UPM BIOFORE
BEYOND FOSSILS

UPM Jämsä River Mills

ENVIRONMENTAL AND SOCIETAL RESPONSIBILITY 2018

UPM Jämsä River Mills

UPM's Jämsä River Mills – Jämsänkoski and Kaipola – are located in the Jämsä River Valley in Central Finland. The Jämsänkoski mill is located on the banks of the Jämsänjoki River, and the Kaipola mill stands on the edge of Lake Päijänne. Production at Kaipola mill started in the 1950s and at the Jämsänkoski paper mill in the 1880s.

The mills function as a unit, with a total of six paper machines in operation. Uncoated magazine paper and label and packaging papers are produced at the Jämsänkoski mill, while coated magazine paper, catalogue paper and newsprint are produced at the Kaipola mill.

The main raw materials used in paper production at Jämsänkoski are mechanical pulp made of spruce pulpwood for the magazine papers, and chemical pulp, sourced from UPM's own mills or the market, for label and packaging paper. In Kaipola, the main raw materials are spruce pulpwood, recovered household paper and spruce sawmill chips.

Both of the mill sites include a debarking plant, a TMP plant, a water plant, a biological effluent treatment plant and a power plant. The Kaipola site also includes a deinking plant for recovered household paper. At both mill sites, the heat and a small portion of the electricity required for mill processes are produced by the mill's own power plant. Heat is also recovered from the TMP plants.

The water used at the Jämsänkoski mill is sourced from Lake Koski-Keskinen and the Iso-Ryöni ravine, while the water source for the Kaipola mill is the Tiirinselkä in Lake Päijänne.

Production capacity	1,345,000 tonnes of paper
Personnel	870
Products	**Magazine paper:** UPM Cat, UPM Impresse, UPM Impresse Plus, UPM Max, UPM Max S, UPM Smart, UPM Cote, UPM Ultra, UPM Ultra Silk, UPM Valor **Newsprint:** UPM News, UPM Brite, UPM Book, UPM Color, UPM EcoBasic, UPM EcoLite, UPM EcoPrime, UPM Opalite, UPM Opalite Plus **Label and packaging paper:** UPM Label Papers, UPM Packaging Papers
Certificates	EMAS – EU Eco-Management and Audit Scheme ISO 14001 – Environmental Management System ETJ+ – Energy Efficiency System ISO 9001 – Quality Management System ISO 22000 – Food Safety Management System OHSAS 18001 – Occupational Health and Safety System PEFC™ Chain of Custody – Programme for the Endorsement of Forest Certification FSC® Chain of Custody – Forest Stewardship Council All certificates can be found from UPM's Certificate Finder (available at www.upm.com/responsibility)
Environmental labels	EU Ecolabel

UPM Jämsä River Mills 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) 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.

We deliver renewable and responsible solutions and innovate for a future beyond fossils across six business areas: UPM Biorefining, UPM Energy, UPM Raflatac, UPM Specialty Papers, UPM Communication Papers and UPM Plywood. We employ around 19,000 people worldwide and our annual sales are approximately EUR 10.5 billion. Our shares are listed on Nasdaq Helsinki Ltd. UPM Biofore – Beyond fossils. www.upm.com

FSC www.fsc.org FSC® C014719

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PEFC PEFC/02-31-80 Promoting Sustainable Forest Management www.pefc.org

For more information about PEFC certification visit www.pefc.org

EU Ecolabel www.ecolabel.eu EU Ecolabel : FI/011/001

EU Ecolabel www.ecolabel.eu EU Ecolabel : FI/037/001

Review of year 2018

In 2018, we focused on improving our performance supported by culture of aiming higher and responsibility, along with a drive to find new sustainable solutions to mitigate risks, create competitive advantages, open up new growth opportunities and help to answer the global challenges.

Annual production at the Jämsä River Mills was higher in 2018 than in the previous year. A development project to reduce energy consumption in the production of mechanical pulp was completed in Kaipola. In Jämsänkoski in the production of label and packaging papers a calender was rebuilt to increase finishing capacity to serve higher value end uses. The investment was completed in October.

