

UPM Kymi

# ENVIRONMENTAL AND SOCIETAL RESPONSIBILITY 2018





# UPM Kymi

The UPM Kymi mill in Kuusankoski, Kouvola, by the Kymi river consists of a paper and pulp mill. The Kymi production plants form a modern integrated mill site that produces coated and uncoated fine paper and bleached birch and softwood pulp. In 2018, Kymi employed 745 people.

The paper mill is divided into two production units. Paper machine 8 and the coater form a production line that produces coated fine paper. The high-quality printing paper is delivered in reels and sheets. Paper machine 9 produces uncoated fine paper on reels and in sheets to be used as printing paper, forms and envelopes as well as copier/printer paper. The pulp mill's two fibre lines produce bleached softwood and birch pulp. A sawdust digester is used to cook sawdust pulp that is added to the birch pulp.

The production plants receive the heat energy and most of the electricity they need from the pulp mill's energy production and Kymin Voima Oy's biofuel power plant located on the mill site. Schaefer Kalk Finland Oy's PCC plant is also located on the mill site. Kymin Voima Oy's biofuel power plant and the PCC plant are not included in the scope of this report.



<b>Personnel • Kymi integrate</b>	745
<b>Paper mill •</b>	
<b>Production capacity</b>	730,000 t
<b>Products</b>	Coated and uncoated fine papers: UPM Finesse, UPM Fine, UPM PreLaser, UPM PrePersonal, UPM Form, UPM Poste, UPM Poste Insert, UPM Office, New Future, Yes, Kym Ultra, KymLux, UPM Digi fine, UPM Digi Fine Pro, UPM Jetlabel, UPM LabelCoat prime
<b>Pulp mill •</b>	
<b>Production capacity</b>	870,000 t
<b>Products</b>	Birch pulp UPM Betula and pine pulp UPM Conifer
<b>Bioenergy</b>	Thermal energy and electricity
<b>Residues</b>	Tall oil and turpentine
<b>Certificates</b>	EMAS – EU Eco-Management and Audit Scheme ISO 14001 – Environmental Management System ISO 9001 – Quality Management System ETJ+ – Energy Efficiency System OHSAS 18001 – Occupational Health and Safety System PEFC™ - Programme for the Endorsement of Forest Certification FSC® - Forest Stewardship Council® All certificates can be found from UPM's Certificate Finder (available at <a href="http://www.upm.com/responsibility">www.upm.com/responsibility</a> ) ISO 22000 – Food Safety Management System
<b>Environmental labels</b>	EU Ecolabel UPM pulp products have the approval for use in EU Ecolabel and Nordic Ecolabel paper products.



UPM Kymi Environmental and Societal Responsibility 2018 is a supplement to the Corporate Environmental and Societal Responsibility Statement of UPM's pulp and paper mills (available at [www.upm.com](http://www.upm.com)) and provides mill-specific environmental and societal performance data and trends for the year 2018. The annually updated mill supplements and the UPM Corporate Environmental and Societal Responsibility Statement together form the joint EMAS Statement of UPM Corporation. The next UPM Corporate Environmental and Societal Responsibility Statement and also this supplement will be published in 2020.

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EU Ecolabel : FI/011/001

# Review of the year 2018

In 2018, the pulp and paper mill enjoyed a good market situation and the pulp mill achieved a new annual production record. The volume of pulp sold to third parties increased in 2018. The new environmental permit for the integrated mill site entered into force in April 2018.

UPM Kymi systematically covered its obligations related to environmental protection in compliance with the environmental permit. The particle emissions of the lime kiln exceeded the annual limit set in the permit, but all other mill emissions complied with the permit limits.

We were able to reduce our environmental load in many respects. For example, the COD and AOX loads in our emissions to water decreased significantly compared to previous years. This was due to improvements in fibre line washing efficiency and bleaching made as part of the KYMI870 investment project.

The integrated mill site's environmental objectives included maintaining compliance with the Clean Run programme launched in 2011, reducing abnormal emissions, ensuring efficient flow of information and use of the Clean Run programme, increasing environmental awareness among employees, decreasing water consumption, solid losses and odour emissions, increasing the re-use of process waste and reducing the amount of solid waste sent to landfill sites.

