

Environmental performance in 2016



UPM Chapelle Darblay



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

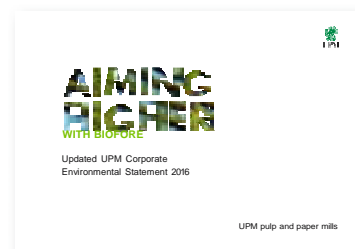
UPM Chapelle Darblay

UPM Chapelle Darblay paper mill is located in Grand-Couronne, near Rouen, by the river Seine and approx. 130 km from Paris. Founded in 1927, Chapelle Darblay belongs to UPM ENA (Europe and North America) business area and manufactures newsprint from 100% recycled fibres. The mill consists of one paper machine after the permanent shutdown of the PM3 in June 2015, two de-inking lines, a Biomass Combined Heat and Power (CHP) plant, a primary effluent treatment plant as well as a Paper Sorting Center.

For the production of newsprint, Chapelle Darblay recovers 350,000 tonnes of newspapers and magazines per year through 350 contracts with local authorities, representing 20 million people in France. A great part of the recyclable papers is coming from the Paris area and is transported by waterway. Our vicinity to large urban centres enables us to limit greenhouse gas emissions whenever possible.

Environmental issues are an integral part of our everyday operations. Targets are set as part of our annual planning process with our key environmental aspects and impacts identified through our regulatory and business requirements to demonstrate continuous improvement. These targets are followed closely through the year.

Production capacity	up to 250,000 tonnes of paper per year
Personnel	208
Products	Standard and Improved Newsprint: UPM News, UPM Brite, UPM EcoBasic H, UPM EcoPrime
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
Accreditation	Seine-Normandy Water Agency



UPM Chapelle Darblay Environmental Performance in 2016 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 2016. 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 2018.



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Environmental year 2016

This report gives information on the mill's environmental performance and covers the most significant impacts: emissions to air and water, waste and material consumption.

UPM Chapelle Darblay operates within a permit delivered by the French Ministry of Environment. This permit details the limits to be respected for air and water emissions. The whole personnel strive at respecting the permit limits. Some actions, described below, were implemented to improve our environmental performance.

Water

The major difficulties in the effluent process are related to the management of stop and start installation. The new procedure in place improves significantly the management of the waste water treatment and therefore the emission parameters into the water

Air

Thanks to the good efficiency of the biomass boiler, we use less and less fossil fuels and hence reduce our emissions of fossil CO₂.

Local environment authorities

UPM Chapelle Darblay cooperates with the local authorities on environmental issues. A constant dialogue is maintained on the operation of our facilities, thus creating a climate of trust between the parties. UPM Chapelle Darblay is subject to the prefectural decree of 18 January 2011 (classified site and subject to authorization).

In compliance with the new directive about industrial emissions, we are working on the new limit values.

Extract from UPM Chapelle Darblay engagement

In keeping with the vision and values of UPM, our mill is committed to becoming

a frontrunner in safety, environment and energy. Specifically, in terms of environment and energy, our engagement is about:

- reducing the environmental impacts and pollution
- reducing our energy consumption and encouraging the purchase of products and energy-efficient services
- monitoring the performance indicators
- cooperating with the other UPM production sites to share and implement the best practices
- encouraging innovation to improve the competitiveness of the mill
- respecting the laws and requirements of our stakeholders



Jean Kubiak, Managing Director
and Céline Pierre, Management Systems Manager and
Coordinator of Health, Safety and Environment

Air

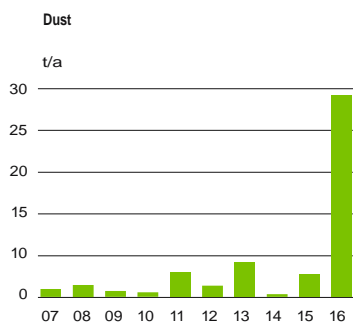
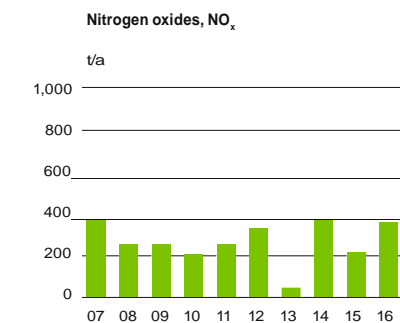
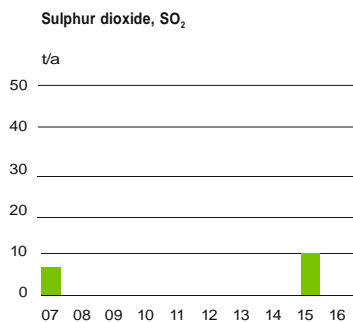
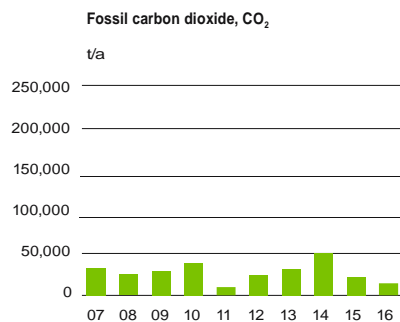
Our air emissions (dust, fossil carbon dioxide, nitrogen dioxide oxides, sulfur dioxide, hydrochloric acid, hydrofluoric acid and total organic carbon) from the biomass boiler are monitored continuously using automatic analysers. To validate the checks and to verify the compliance of our emissions with regulatory thresholds, an accredited external body conducts a full analysis of the exhaust gases one to four times a year. The low use of our gas furnaces and our gas turbine allows us to limit greenhouse gas emissions to a minimum.