Feedback from local residents

We received feedback from the local residents near the Kaipola mill about the odour nuisances caused by the waste water treatment plant, especially in the spring of 2018. Throughout the year, we kept investing in the continuous monitoring of waste water hydrogen sulphide levels in order to determine what production situations are prone to the formation of odour-causing hydrogen sulphide. The hydrogen sulphide detected in the waste water at the mill's treatment plant indicates that it is possible that odours have occurred in nearby residential areas. The measurements relate to one point in the process; the occurrence of odours in nearby residential areas also depends strongly on the weather and the direction of the wind.

Based on the information obtained from continuous monitoring and the inspection carried out by an external collaboration partner, calcium nitrate was fed to the waste water to reduce the odour nuisances. In addition to its continuous aeration, another source of oxygen in waste water is nitrate, which prevents the formation of odour-causing hydrogen sulphide. Experiences so far indicate that the odour nuisance has been reduced. We are continuing to work on reducing odour nuisances.

A short-term malfunction at Jämsänkoski

In July 2018, the mechanical primary clarifier at the Jämsänkoski mill discharged effluent into the Jämsänjoki river. The amount of discharge was approximately 77 m^3 and contained a small amount of effluent load. The discharge corresponds to less than one percent of the amount of effluent treated at the mill daily. The discharge that occurred appeared cloudy and was confined to a very limited area in the immediate vicinity. The discharge was not observable at later monitoring points. The effluent discharge was caused by a data transfer malfunction of the automation system that resulted in the effluent pumps stopping.

Product safety and sustainability

Customer enquiries regarding our products mainly related to product safety, certification of the sources of wood raw materials and forests and the use of environmental labels. Product safety is especially important in the case of label and packaging paper used by the food industry. Our papers are safe to use throughout their entire product lifecycles. Papers with food contact certificates can be in direct contact with dry and non-fatty food.

A certification for use involving contact with food was obtained for the label papers. It guarantees that the products comply with the German BfR Recommendation XXXVI and US FDA regulation Title 21 CFR, Parts 170–189. The ISO 22000 certificate held by the Jämsänkoski Speciality Papers unit guarantees that our operations meet the demands of the standard as part of the food supply chain. The raw materials used in our products are suitable for end use with food products, and our processes and products comply with cleanliness requirements. The raw materials we use and our end products are always traceable.

UPM Specialty Papers is actively developing recyclable and renewable barrier papers for wrapping and packaging. These specialty papers can, among other uses, replace plastic-coated disposable papers in packaging food.

Assessments support the development of operations

Our operations have been assessed by independent, external experts. The external audit of the ISO 14001 environmental system, the ISO 9001 quality system, the ISO 22000 food safety system, the OHSAS 18001 occupational health and safety system and the ETJ+ energy-efficiency system that was undertaken in the autumn noted a total of thirteen minor non-conformities. Corrective measures and timelines for implementing them have been set for all minor non-conformities.

The assessors gave good feedback on our extensive safety training. Managers and supervisors took part in the training first, followed by the rest of the employees. According to the assessor's feedback, safety and other issues are thoroughly handled. Based on the feedback, we should develop the monitoring of our goals, among other things. Figures and their monitoring should be collected in one place for personnel to see.

The so-called multisite assessments of UPM paper mills are carried out following a separate plan. The assessments concern all certified systems. The goal is to ensure that the practices of different units are as compatible as possible. The auditors' extensive expertise in UPM's

other industries brings new views to the development of operations. Internal assessment operations between the mills are developed based on experience.

Identification of risks and hazards and elimination of significant risks are the most important goals for both occupational and environmental safety. Safe-working practices have been specified in detailed instructions. Evacuation drills involving all personnel are conducted regularly.

Environmental permit review applications

The Kaipola mill filed an environmental permit review application at the end of 2015. The environmental permit review was based on the entry into force of the BAT conclusions on pulp, board and paper production published in the autumn of 2014, and the clarification of the permit regulation concerning noise. The permit decision was issued in February 2017. An appeal has been filed and the decision is not final.

The Jämsänkoski paper mill received an environmental permit decision at the end of 2016. An appeal has been filed and the decision is not final. The environmental permit application was filed because it was necessary for the permit to be revised to conform with changes in the mill's operations, the BAT conclusions and the new Environmental Protection Act that came into effect in 2014.

The Vierelä landfill site in Jämsänkoski received an environmental permit decision at the end of 2018. An appeal has been filed and the decision is not final. Power plant ash is being temporarily stored at the Vierelä landfill site as needed. There has been no need for landfilling in recent years.

