

# SUSTAINABILITY IS THE BASIS FOR METSÄ BOARD'S SUCCESS

→ Well-being at work increases personnel motivation and productivity as well as the number of healthy service years.

→ Product safety should be taken into consideration throughout the supply chain.

## SUSTAINABILITY THEME



### EMPLOYEE AND SOCIAL RELATIONS

- Human rights
- Ethical business operations
- Responsible employer
- Well-being for local communities



### SUSTAINABLE OFFERING

- Sustainable products, services and innovations
- Product safety

## DEVELOPMENTS IN 2013

- ▶ In 2013, Metsä Board's lost-time accident frequency rate was 12.2 (13.2 in 2012) and sickness absenteeism rate 3.9 (3.9)
- ▶ Production units focused on work safety by
  - Implementing a reporting tool improving safety
  - Emphasising the importance of proactive efforts (observations, brief on-site safety presentations and safety walks)
  - Developing the safety of service providers
  - Updating safety audits
- ▶ Updating of stakeholder activities began

- ▶ Metsä Board launched the renewed light-weight folding boxboards with improved performance and printing properties in 2013
- ▶ The production of light-weight, fully-bleached kraftliners began at Husum mill
- ▶ The benefits of fresh forest fibre-based packaging were further highlighted

## TARGETS

- ▶ Metsä Board aims to improve its lost-time accident frequency rate by 10 per cent each year. The long-term target is zero
- ▶ The target is to keep the sickness absenteeism rate at the best European level and below 3 per cent at all times
- ▶ Safety management and attitudes towards work safety will be developed further by
  - Ensuring a high quality of safety orientation
  - Developing the risk assessment process
- ▶ Stakeholder activities will continue
- ▶ Workplace functionality is measured on a scale from 4 to 10. Metsä Board's aim is that the result would be over 8.3 in all units

- ▶ The competitiveness of the product portfolio will be improved by developing new and existing products as well as by seeking new end-uses
- ▶ The production efficiency and range of services will be improved at the mills
- ▶ The objective is to meet consumer needs in terms of appropriate and responsible packaging

→ The origin of raw materials must be traceable all the way back to their source.

→ Resource efficiency is the foundation of sustainable and economical operations –achieving more with less.



### RAW MATERIALS AND SUPPLIER MANAGEMENT

- Sustainable forest management and nature values
- Sustainable supply chain
- Partnerships with suppliers and forest owners



### ENVIRONMENTAL AND RESOURCE EFFICIENCY

- Energy and climate
- Water efficiency
- Material efficiency
- Environmental risk management

- ▶ In 2013, Metsä Board's production units used 4.8 million cubic metres of wood
  - 65 per cent originated from certified forests
- ▶ The risk assessment process started in order to identify potential risk suppliers regarding sustainability
- ▶ Supplier Code of Conduct was included in 107 contracts, accounting for 56 per cent of all new and renewed supplier contracts in 2013

- ▶ Metsä Board's aim is to reduce fossil CO<sub>2</sub> emissions in production by 30 per cent per product tonne by 2020 from the 2009 level. The objective was met already in 2013
  - CO<sub>2</sub> emissions have decreased by 35 per cent during 2009–2013
  - Energy-efficiency has improved by 7 per cent during 2009–2013
- ▶ New low-consistency refiners were installed at Kaskinen pulp mill
- ▶ Husum mill started to use pitch oil as fuel in the mill's lime kiln
- ▶ Metsä Board's mills started a project aimed at reducing water intake and fibre loss, and making water use more effective

- ▶ Metsä Board is able to trace all the wood it uses back to its origins. All wood raw material comes from sustainably managed forests
  - At Metsä Group level, the target is to sustain the amount of certified wood in operations above 80 per cent
- ▶ Further plans and implementation of supplier chain management will be carried out in 2014–2015
- ▶ The target is to audit 100 per cent of risk-rated key material suppliers against sustainability criteria by 2015