The limits deriving from our permit are:

- Dust: 10 mg/m³
- Sulfur dioxide (SO₂): 50 mg/m³
- Nitrous oxides (NO_x): 200 mg/m³



The biomass boiler produces green electricity. This is achieved through the use of biofuels which supply the boiler, and the purification of flue gas.

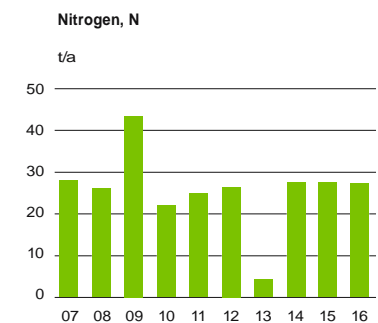
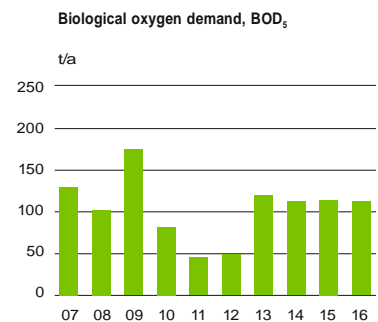


Water

The water used in our mill comes from the river. Once it has been drawn the water is coarsely filtered and then a portion of the water is finely filtered in a treatment plant equipped with pulsating settling tank and sand filters.

After our recyclable materials have been suspended in the water, it is called process water, and serves as a carrier for the paper fibres. It transports the fibres to the de-inking lines and then on to the paper machines where it is removed from the paper web by draining, pressing and drying. Most of the process water is then recycled. The remainder, called 'effluent' goes to our treatment plant for cleaning before it is discharged back into the Seine.

Recycling the process water is an important issue for UPM and for Chapelle Darblay in particular.



Waste

Due to the shutdown of PM3, the paper production dropped by -31% in 2016 compared to 2014 while the volumes after the WWTP decrease by 27%.

Our 2017 target is to maintain the quality of purifying efficiency at the effluent treatment plant while reducing the volumes of rejected effluents from production lines to the effluent treatment plant.

The limits deriving from our permit are:

- BOD₅: 1,220 kg/day
- COD: 12,250 kg/day
- TSS: 980 kg/day
- Nitrogen: 200 kg/day
- Phosphorous: 25 kg/day
- AOX: 7.5 kg/day
- Process waste water volume: 25 m³/t



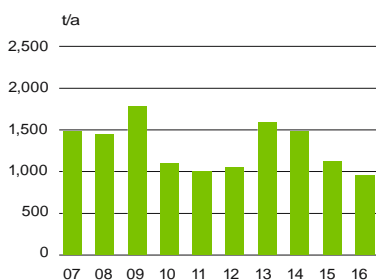
Our policy is to reduce waste as much as possible at the source, then sort and recycle or re-use it. The waste, classified into several groups, is sorted on site and goes through agreed treatment or recovery procedures in order to improve sorting at the source. We strive at finding as many recovery solutions as possible for our waste.

The waste originating from de-inking process and from waste water treatment plan are mixed together and burn with externally purchased biomass in the CHP boiler. The ash resulting from combustion is REACH-approved.

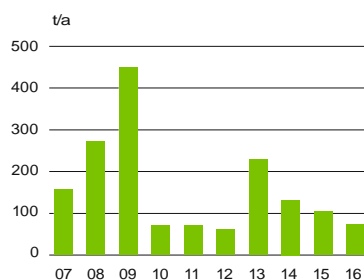
Hazardous waste is handled according to BSDD (Bordereau de Suivi des Déchets Dangereux, hazardous waste tracking note) and sent to the appropriate processes. Each type of waste leaving the site is recorded in the waste register.