An environmental permit application for the Pitkäniemi landfill site in Kaipola was submitted in August 2017. The application concerns the suspension of landfill operations, the intermediate storage of waste being directed to recovery and measures to be taken in the waste-disposal area that will be closed. A decision concerning the application has not yet been forthcoming.

The environmental impacts of the mills, in terms of watercourses and fishery, are being monitored by the Eurofins unit in Jyväskylä. The monitoring is carried out in accordance with the programme approved by the Centre for Economic Development, Transport and the Environment, in co-operation with the town of Jämsä. Air quality is being monitored in co-operation with Jämsän Aluelämpö Oy and the town of Jämsä.

Wellbeing at work

We are working closely with employees and external occupational health organisations to support the wellbeing of our personnel. Our aim is to support the continuous improvement of employees' health, quality of life and ability to work.

UPM continued the quarterly global health and safety themes throughout 2018. These focused on how to stay vigilant and alert at work, how to take care of your personal mental and physical recovery, and how to avoid accidents at home and during your free time.

In the Jämsä River Mills, the amount of sick leaves increased a little compared to the year before, but still stayed at a reasonably good level of 3.9%. Approximately 46% of personnel did not have a sick leave at all in 2018. To foster

wellbeing at work UPM has models for early support activities, e.g. modified work.

Strengthening a proactive safety culture

Our proactive safety culture is based on the company values, the UPM Code of Conduct and our health and safety policy, UPM safety rules. The safety rules, which connect UPM's safety vision to everyday activities, were updated in 2018.

Our global One Safety tool is used for proactively reporting safety incidents. All employees of UPM and our contractors are required to report all near-misses and to make safety and environmental observations. This open and transparent tool supports us in achieving the objectives we have set and allows us to proactively share the insights gained from incidents across UPM. The One Safety tool also supports effective safety steering and OHS risk management.

The safety training programme initiated at the Jämsä River Mills in 2017 continued with personnel training sessions in early 2018. Over 800 employees participated in these 7 sessions. The training was carried out by line managers and supervisors who had participated the previous year. Based on the figures, the development in safety issues seemed promising in the last two quarters of 2018.

Pia Siirola-Kourunen, Environmental Manager

Antti Hermonen, General Manager

UPM Jämsä River Mills

Responsibility figures 2018

Waste

Amount of waste taken to landfill

0 kg

Waste is recovered as materials or for energy

Power plant ash directed to reuse

100%

Ash recovered for soil improvement and construction

Certified Fibre

86%

of fibre used in paper production was FSC and/or PEFC certified. UPM's target is to use only certified fiber by 2030

Recycled Fibre

26%

of the fibre used at Kaipola

Taxes

Mills' local tax impact approx.

EUR 32 million

Real estate tax EUR 0.8 million

Estimate of tax on salaries EUR 7.9 million

Estimate of corporate income tax EUR 23.7 million based on the number of employees*

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

Safety

3,286

environmental and safety observations, near-misses, safety walks and discussions recorded by the employees and contractors of UPM Jämsä River Mills

Consumption impact*

Mill's consumption impact in region approx.

EUR 37 million

in Finland approx.

EUR 65 million

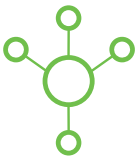
* Direct and indirect employees' private consumption of commodities through net income

Health

889

preventive health checks, including pre-employment, statutory and age group examinations

Supply Chain



99%

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

Employment

The mills employed directly

870 people

and offered

145 summer jobs

Indirect employment effect in region approx.

850 persons

Energy

Biomass-based fuel

68%

of the fuel used by the power plants

Air

Power plant emissions into the air remained below the maximum permitted levels. Total fossil carbon dioxide emissions increased slightly at both the Kaipola and the Jämsänkoski power plants. The share of forest bioenergy and sawmill wood residues decreased compared to the previous year, leading to an increase in the use of peat. Other emissions decreased or remained at the previous year's level. New control models have decreased nitrogen oxide emissions compared to 2016 at both plants. The total efficiency of boilers was also improved for the aforementioned reason.

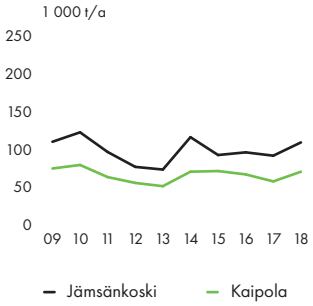
The use of biomass-based fuel—forest bioenergy, bark and sludge—decreased slightly compared to the previous year. Their share of all fuel was nearly 70%. The use of oil amounted to less than 2% of the total at both plants.

