

Metsä Board
CEO Water Mandate
Communication on Progress (COP-Water) 2011

Metsä Board is Europe's leading producer of fresh forest fibre cartonboards, the world's leading manufacturer of coated white-top kraftliners, and a major paper supplier. It offers premium solutions for consumer and retail packaging, graphics and office end-uses. The company's sales network serves brand owners, carton printers, corrugated packaging manufacturers, printers, merchants and office suppliers. Metsä Board is part of Metsä Group and is listed on the NASDAQ OMX Helsinki. In 2011, Metsä Board's sales totalled EUR 2.5 billion. Metsä Board has approximately 4,000 employees. We have 9 production units in three European countries and about 4,000 employees. Most Metsä Board mills are located in Finland, one in Germany and one in Sweden.

Metsä Board signed the CEO Water Mandate initiative at the beginning of 2011. CEO Water Mandate is a joint venture between the public and private sectors with the aim to improve the efficiency of and open reporting on water usage. This is Metsä Board's first CEO Water Mandate report.

Direct Operations

Fresh water is one of the main natural resources in the Nordic countries. All our mills are long-standing production sites and built on places with abundant supply of good quality surface water. Water needed for production is obtained from rivers and lakes; at our German mill also groundwater from wells is used. As all our mills are located in areas where there is plenty of water available thus they do not compete with other water uses like irrigation of fields for food production or usage for other industry sectors or as drinking water.

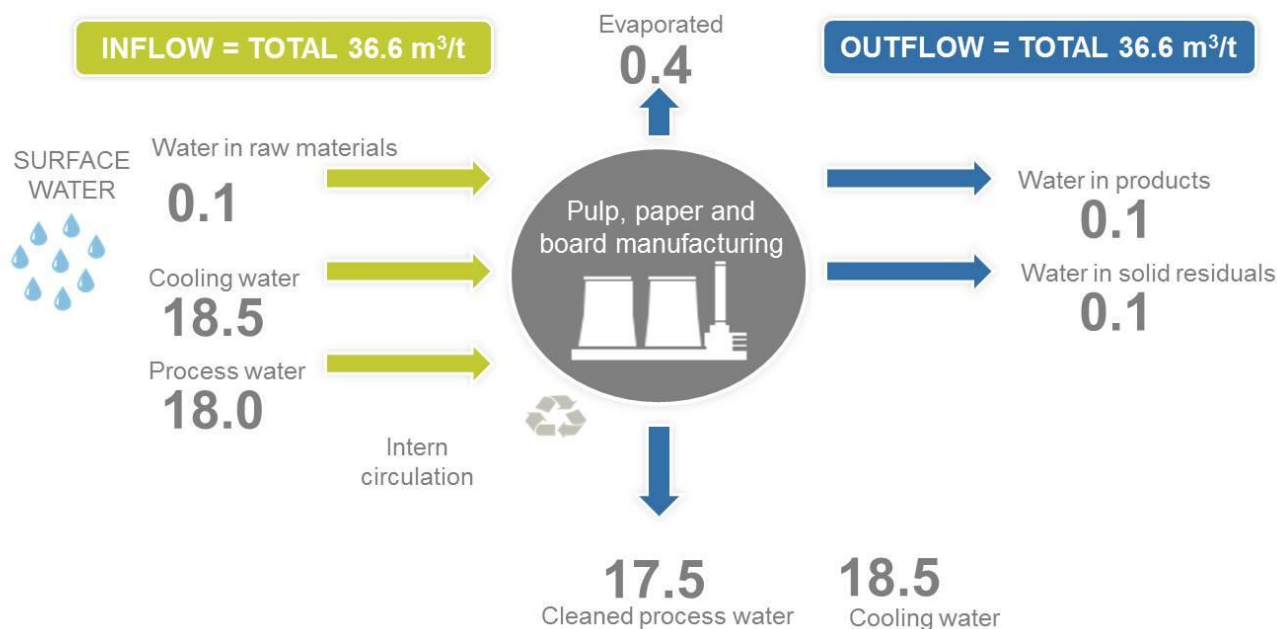
On average, European water use is 6% of the available regional water resources. Utilisation degree of water resources is remarkably different in different parts of Europe. For example in Finland and Sweden it is 2%.