Our recycling rate has slightly decreased (96% in 2016). Part of the waste sent to landfill is domestic waste. The other part is process waste. The identification of these waste will be strengthened in order to reduce the production of process waste at the source to respect the UPM 2030 target: no process waste to landfill.

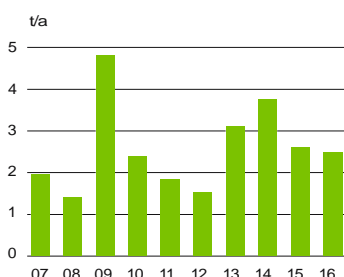
Chemical oxygen demand, COD



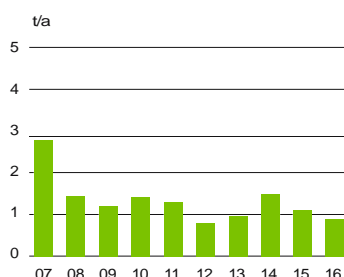
TOTAL Suspended solids, TSS



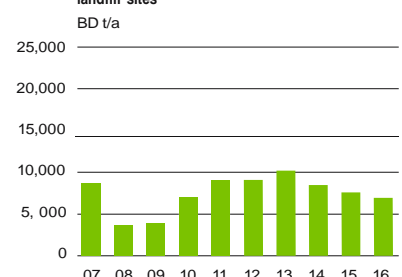
Phosphorus, P



Adsorbable organic halogen compounds, AOX



Disposal of industrial waste to class 2 landfill sites



Environmental parameters 2016

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	250,000 t
Raw materials	Recycled fibre pulp Process chemicals	See UPM Corporate Environmental Statement for more information
Energy	Fossil fuels Biofuels	23% 94% See UPM Corporate Environmental Statement for more information
Emissions to air	Carbon dioxide, CO ₂ (fossil) Nitrogen oxide, NO _x Sulphur dioxide, SO ₂ Dust	17,607 t 359 t 2 t 29 t
Water intake	Surface water Municipal water Groundwater	15,262,363 m ³ 16,603 m ³ 0 m ³
Discharges to water	Cooling water Effluent volume Biological oxygen demand, BOD ₅ Chemical oxygen demand, COD Total suspended solids, TSS Nitrogen, N Phosphorus, P Adsorbable organic halogen compounds, AOX	13,168,506 m ³ 4,152,800 m ³ 111 t 949.6 t 66.4 t 27 t 2,5 t 0.9 t
Waste*	Waste, total (excl. hazardous waste) of which: – Ash – Sludge – Wood and other wood waste – Deinking residues (non-fibrous) – Bark sand – Others Recycling Rate Hazardous waste	48,162 t 40,586 t 54 t 171 t 0 t 6,928 t 423 t 95,4% 93 t
Size of mill area		33 ha
Biodiversity	Built area	306,500 m ² out of 330,000 m ² of the total mill area See UPM Corporate Environmental



To produce green electricity, the biomass boiler is provided with paper sludge produced by the mill, recycling wood and forest chips.

* excluding moisture (dry weight)

Performance against targets in 2016

Target	Achievement	Comments
Clean Run deviations of category 3 at level of 2 or less for the year	No	A new procedure of the management of shut and start of installations has been implemented in December 2016.
Clean Run deviations of category 4 at level of 0	Yes	
Full compliance with permit limits	No	The three category 3 deviations in 2016 were about the exceeding of limit values of effluent parameters.
Decrease the process waste water volume	No	This action has been postponed. A work will be started in compliance with the UPM 2030 target.

Environmental targets 2017

- Clean Run deviations of category 3 at level of 0
- Clean Run deviations of category 4 at level of 0
- Full compliance with permit limit
- Decrease the process waste water volume



Environmental verifier's declaration on verification and validation activities

Mr Bruno Jacquet, EMAS environmental verifier, ECOCERT, bearing agreement number COFRAC n°4-0011 rév.18 – FR-V-0010, accredited or certified for NACE 17 codes, declares to have verified whether the site or the organization as a whole, i.e. UPM Chapelle Darblay (France – 76530 Grand Couronne), (with agreement number FI-000058), as indicated in the updated Environmental Statement of the mentioned site, 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 of the site reflect a reliable, credible and correct image of all the activities on the site within the scope mentioned in the environmental statement.

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.

Executed in Paris (France) on *27/01/2017*

Bruno Jacquet
ECOCERT environmental verifier

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of bio and forest industries
into a sustainable future.
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