The Jämsänkoski power plant's updated monitoring programme for environmental protection was approved in 2018. The monitoring programme describes the implementation of the environmental permit decision.

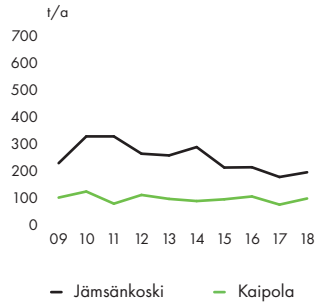
Particulate measurements have indicated that the average air quality in the town of Jämsä has, for the most part, been good. During the spring street-dust season, particulate measurements have shown air quality to be satisfactory. The key sources of particulates in the air are traffic, the heating of buildings and a variety of diffuse emissions. Monitoring has shown that industrial and energy production plants generate very few particle emissions.

Most nitrogen emissions in the Jämsä region come from road traffic and the production of energy. The concentrations of nitrogen oxide measured in the town centre are below the guideline value.

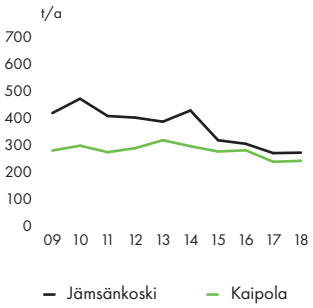
Fossil carbon dioxide, CO_2



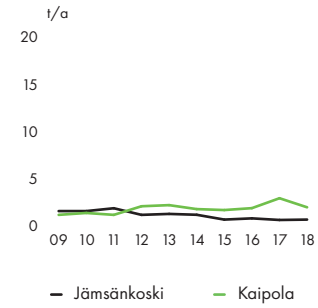
Sulphur dioxide, SO_2



Nitrogen oxides, NO_x

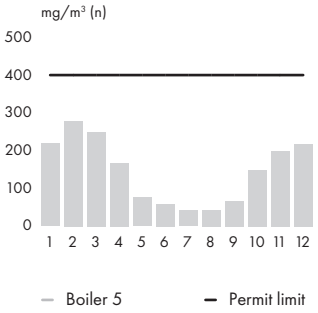


Particulates

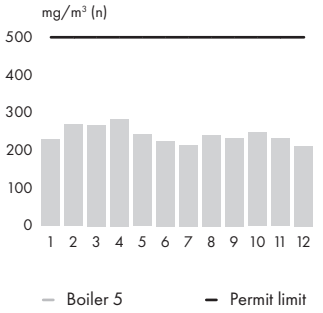


SPECIFIC EMISSIONS FROM THE POWER PLANT'S MAIN BOILER, Jämsänkoski

Sulphur dioxide, SO_2

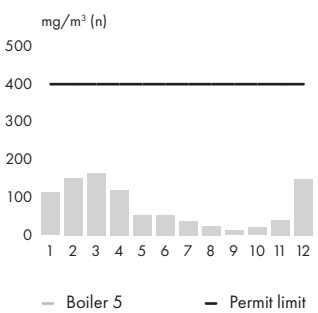


Nitrogen oxides, NO_x

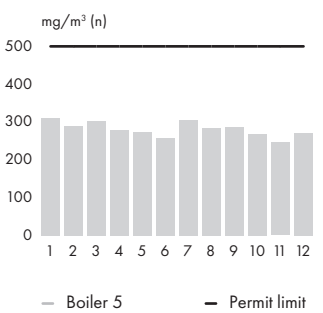


SPECIFIC EMISSIONS FROM THE POWER PLANT'S MAIN BOILER, Kaipola

Sulphur dioxide, SO_2



Nitrogen oxides, NO_x



Waste

One of UPM's global objectives is that by 2030, no process waste of any kind, and at any UPM location, will be disposed of in landfills or burned without recovering the energy produced. The objectives support the United Nations' global sustainability objectives for 2030.