The Clean Run programme was part of the Kymi mill site's normal operations in 2018. All environmental observations and abnormal emissions were recorded with the OneSafety tool (in total, 197 notifications concerning the pulp mill and 147 concerning the paper mill) and their underlying causes were studied. An environmental review was arranged once a week during the pulp and paper mill's morning meetings to review the environmental issues/events from the previous week in more detail.

Ten pieces of stakeholder feedback were received in 2018. Eight of them concerned odour emissions that mainly occurred during shutdowns.

In April, the breakdown of the recovery boiler water supply valve resulted in a sudden shutdown at the integrated mill site. The chain of events related to the shutdown caused odour emissions, foam in the water close to the shore and noise in central Kuusankoski.

In 2018, the Kymi site also continued the waste re-use development project in

co-operation with external partners. The objective of the project is to continue to find new ways of re-using process waste and to use them to improve the waste re-use rate.

The main environmental investment made in 2018 was the construction of a sedimentation basin with a volume of 5000 cubic metres for settling the solids in stormwater runoff from the timber yard. The sedimentation basin was put into use in the autumn of 2018.



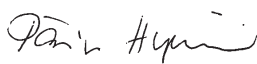
The paper mill's Safety and Environmental Manager Anna Laksio (left) and the pulp mill's Environmental Manager Päivi Hyvärinen.



Jyri Kylmä,  
General Manager,  
Kymi pulp mill



Matti Laaksonen,  
General Manager,  
Kymi paper mill



Päivi Hyvärinen,  
Environmental Manager,  
Kymi pulp mill



Anna Laksio,  
Safety and Environmental Manager,  
Kymi paper mill

# Responsibility figures 2018

## Taxes



Kymi's local tax impact approx.

# 28 Meur

Real estate taxes EUR 0,8 million; estimated tax on salaries EUR 6,7 million; estimated corporate income tax EUR 20,3 million based on the number of employees\*

\*Approximately 30% of this goes to municipalities, which is split between each municipality according to their share of business activities and forests operations.

## Consumption impact

Kymi's consumption impact in region approx.

# 39 Meur

in Finland approx. EUR 71 million.

\*Private consumption of commodities generated through internal and indirect employees' net wages.

## Community

The total number of schoolchildren and students visiting the UPM Kymi mills and UPM's events was over

# 3,000



UPM supports the education and employment of young people through active collaboration with educational institutions, industry organisations and the city.

## Employment



The total number of employees at UPM Kymi, including paper and pulp mill personnel as well as global functions personnel, was

# 745

Indirect employment effect in region approx. 730 people.

## Safety



The number of accidents resulting in sick leave for UPM personnel at the pulp and paper mill was

# 0

Over the past 10 years, the number of accidents resulting in sick leave for UPM personnel at the Kymi mill has decreased by 100%.

## Wellbeing

According to the annual UPM Employee Engagement Survey, employee engagement at the paper mill increased by

# 3 %



and enablement by 1%. Engagement and enablement were two of the main indices of the survey. For the pulp mill, the survey showed increases in questions related to appreciation and recognition.

## Water



COD emissions to water between 2009 and 2018 decreased by

# 53 %

The figure applies to production at the Kymi pulp mill.

## Supply chain



# 98 %

of raw materials spend qualified against UPM Supplier and Third Party Code (wood not included).

## Water



AOX emissions to water between 2009 and 2018 decreased by

# 60 %

The figure applies to production at the Kymi pulp mill.

## Air



Airborne emissions have been reduced in 2009–2018; sulphur dioxide, SO<sub>2</sub>

# 65 %

Figure from the Kymi pulp mill production.

## Energy



Energy produced using renewable fuels over

# 89 %

Pulp production used black liquor as main fuel.

## Certified fibre



# 84 %

The proportion of PEFC and/or FSC certified fibre in paper production. UPM's goal is to use only certified fibre by 2030.

# Air and noise



Emissions to air complied with the new permit limits, with the exception of the lime kiln particle emissions.

The high level of particle emissions was caused by structural changes made to the feed end of the lime kiln in the autumn of 2017 to increase efficiency. These changes resulted in a significant increase in the particle emissions from the lime kiln.

During the maintenance shutdown scheduled for May 2019, structural changes will be made to the feed end of the lime kiln to resolve the dust issue.