Water use in papermaking

Water is vital in board and paper production. It is used in several operations and for numerous purposes during the manufacturing process. Water consumption depends of the location of the mill, paper machine design, paper grade, raw materials and water supply. Water withdrawal by Metsä Board mills totaled some 180 Mm³ in 2011. Almost all (95%) was surface water from rivers and lakes. The water intake to mills is negligible in comparison to the total flow of the river and is typically some 0.1–1 % of the flow. Additionally, water intake from wells is carefully controlled by the mill's environmental permit.

Fresh water is used in places where the clean water is needed the most e.g. paper machine showers, in the application of additives and in the coating stage of the papermaking process. On the other hand, process water is circulated in the process and reused several times, either directly or after the internal purification.

Water balance in pulp, paper and board manufacturing process (case example - Metsä Board mill)



Optimised water use saves costs. We continuously seek new ways to minimise the use of fresh water in our processes by recycling it effectively. This reduces the wastewater emissions and saves energy, thus cuts carbon dioxide emissions, hence decreases the impact on the climate as well. Reducing water use automatically decreases energy consumption as less water needs to be pumped, heated and purified. The percentage of recycled and reused water varies mill by mill, mainly depending on local water conditions, process technology and product quality requirements. Typically water is re-circulated in the process from six to ten times, then purified and returned to natural water bodies. As a result, the need of fresh water varies between 8 m³ and 32 m³ per ton board or paper produced.

Cooling waters stay clean when going through processes and therefore do not need purification when returned to water bodies. All used process water is cleaned carefully before discharging back to the rivers or other water bodies. Metsä Board mainly utilises mills' own waste water treatment plants, which use modern activated sludge biological purification technology. Total amount of purified waste waters was 86 Mm³ in 2011. Discharged process waters and their impacts are strictly regulated by mills' environmental permits and therefore carefully monitored and reported to authorities. In 2011, Metsä Board had two cases where a single waste water parameter exceeded the limit set in the mill's environmental permit. Immediate corrective actions were launched to minimise possible environmental impacts and to prevent similar cases to happen in the future. In general, the impact on environment caused by waste water and other emissions have decreased at Metsä Board mills during past years as following charts indicate.

Impacts caused by wastewater and other emissions



More detailed emission data has been published in [Metsä Board's Sustainability Report 2011](#)

Supply Chain and Watershed Management

The most important raw materials for Metsä Board processes are wood and pulp. Wood is supplied by Metsä Forest, the sister company of Metsä Board. Majority of wood has been purchased from Finland and Sweden and the share of certified (PEFC or FSC) timber is 65 %. Forest certification together with certified environmental and quality management systems applied in logging operations are a proof of sustainable forest procurement, including protection of water bodies.

Pulp is manufactured either at Metsä Board's own pulp mills or supplied by Metsä Fibre, the sister company of Metsä Board. Metsä Forest is also the wood supplier to Metsä Fibre's pulp mills. At pulp mills, the water withdrawal, use, recycling and waste water purification is similar to those of paper and board mills. At the pulp mill, some 30 m³ of fresh water is required to make a ton of pulp. Detailed information on Metsä Fibre pulp mills' emissions has been published in [Metsä Group's Sustainability Report 2011](#)

Additionally, Metsä Group utilises in its processes other raw materials such as fillers, coating pigments and binders for coating. Total waste water volume by all these components is approximately 0,7 m³ per ton board.

Policies and targets

Metsä Group's common policies cover all Groups' business areas, including Metsä Board. Metsä Board is committed in many ways to conducting its business in a responsible manner and continuously improving its operations. The responsibility of operations in Metsä Board is guided by the Metsä Group Code of Conduct, Sustainability Principles and the Environmental Policy. Metsä Group's Sustainability Principles are based on the UN's Global Compact initiative. In its operations, the Group is committed to adhering to and promoting the initiative's ten principles related to human and labour rights, environmental responsibility and anti-corruption. As a part of Metsä Group, Metsä Board is also a member of the World Business Council for Sustainable Development (WBCSD).