The Jämsä River Mills are forerunner in achieving UPM's objectives concerning the reduction of waste taken to the landfill. Processes have been developed to minimise the generation of waste, and the fractions that are generated are reused, mainly by means of recycling. Since 2016, no waste has been taken to the landfill from the Jämsä River Mills. All waste generated is reused, either as is or after further processing. Fractions that the mill and other operators cannot use as materials are used as sources of energy. As transporting fractions far from the mill for further processing is not financially or environmentally effective, local partners play an important role in meeting this objective. The amount of waste generated by the Jämsä River Mills was on a par with the previous year.

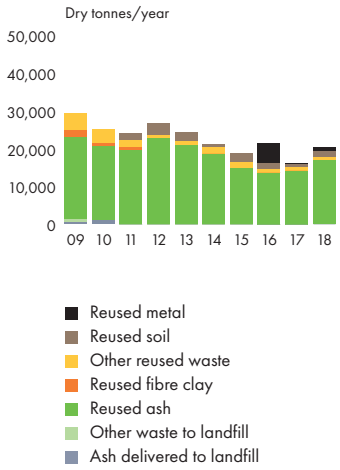
In both mill units, ash from the power plants constitutes the largest waste fraction. The amount of ash was slightly higher than the previous year. All of the ash produced was reused. A significant portion of the ash was used for soil improvement, mainly in crop fields. The ash contains high amounts of calcium, and also important trace elements, such as magnesium and potassium. The ash complies with the requirements of the Finnish Fertiliser Product Act, and, in addition to self-monitoring, Evira monitors ash properties on a regular basis.

Another significant reuse application has been construction, with the ash being used in the reconstruction of forest roads. The ash is used in the road base to improve the load-bearing capacity and frost resistance of the road. The ash is used instead of stone.

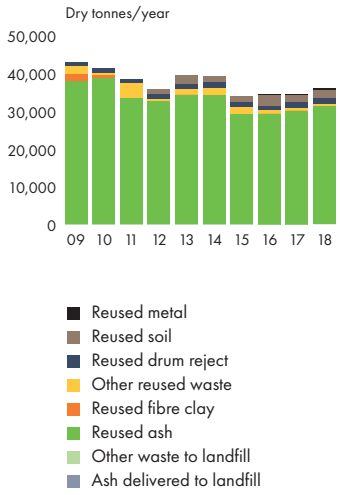
In addition to ash, the most important waste fractions were soil from forest energy and drum reject generated during processing of recovered paper. As in previous years, the drum reject, consisting primarily of wood fibres and plastic, was sent to a local waste management company to be used as raw material for recovered fuel. The soil was sifted and reused in the Himos area. The wood materials separated in the sifting process were forwarded to the Kaipola power plant for burning. The mills' waste oils were sent to regeneration plants for reuse.

Waste generated at the mills is carefully separated into different fractions, which are then reused as raw materials or for energy. Oils, metals, plastics, papers and cardboards are reused. Hazardous waste is sent to Fortum Oy in Riihimäki for processing by various methods. Wood waste, plastics, and paper and board waste unsuitable for recycling are used to produce recovered fuel or sent to facilities such as the Rauman Biovoima energy plant for burning.

Process waste, Jämsänkoski



Process waste, Kaipola



Water

In compliance with UPM's environmental principles, the mills use water responsibly. The goal is to minimise the impact of the operations on local water resources. The Joint Monitoring Programme for Central Päijänne has revealed that most of the area's nutrient load is caused by nonpoint source pollution from forestry and agriculture. According to the 2017 joint monitoring results, Kaipola's effluents accounted for 7.0% of the phosphorus load and 3.7% of the nitrogen load in the monitored area. Correspondingly, Jämsänkoski's effluents accounted for 8.9% of the phosphorus load and 3.7% of the nitrogen load in the monitored area. The water quality in the monitored area does not limit the populations of any sensitive species of fish.

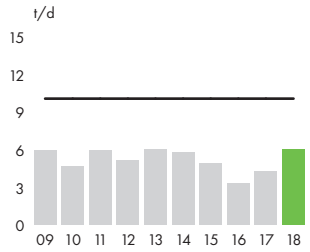
The volume of process water used per tonne of paper produced remained at the previous year's level. The volume of process water used complied with the target level and the best available technology (BAT ref 2014) level.

Kaipola mill's effluent phosphorus load decreased from the previous year and slightly increased in terms of organic load, solids and nitrogen load. The operations of the treatment plant met the effluent limits set for processed waste water.