Total NO<sub>x</sub> emissions reported in tonnes increased slightly from the previous year. This was due to a significantly higher production volume compared to the previous

year. Gaseous sulphur emissions were very low.

It was also recorded that 99.6% of weak malodorous gases and 99.9% of strong malodorous gases were recovered and burnt.

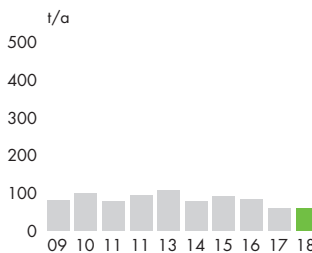
The increase in production volume has placed more strain on the recovery of malodorous gases and led to the temporary occurrence of unpleasant odours during process disturbances.

However, TRS emissions at the Kouvolaa City Environmental Services measuring station in central Kuusankoski remained low. The average hourly TRS content only exceeded the level of 5 µg/m<sup>3</sup> during 0.2% of the total hours in 2018.

CO<sub>2</sub> emissions were lower in 2018 than in the previous year due to a decrease in the use of the auxiliary boiler to generate energy for the paper mill from natural gas. The CO<sub>2</sub> consumption of the PCC plant was not deducted from the CO<sub>2</sub> emission figures for 2018.

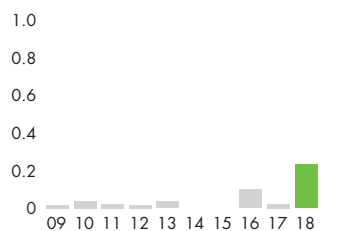
On 13 April, the water supply valve of the recovery boiler broke down, which resulted in odour emissions and caused foam in the water close to the shore. Furthermore, a disturbance occurred during the ramp-up following the maintenance shutdown. This forced the mill to shut down again, and the steam discharges gave rise to a noise complaint concerning central Kuusankoski. UPM also received stakeholder feedback for this incident, and the abnormal situation was reported to the authorities.

Gaseous sulphur emissions SO<sub>2</sub> (\*)

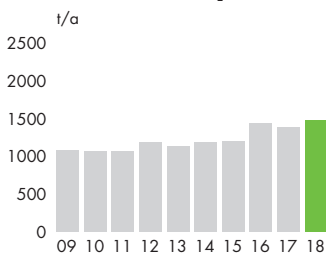


■ SO<sub>2</sub> and odorous sulphur emissions as sulphur dioxide

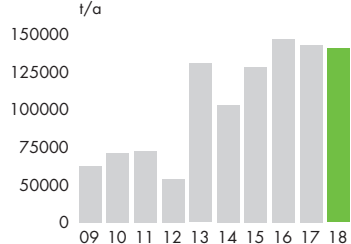
Percentual share of hourly average TRS values exceeding 5µg/m<sup>3</sup> each year



Nitrogen oxides, NO<sub>x</sub> (\*)



Fossil carbon dioxide (\*)  
PCC-related carbon dioxides decreased until 2012



\* Includes Kymin Voima Oy's emissions with regard to the energy consumed by Kymi.



# Waste



The total amount of waste for 2018 was approximately 28,700 tonnes, of which approximately 10,022 tonnes was taken to landfill sites (the municipal landfill or the Lamminmäki landfill). In 2018, a total of 10,013 tonnes of waste was taken to the Lamminmäki landfill as dry matter.

A total of 16,080 tonnes of wastewater sludge was combusted in the Kymin Voima Oy boiler in 2018.

The amount of waste sent to landfill sites increased from the previous year due to the lack of re-use applications for green liquor dregs and the need to deposit 7% more of it at landfill.

Green liquor dregs produced in the recovery process remained the most significant waste component taken to the Lamminmäki landfill site, and a viable solution for its continuous recycling is yet to be found.

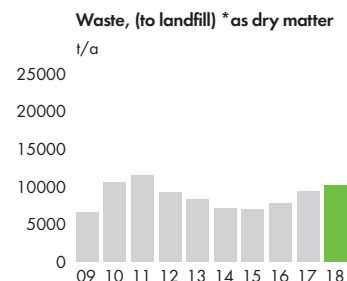
Approximately 8,900 tonnes of ash was re-used in 2018.