Metsä Group's policies are available on Group's website

In 2011, Metsä Group determined a set of sustainability targets to ensure an efficient sustainability management through out the Group and in all its business areas. These targets cover a wide range of key sustainability issues from sustainable raw materials, to energy efficiency and employee well-being.

Management systems allow us to assess our performance and to continuously improve our operations. They help us to achieve the Group's strategic objectives; improve our key performance indicators; support our sustainability performance, and manage operational risks. Metsä Board's mills have set their own targets and continuous improvement plans for water use in their environmental management systems. Most water related targets are linked to decreasing both water use and waste water emission loads.

Collective Actions

Metsä Board is also an active member in international and national forums related to water management and climate change. At the beginning of 2011, Metsä Board signed the CEO Water Mandate initiative. Signing the agreement was a natural step for Metsä Board since CEO Water Mandate is part of the UN Global Compact initiative. Metsä Board, as a part of Metsä Group, is among the very first companies in Finland to commit to the ten principles of the United Nations Global Compact initiative.

Additionally, Metsä Board is actively attending in the regional working groups set to implement the EU's Water Framework Directive in Finland. These working groups are established by the Finnish Ministry of the Environment and led by the areal environmental authorities. The purpose of the activity is to gather together different kinds of interest groups, such as communities, agriculture, forestry, different industries, water supply companies etc., and to discuss and plan actions required to reach and maintain good condition of both surface and ground water resources. The national implementation plan has been created based on the work of these working groups.

Community Engagement

Pulp and paper mills are usually built at a suitable rapid alongside a river in order to easily get enough water and hydro power for the mill. Later on, communities were gradually built around the mill's. Therefore the mills have traditionally operated closely with the surrounding communities. Metsä Board is a major player and an active member of the local communities in the regions where it operates. The socio-economic impacts of the company's operations have major effects on different stakeholder groups and locations.

As well as providing livelihood for forest owners, Metsä Board is an important employer, also in many remote areas. In addition to the people the company employs directly, it generates significant employment opportunities indirectly for its partners and subcontractors. Metsä Board aims to create well-being for mutual benefit of all its stakeholders. For this reason, the company takes into account the impacts that the surrounding communities might undergo due to changes in its operations already during the planning phase - whether it is investing in the current, starting up new or closing down existing operations.

Transparency

Metsä Board aims to be an open and transparent company that actively engages to a discussion with its stakeholders. Transparent and straightforward sustainability communication is part of our core values.

Metsä Board reports its sustainability performance on the company as well as on product levels. For more details have a look at [Metsä Board's website](#) for more information about sustainability. Additionally [Metsä Group's Sustainability Report 2011](#) includes detailed information also about Metsä Board's sustainability performance.

Metsä Board publishes product and production related environmental information and utilises environmental labeling in its products as a proof of their environmental quality. The company uses several product declarations intended for pulp and paper products. For example, Metsä Board has issued Paper Profiles for all of its paper and board products already since 2001. Paper Profile declarations are available at www.metsaboard.com/paperprofiles

Additionally Metsä Group has conducted Carbon Footprint calculations for all board and paper products. These reports will be delivered to customers upon request.

Conclusion

Engagement in the CEO Water Mandate motivates Metsä Board to further improve the company's work towards sustainable operations and helps to communicate better of its achievements. Reducing waste water emissions and their impacts have been and still are high in Metsä Board's sustainability agenda. Energy savings and simultaneous reduction of carbon dioxide emissions linked to reduction of water use are the company's actual challenges.

Metsä Board will continue to endorse the UN Global Compact's CEO Water Mandate. It supports the company in its efforts to improve sustainability of all operations. The Mandate also assists Metsä Board's work to motivate its stakeholders in addressing the importance and impacts of their water use.