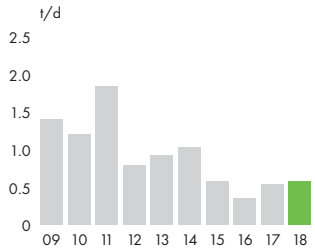
Kaipola mill's environmental permit includes monthly effluent discharge limits for chemical oxygen demand (COD), phosphorus and nitrogen. In addition, an annual discharge limit has been imposed for COD, and annual target values are in place for phosphorus and nitrogen. The monthly and annual emission limits for solid emissions in the

JÄMSÄNKOSKI

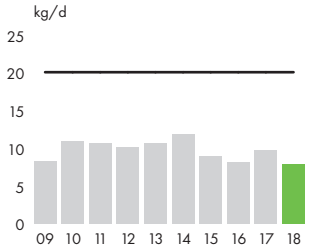
Chemical oxygen demand, COD



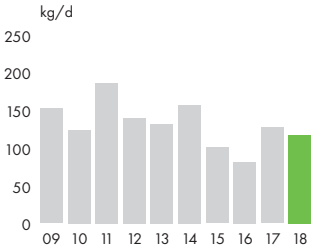
Total suspended solids, TSS



Phosphorus, P



Nitrogen, N



— Permit limit

purified effluent came into effect on 1 October 2018.

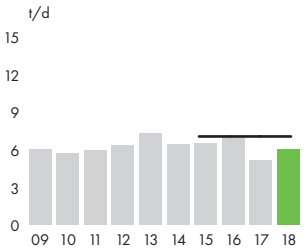
The effluent load of the Jämsänkoski mill complied with the limits established by the environmental permit. The environmental permit for the Jämsänkoski mill includes effluent discharge limits for COD and phosphorus. The monthly and annual emission limits for solid emissions in the purified effluent came into effect on 1 October 2018.

The effluent load at the Jämsänkoski mill increased slightly compared to the previous year in terms of COD and solids and decreased in terms of the nutrient load.

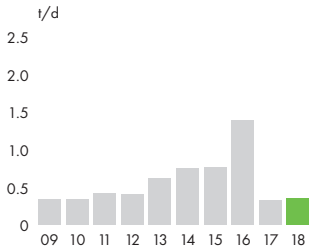
At both mills, an increase in annual production caused a greater organic load to be directed to the waste water treatment plant for processing, which was then evident in the slightly higher load of the processed waste water. Throughout the year, there were 87 environmental observations and minor deviations that were dealt with in the daily operations of the mills, in accordance with the UPM operating model.

KAIPOLA

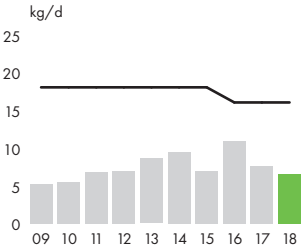
Chemical oxygen demand, COD



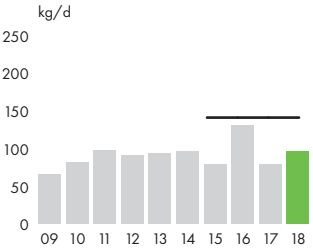
Total suspended solids, TSS



Phosphorus, P



Nitrogen, N



— Permit limit

Societal responsibility

Zero-accident target
Our goal in UPM is to be the industry leader in health and safety. Safety is fully embedded in our daily activities and is not considered less or secondary than any other interest. We strive to reduce and eliminate accidents under our control through continuous improvement and effective risk management.

Our employees, as well as business partners and their employees, are required to adopt safe work practices and to comply with the rules and standards we have established.

Before accessing UPM production site, contractors get UPM safety training, which presents and demonstrates the basic safety requirements. This is complemented with a job specific safety induction and a permit to work.

In 2018, 1126 safety walks and discussions and almost 2200 near-misses and safety and environmental observations were recorded using the One Safety tool at the Jämsä River mills.

Our permanent target is to have zero accidents, with good safety performance recognised through company-wide safety awards. As part of the proactive actions in work safety at the Jämsä River Mills, we monthly choose a safety observation that is exceptionally good and promotes or has a great impact for safety.

The safety training carried out at the Jämsä River Mills in 2017 and 2018 demonstrated that UPM's safety rules and principles are well known by our employees. The main points that came out from the training have been included in a development programme which is implemented by departments.