As before, ash created during bioenergy production was delivered for granulation, after which it was applied to forests owned by UPM. The idea is to recycle nutrients brought to the mill in the wood back into the forest.

Other uses for recycled ash in 2018 included structures at the L&T Heinsuo landfill and field structures at the Hyötypaperi site, as well as binding green liquor dregs used in structures at the Lamminmäki landfill.

Around 2,800 tonnes of bark and wood waste was delivered to be re-used as culture medium raw material in 2018.

UPM's Zero Solid Waste project, which began in 2015, also continued in 2018. The project's goal is to find re-use applications for all of the mill's process waste types by 2030, including green liquor dregs. In accordance with this project, 177 tonnes of green liquor dregs from the Kymi site was used for bioconcrete test runs in 2018.



\* Includes Kymin Voima Oy's ash corresponding to the energy used by Kymi.



Ash created during bioenergy production was delivered for granulation, after which it was applied to forests owned by UPM.

# Water



The performance of the biological treatment plant was good throughout the year. The investment project completed in 2017 improved the birch line washing, sorting and bleaching processes. These improvements manifested in lower COD, AOX and phosphorus values in the 2018 emission measurements.

The monthly permit limits set in the new environmental permit were not exceeded for any month.

The reduction rates indicating the efficiency of the treatment plant were 99% for biological oxygen demand (BOD) and 82% for chemical oxygen demand (COD). The solids reduction rate was 94%.

The effluent load to the river remained below all environmental permit limits throughout the year.

In 2018, the Kymi mill site used a total of 90 million cubic metres of water. Water consumption at the integrated mill site increased by approximately 4.6% year-on-year due to the significant increase in the pulp mill's production volume compared to the previous year.

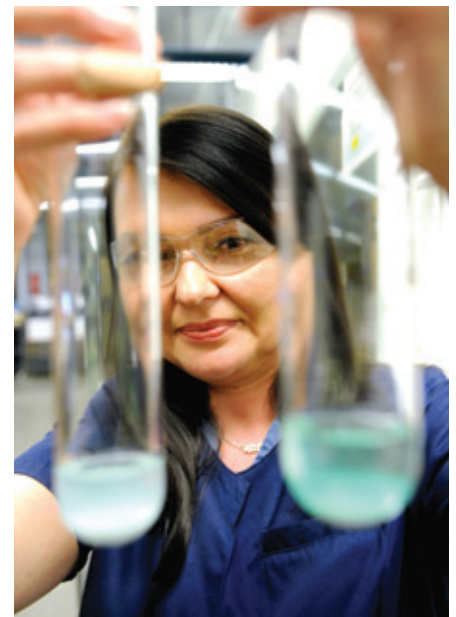
The paper mill achieved a reduction in wastewater volume and solids losses compared to the previous year. Wastewater volume in particular was below the target level.

Wastewater monitoring at the paper mill changed in the autumn of 2017. Before this, the pulp mill's water consumption was included in the paper mill's water consumption levels.

The wastewater volume and solids losses of the pulp mill also decreased from the previous year due to the improved washing efficiency of the fibre line and the steady operation of the wastewater treatment plant.

