions.	No	No, but number of deviations from permit limits down to 1 from 6 (in 2013).
Raw materials Reduce material losses on SC line by 3% through improved pulp screening and paper machine operation.	No	No, increase by 5% due to poor capacity utilisation.
Chemical use Continue exploring ways to reduce specific COD load of effluents by changing chemicals used for bleaching groundwood pulp (PGW).	Yes	Successful trial to reduce COD load of effluents from groundwood bleaching. Specific COD load down by 8%.
Energy Reduce specific power consumption by 5,000 MWh/a through various technical improvements.	Yes	Various technical measures implemented.

Current targets

Unless otherwise stated, the reference year is 2014

TARGETS AND MEASURES	DEADLINE	DEPARTMENT RESPONSIBLE
Water Reduce specific fresh water consumption on PM 1 by 1 l/kg.	12/2015	Production
Water and air Improve environmental responsibility on all organisational levels in Production.	12/2015	Groundwood Pulping, Production, Environmental Officer
Raw materials Reduce material losses on PM1 by 20%. Increase share of DIP on PM1 by 100%.	12/2015	Production, Groundwood Pulping
Chemical use Continue exploring ways to reduce specific COD load of effluents from bleaching groundwood pulp (PGW).	12/2015	Mill Development, Groundwood Pulping
Energy Reduce energy consumption by 20,000 MWh/a through various technical improvements.	12/2015	Groundwood Pulping, Production



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 Plattling (MD Papier GmbH and Rhein Papier GmbH) in 94447 Plattling, Nicolausstrasse 7, 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 Plattling (MD Papier GmbH and Rhein Papier GmbH) reflect a

reliable, credible and correct image of all the activities of UPM Plattling (MD Papier GmbH and Rhein Papier GmbH) 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.

Essen, 28 April 2015

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

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