One of the main focuses of the development programme is on increasing our employees' knowledge of the safety risks of their work. This works best in practice when employees participate in updating their workplace's risk assessments.

In 2019, the personnel's safety attitude is improved with good leadership. Managers and supervisors will pay special attention to employees observation skills and to make sure they understand that intervening is caring. The zero-accident target requires that our common goal is to focus on doing the safety works always exactly right.

Health and wellbeing at work
The Jämsä River Mills offers a fitness centre and a sports hall for employees to use for free with their families. UPM also supports employees' exercise and cultural activities.

Several employees from the Jämsä River Mills participated in a variety of different training sessions related to workplace wellbeing during 2018. Two workplace wellbeing projects customised for mill personnel were finalised at the Jämsä River Mills, the first aimed at individuals whose ability to work is at particular risk, and the second for those who do a lot of sitting at work. Our employees participated actively in variety of first aid, safety and Occupational Safety Card and Hot Work Card trainings.

Employees' ability to work was also taken care of through a total of 664 versatile health checks. The health checks include both the age group examinations and statutory examinations for people performing tasks that may cause exposures. The age group examinations are performed every 5 years for people under the age of 50 and every 2.5 years for people over the age of 50. 225 pre-employment examinations were aimed at new employees.

Encouraging learning
We encourage our employees to pursue professional growth and support them in learning and developing their skills. Ensuring high performance for business success and continuous professional development are UPM's long-term goals.

At the Jämsä River Mills, employee skills were ensured with several training sessions over a total of 2462 training days. Safety training was still the most important theme, but we also focused in particular on developing supervisory work by carrying out joint training sessions together with other Communication Papers units in Finland.

The UPM mills host apprenticeship programmes in which employees learn a profession through hands-on work and theoretical learning. The Jämsä River Mills participate in an apprenticeship training programme, initiated in collaboration with the UPM Rauma and Tervasaari mills, which leads to the "Further Qualification for Power Plant Operators". Four people from the Jämsä River Mills participate in the programme.

During the autumn of 2018, we prepared new two-year apprenticeship programmes to secure our future needs for labour and recruited 22 future employees to three parallel programmes: production, automation and mechanical maintenance. The apprenticeship programmes began in January 2019 and are carried out in collaboration with the Rauma and Tervasaari mills. The main goal of all apprenticeship programmes is to obtain the most versatile professional know-how possible.

UPM Communication Papers initiated a Graduate Trainee programme last year and recruited seven newly qualified university students in total. The programme contains a practical training period and Jämsä River Mills offered one trainee position for this purpose. The UPM Bioforce Graduate programme, launched in 2017, was continued, and Jämsä River Mills opened up another trainee position for this programme too.

Continuously aiming higher
Implementing of the culture of Aiming Higher includes encouraging to learn, enabling performance with agile goal-setting and feedback, engaging employees to develop the workplace, responsible management based on values, recognition of and reward for high performance and developing a diverse and inclusive work environment.

UPM has a systematic process for goal-setting and manager-employee dialogue on performance. In 2018, 89% of UPM employees (93% at Jämsä River Mills) had goal setting or annual discussion completed.

Biofore Share and Care Programme

UPM is involved in many causes and community projects supporting sustainable development and the prosperity and welfare of the communities in which we are active. Our work on this arena is clearly connected to our Biofore Strategy and responsibility targets. It is coordinated under the umbrella of our Biofore Share and Care programme.

The Biofore Share and Care programme comprises three forms of support: sponsorships, donations and employee volunteering. The support can be a monetary contribution, products, materials or employee volunteering. Local sponsorship is target-oriented and long-term involvement in the community where UPM operates.

In 2018, the Biofore Share and Care programme supported local youth activities through culture and sports clubs operations at the Jämsä River Mills.

Tax impact

Tax revenue generated by UPM's business operations is an essential part of our societal impact. UPM pays corporate income taxes in the countries where added value is created and profit is generated. Based on UPM's corporate and operational structure, UPM reports and pays its corporate income taxes mainly in countries where production activity takes place and where innovations are developed. In addition to the taxes on income, UPM's various production inputs and outputs are also subject to taxation. Taxes are paid in accordance with the local tax legislation and regulations of the country in question.

In 2018, UPM's corporate income taxes paid and property taxes were approximately EUR 283 million in total (EUR 251 million in 2017).