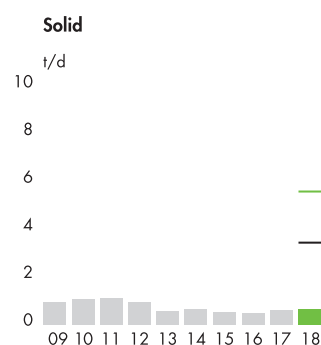
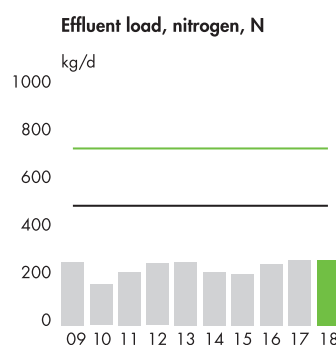
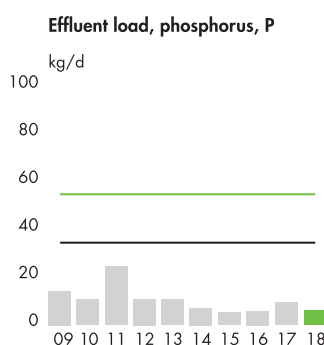
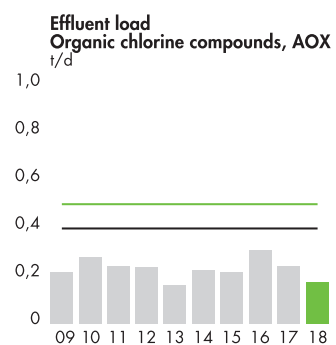
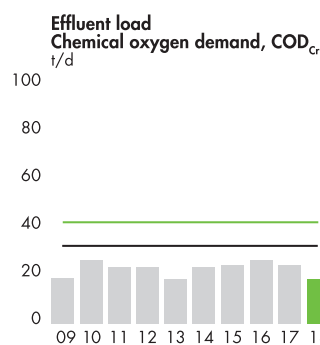
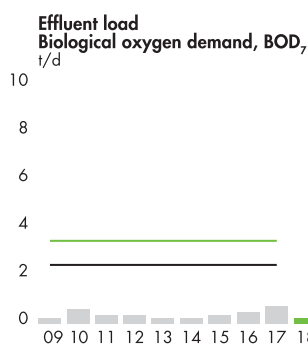
Kymi was one of the first mill sites to construct a sedimentation basin compliant with the requirements of the new environmental permit for settling the solids in stormwater runoff.

In summary, the effluent load of the pulp and paper mill remained at or below the BAT reference limit throughout 2018.



Wastewater monitoring is conducted regularly at the Kymi process laboratory. Laboratory attendant Sari Piira is performing nitrogen determination.

— Permit limit, monthly mean value  
— Permit limit, annual mean value







The stormwater detention basin completed in 2018 ensures that the solids present in stormwater runoff, such as fine particles from wood and bark, remain in the basin. This sedimentation basin reduces the nutrient load of the Kymijoki river. The basin is 140 metres long and 30 metres wide, and its depth varies from 3 to 4 metres. The volume of the basin is approximately 5000 cubic metres.



# Societal responsibility

UPM is a significant operator in Kouvola. Last year, the Kymi mills and other UPM functions in the area employed approximately 900 people in total. UPM was the fourth-largest employer in the area.

With global functions personnel included, the total number of company personnel at the Kymi integrated mill site was 745. Over the summer, approximately 150 people were employed as holiday stand-ins.

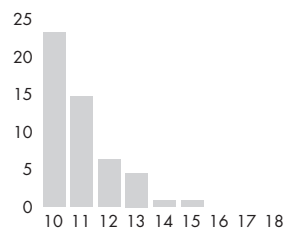
## Taxes

In 2018, UPM (Group) paid a total of approximately EUR 283 million (251 million in 2017) in corporate income taxes and real estate taxes.

Real estate taxes and the municipal share of corporate income taxes paid by UPM support the local economy. In addition, the taxes and social security contributions that UPM employees pay on their wages also have a significant local impact. The Kymi integrated mill site's tax contributions in Kouvola amounted to approximately EUR 28 million in 2018.

The integrated mill site's tax contributions consist of real estate taxes (EUR 0.8 million), municipal income tax paid on wages (EUR 6.7 million) and the estimated corporate income tax (EUR 20.3 million).

UPM Kymi  
Accidents at the mill site (LTA)



In total, municipalities receive approximately 30% of corporate income taxes. This amount is split between municipalities according to each municipality's share of business activities and forests.

## Consumption impact

The local effect on consumption created by the integrated mill site amounted to approximately EUR 39 million in 2018. For Finland as a whole, the effect was approximately EUR 71 million. These figures reflect the consumption generated through internal and indirect employees' net wages.

## Responsible sourcing

We require all suppliers to uphold the UPM Supplier and Third Party Code, which lays out our minimum corporate responsibility requirements relating to environmental impact, human rights, la-



bour practices, health and safety, product safety, corruption and bribery.

UPM's target is to have 100% of raw material spend and 80% of all spend qualified against the UPM Supplier and Third Party Code by 2030. In 2018, 94% of UPM's raw material spend and 83% of all spend was qualified against the UPM Supplier and Third Party Code. At Kymi, 98% of raw material spend (excluding wood) was qualified last year.



The professional and educational opportunities offered by UPM were introduced at networking events in Kotka and Kouvola, organised by the South-Eastern Finland University of Applied Sciences (Xamk). Pictured: the event held at the Kotka campus.





Pictured: The drying machine at the Kymi pulp mill was introduced to mill visitors from the circular economy programme of the Finnish Science Centre Heureka. Heureka is organising an extensive circular economy programme between 2018 and 2020. UPM is involved as a strategic partner through the Finnish Forest Industries Federation.

### Personnel development

Average number of hours spent on training at the Kymi paper and pulp mills, total hours/employee

2018	2017	2016
14.37	16.86	12.33

### Stakeholder engagement and employee wellbeing

UPM's approach to stakeholder engagement and local collaboration in Kouvola involves active dialogue and co-operation with various stakeholders. The safety of the people working at the mill site and living nearby is always our number one priority. UPM employees had no accidents leading to sick leave in 2018. Occupational safety at the integrated mill site has remained high for three years.

We encourage both our own personnel and external personnel working on site to be active when it comes to safety notifications and safety reviews. Safety training has been organised for our contractors. Site safety is also addressed in UPM's OneSecurity project, which was launched in the autumn.

The UPM Employee Engagement Survey has shown positive development in various areas of employee engagement and

wellbeing at the Kymi mill site. In addition to the department-specific improvement measures, a joint UPM Kymi plan for wellbeing at work was implemented. Particular attention will be paid to management and supervision. Extensive training was organised for supervisors at the paper and pulp mill last year. Absences due to illness remained at the same level as in the previous year.

### Young people and the forest industry

Our objective is to inform young people about jobs in the forest industry and encourage them to study forestry and pursue careers in the field. Events aimed at pupils, students and young people in general reached more than 3000 people.

School pupils and students attended study trips to the paper and pulp mill. In turn, experts from UPM also visited schools as ambassadors of the "Forest of Opportunities" campaign to introduce the forest industry to pupils in grades 7 to 9. In 2018, the largest events aimed at school pupils consisted of the "KouAhead" event for ninth graders in Kouvola and a two-day trip titled "Lifecycle of a commercial forest" (Talousmetsän kierto), organised by UPM Forest for all sixth graders in the region.

UPM engages in various forms of collaboration with educational institutions, with recruitment and networking events being the most common.



In a new type of collaboration between UPM Kymi and educational institutions, we participated in the "Critical friends" peer mentorship programme organised by Economy and youth TAT. Kymi labour relations manager Seppo Mäkinen (right) collaborated with guidance counselor Antti Sinisalo from the Valkeala upper secondary school during the programme.



The sixth graders in the Kouvola region got to conduct small-scale water testing during the "Lifecycle of a commercial forest" trip organised in Valkeala in September.



# Environmental parameters 2018

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 and Societal Responsibility Statement.

<b>Production capacity</b>	Coated and uncoated fine paper Pulp	730,000 t 870,000 t
<b>Raw materials</b>	Wood Purchased pulp Chemicals	See UPM Corporate Environmental and Societal Responsibility Statement for more information
<b>Energy</b>	Biofuels Fossil fuels	89 % 11 %
<b>Emissions to air</b>	Sulphur, SO <sub>2</sub>  Nitrogen oxides, NO <sub>x</sub> Carbon dioxide, CO <sub>2</sub> (fossil) Particulates	62.3 t (SO <sub>2</sub> and malodorous sulphur emissions as sulphur dioxide) 1,476 t 141,688 t 380 t
<b>Water intake</b>	Process and cooling water	90,015,476 m <sup>3</sup>
<b>Discharges to water</b>	Cooling water Effluent Chemical oxygen demand, COD <sub>Cr</sub> Biological oxygen demand, BOD <sub>7</sub> Adsorbable organically bound halogens, AOX Phosphorus, P Nitrogen, N	53,046,303 m <sup>3</sup> 36,982,038 m <sup>3</sup> 6,204 t 85.4 t 63.4 t 2.27 t 104 t
<b>Waste to landfill (as dry matter)</b>	Green liquor dregs Mixed waste Process waste Construction waste	9,908 t 9 t 98 t 7 t
<b>Recycled waste (as dry matter)</b>	Ash Green liquor dregs Lime sludge Bark and wood waste Cores and wrapping Waste paper and cardboard Metal Combustible waste Concrete and asphalt waste Biowaste Other waste	8,960 t 177 t 370 t 2,803 t 3,533 t 145 t 596 t 491 t 307 t 19 t 1,169 t
<b>Temporarily stored waste intended for reuse</b>	Ash (as dry matter)	0 t
<b>Hazardous waste</b>		91 t
<b>Mill area</b>		250 hectares