The mills' operations benefit also the local community in many ways. Municipal share of corporate income taxes and the real estate taxes paid by UPM support the local economy. In addition the taxes and social security contributions that UPM employees pay on their wages have also a significant local impact. Furthermore, the purchasing power of UPM employees and subcontractors maintains and enhances the vitality of the community.

Responsible sourcing and qualified supplier spend

UPM is committed to responsible sourcing practices throughout the entire supply chain. We work closely with our suppliers to ensure that our suppliers understand and meet all of the company's requirements on sustainability and responsibility.

UPM requires its suppliers to comply with the UPM Supplier Code and Third Party Code (Code) that defines suppliers' minimum requirements in terms of responsibility with regard to matters such as environmental impact, human rights, labour 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 UPM Supplier and Third Party Code by 2030 (Qualified spend). In 2018, 94% of UPM`s raw material spend and 83% of all spend was qualified against the UPM Supplier and Third Party Code.

Suppliers' environmental and social performance is followed through regular data collection and analysis. Based on the annual risk assessments, we select the suppliers whose performance we want to study more closely. If any non-conformancies are found, the supplier is obligated to make corrective actions. We follow actively the results of these actions and are ready to support our suppliers with our know-how in order to help them to enhance their performance.

The UPM Code of Conduct sets standards for responsible behavior towards our stakeholders. The standards cover topics relating to legal compliance and disclosure, conflicts of interest, anti-corruption and anti-bribery, HR practices, human rights questions and environmental matters. At the Jämsä River Mills, 99,6% of employees actively employed have completed training on the Code od Conduct.

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.

Production capacity	Paper	1,345,000 tonnes
Raw materials	Wood Recovered paper Pulp Fillers and coating pigments Process chemicals	See UPM Corporate Environmental and Societal Responsibility Statement for more information
Energy	Biomass-based and fossil fuels Purchased energy	Biomass-based fuels 68%, fossil fuels 32% See UPM Corporate Environmental and Societal Responsibility Statement for more information
Emissions to air	Particulates Sulphur dioxide, SO_2 Nitrogen oxides, NO_2 Carbon dioxide, CO_2, (fossil)	2.3 t 281 t 500 t 175,340 t
Water intake	Process and cooling water	25,605,000 m^3
Discharges to water	Cooling water Effluent volume Chemical oxygen demand, COD Biological oxygen demand, BOD_7 Phosphorus, P Nitrogen, N	9,853,000 m^3 15,717,000 m^3 4,392 t 219 t 5.3 t 78 t
Waste	Waste to landfill Reused waste – ash – drum reject from the deinking plant – soil – metal – other Intermediate storage Hazardous waste – of which recyclable waste oil	0 t 48,044 t 1,431 t 3,908 t 1,305 t 1,478 t 0 t 129 t 73%
Size of mill area	Jämsänkoski and Kaipola	120 ha

Performance against targets in 2018

TARGET	ACHIEVEMENT	COMMENTS
At the Jämsä River Mills, no environmental deviations in categories 3–5	Yes	No deviations from the environmental permit's emission limits or other significant disturbances
Prevention of odour problems	Partially yes	The odour nuisance in Kaipola has been reduced, work is continued
Stakeholder engagement in the local area	No	A stakeholder meeting has not been held, because the environmental permits are not yet legally final

Targets for 2019

TARGET	REQUIREMENTS BY DEPARTMENT
At the Jämsä River Mills, no environmental deviations in categories 3–5	Fast reaction to deviations
At the Jämsä River Mills, improvement of safety results (TRIF < 6.0)	Improving the safety culture by continuing the safety programme
Stakeholder engagement in the local community	Stakeholder meetings will be held once the environmental permit decisions are legally final
The promotion of the UPM group's environmental objectives for 2030 at the Jämsä River Mills	Planning has started

EMAS
Verified environmental management
REG.NO. FI - 000058

Validation statement

As accredited environmental verifier (FI-V-0001), Inspecta Sertifiointi Oy has examined the environmental management system and the information of UPM Jämsä River Mills 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 2019-04-03 that the environmental management system, this UPM Jämsä River Mills Environmental and Societal Responsibility report and the information concerning UPM Jämsä River Mills of UPM Corporate Environmental and Societal Responsibility Statement are in compliance with the requirements of the EMAS Regulation (EC) No 1221/2009.

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