The figures include Kymin Voima Oy's waste and emissions with regard to the energy consumed by the Kymi site.



The River Kymi and Kuusaanlampi lake are popular fishing spots in both summer and winter.

# The pulp mill's performance against targets in 2018

OBJECTIVES AND INDICATORS	ACHIEVED	COMMENTS
<b>Minimising environmental non-conformances</b> -0 cases in classes 3 to 5	No	Permit limit exceeded once: lime kiln particle emissions.
<b>Reducing solid waste to landfills</b> <12.5 kg dry matter/tonne of pulp	Yes	Actual figure below target. Mainly green liquor dregs.
<b>Reducing water consumption at the pulp mill</b> -target < 40 m <sup>3</sup> /tonne of pulp	Yes	Water consumption reduced by improvements in birch line washing.
<b>COD emissions</b> -target < 10 kg/tonne of pulp	Yes	Improvements in birch line washing.
<b>AOX emissions</b> -target < 0.14 kg/tonne of pulp	Yes	Improvements in birch line washing.
<b>Solids to river</b> -target < 1,3 t/d	Yes	Steady operation of the wastewater treatment plant.
<b>CO<sub>2</sub> emissions</b> -target < 100 kg CO <sub>2</sub> /tonne of pulp	Partially	Actual figure close to target. Lime kiln mainly fuelled by natural gas.
<b>SO<sub>2</sub>+TRS emissions</b> -target <0.1 kg of sulphur/tonne of pulp	Yes	Actual figure very low.
<b>NO<sub>x</sub> emissions</b> -target < 1.55 kg/tonne of pulp	Partially	Actual figure close to target.
<b>Lime kiln particulates</b> -target < 0.05 kg/tonne of pulp	No	Annual permit limit exceeded.

# The paper mill's performance against targets in 2018

OBJECTIVES AND INDICATORS	ACHIEVED	COMMENTS
<b>No environmental non-conformances</b> -classes 3 to 5	No	One case of abnormal emissions: water discoloured by pulp waste entered the stormwater channel.
<b>Waste to landfills 0 t</b>	No	Approx. 53 tonnes of waste to landfills.
<b>Reducing water consumption at the paper mill</b> < 10 m <sup>3</sup> /tonne of paper	Yes	Target achieved.
<b>Solids loss at the paper mill</b> < 10 kg/tonne of paper	Partially	Target not quite achieved.
<b>Environmental notifications,</b> 40 notifications/yr	Yes	Environmental awareness increased through communications, observations encouraged.

# The pulp mill's objectives for 2019

OBJECTIVES AND INDICATORS	SCHEDULE	UNIT'S RESPONSIBILITIES
<b>Minimising environmental non-conformances</b> -classes 3 to 5	2019	Determining and optimising vapour recovery capacity. Improving the treatment of strong malodorous gases. Implementing changes to the feed end of the lime kiln. Maintaining steady operation and carrying out scheduled maintenance work at the wastewater treatment plant.
<b>Solid waste to landfills</b> <12.5 kg dry matter/tonne of pulp	2019	Finding a re-use application for removed lime sludge dust. Optimising the amount of green liquor dregs for budget production. Actively participating in research seeking re-use applications for green liquor dregs.
<b>Water consumption</b> < 39 m <sup>3</sup> /tonne of pulp	2019	Optimising fibre line washing at the maximum production level.
<b>COD emissions</b> < 9 kg/tonne of pulp	2019	Optimising fibre line washing at the maximum production level.
<b>AOX emissions</b> < 0.10 kg/tonne of pulp	2019	Optimising fibre line washing and chlorine dioxide doses at maximum production level.
<b>Solids to river</b> < 1,0 t/d	2019	Maintaining steady operation and proceeding with scheduled maintenance work at the wastewater treatment plant.
<b>CO<sub>2</sub> emissions</b> < 50 kg CO <sub>2</sub> /tonne of pulp	2019	Optimising the operation of the lime kiln. Minimising unplanned shut-downs.
<b>SO<sub>2</sub>+TRS emissions</b> < 0.1 kg S/tonne of pulp	2019	Minimising unplanned shut-downs.
<b>NO<sub>x</sub> emissions</b> < 1.55 kg/tonne of pulp	2019	Optimising the operation of the lime kiln. Minimising unplanned shutdowns. Implementing changes to the combustion air distribution of the recovery boiler.
<b>Lime kiln particulates</b> <0.05 kg/tonne of pulp	2019	Implementing changes to the feed end of the lime kiln.



Jyri Kylmä, General Manager of the pulp mill, explains that one of the main objectives for 2019 is to make the Kymi pulp mill "odourless". The plan is to achieve this by further enhancing the treatment of strong and weak malodorous gases. "We also aim to decrease the particle emissions of the lime kiln after new installations are made at the feed end in the spring. Changes will also be made to the combustion air distribution of the recovery boiler. The aim is to further decrease the boiler emissions. In addition, development work seeking re-use applications for green liquor dregs is ongoing."



# The paper mill's objectives for 2019

OBJECTIVES AND INDICATORS	SCHEDULE	UNIT'S RESPONSIBILITIES
<b>No environmental non-conformances</b> -classes 3 to 5	2019	Continuous improvement of environmental awareness.
<b>Solid waste to landfill 0 t</b>	2019	Improving sorting.
<b>Reducing water consumption at the paper mill</b> < 10 m <sup>3</sup> /tonne of paper	2019	Improving line-specific monitoring.
<b>Solids loss at the paper mill,</b> < 10 kg/tonne of paper	2019	Improving line-specific monitoring.
<b>Environmental notifications,</b> 50 notifications/yr	2019	Continuous improvement of environmental awareness, improving communication.



"At the paper mill, we have been focusing on improving environmental awareness for the past few years. Our objective has been to eliminate abnormal emissions of classes 3 to 5 and simultaneously increase the number of environmental observations. We have also organised more training and increased awareness in matters related to the sorting of waste. Our efforts to minimise water consumption and solids losses have been very successful in the past few years," says Matti Laaksonen, General Manager of the paper mill.



## VALIDATION STATEMENT

As accredited environmental verifier (FI-V-0001), Inspecta Sertifointi Oy has examined the environmental management system and the information of UPM Kymi Environmental and Societal Responsibility 2018 report and of UPM Corporate Environmental and Societal Responsibility Statement 2018.

On the basis of this examination, the environmental verifier has herewith confirmed on 2019-04-01 that the environmental management system, this UPM Kymi Environmental and Societal Responsibility report and the information concerning UPM Kymi of UPM Corporate Environmental and Societal Responsibility Statement are in compliance with the requirements of the EMAS Regulation (EC) No 1221/2009.

We reduce the world's reliance on fossil-based materials by developing renewable and responsible products and solutions in all our businesses. **UPM Biofore – Beyond fossils.**



**UPM Kymi**

Selluntie 1  
FI-45700 Kuusankoski, Finland  
Tel. +358 2041 5121

Further information  
[info.kymi@upm.com](mailto:info.kymi@upm.com)  
[www.upmkymi.fi](http://www.upmkymi.fi)

Päivi Hyvärinen  
Environmental Manager, Pulp mill  
Tel. +358 2041 52514  
[paivi.hyvarinen@upm.com](mailto:paivi.hyvarinen@upm.com)

Teija Ahola  
Coordinator, Environment and Resources,  
Pulp mill  
Tel. +358 2041 52923  
[teija.s.ahola@upm.com](mailto:teija.s.ahola@upm.com)

Anna Laksio  
Safety and Environmental Manager,  
Paper mill  
Puh. +358 50 5450260  
[anna.laksio@upm.com](mailto:anna.laksio@upm.com)

Irma Niemi  
Stakeholder relations Manager  
Tel. +358 2041 52173  
[irma.niemi@upm.com](mailto:irma.niemi@upm.com)



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