- ▶ The target is to improve energy-efficiency by 10 per cent by 2020 from the 2009 level
- ▶ The goal is to reduce process water consumption by 10 per cent by 2020 from the 2010 level
- ▶ The water consumption and material efficiency improvement projects launched in 2013 will continue in 2014

### SICKNESS ABSENTEEISM



### CO<sub>2</sub> EMISSIONS



### SHARE OF CERTIFIED WOOD



READ MORE FROM METSÄ GROUP'S SUSTAINABILITY REPORT

[www.metsagroup.com/sustainability](http://www.metsagroup.com/sustainability)

# SUSTAINABILITY GUIDES ALL OPERATIONS

Metsä Board's business operations are guided by Metsä Group's sustainable development principles based on the UN's Global Compact initiative. Sustainable development is an inseparable part of all operations and daily work.



Metsä Board openly reports on the impact of its operations and continuously develops related communication.

Paper Profile environmental product declarations have been provided for all Metsä Board's papers and paperboards since 2001, and carbon footprint calculations since 2007. More detailed reporting on the environmental impact (Environmental Product Declaration, EPD) of folding boxboards will continue in 2014, building on the experiences gained from the lifecycle assessment of Simcote folding boxboard in 2012.

Environmental labels help consumers understand the environmental impacts of a product. Metsä Board's office papers have been granted the EU Ecolabel. Corresponding criteria do not yet exist for packaging products. Information on pulp manufactured by Metsä Board is available in the new My Swan Account information system maintained by the Nordic ecolabel, or the Swan label.

Metsä Board is committed to several global initiatives aiming to open reporting on the environmental impact of operations, climate strategy and origin of fibres, among other things.

## METSÄ BOARD PARTICIPATES IN THE FOLLOWING INITIATIVES

UN Global Compact Nordic Network

UN CEO Water Mandate

CDP (Carbon Disclosure Project)

WWF Check Your Paper

WWF The Paper Company Environmental Index

Sedex (Supplier Ethical Data Exchange)

PREPS (Publishers' database for Responsible Environmental Paper Sourcing)

Forest certification organisations

- Programme for the Endorsement of Forest Certification (PEFC®)
- Forest Stewardship Council (FSC®)

## METSÄ BOARD ACTIVELY TAKES PART IN SEVERAL ORGANISATIONS

The World Business Council for Sustainable Development (WBCSD)

The Confederation of European Paper Industries (CEPI)

The European Organization for Packaging and the Environment (EUROPEN)

The Finnish Forest Industries Federation

The Swedish Forest Industries Federation

Verein Deutscher Papierfabriken (VDP)

The Confederation of Finnish Industries (EK)



# WELL-BEING FOR ALL

Safety is the basic requirement in all operations. It applies to both the working environment and products manufactured as well as the well-being of employees, suppliers and partners.

Motivated and satisfied personnel is Metsä Board's most important asset. Employees' work capacity is maintained by means of an early support model. The model includes assessing work capacity and intervening as early as possible in issues that may compromise work capacity, as well as a personal work capacity plan. Supervisors are provided with tools and training for identifying situations which are potential risks to personnel well-being.

Focus has been placed on occupational safety in recent years by efforts aimed at influencing attitudes and by promoting proactivity. Attention has been paid, in particular, to reporting observations related to safety and dangerous situations. The HSE (Health, Safety and Environment) tool enables employees to report safety observations, damage notifications, accidents and close calls endangering safety. The objective is to create a strong safety culture that everyone is committed to.

In the Finnish production units, 22 accidents at work were reported in 2013, which is 13 incidents less than the previous year. Lost-time accident frequency rate (accidents at work resulting in absence per one million worked hours) was 10.2 (2012: 16.5) at the Finnish mills.

In April 2013, the Etelä-Karjala District Court in Finland deemed three Metsä Board supervisors to have committed an industrial safety offence in an unfortunate accident in Simpele mill in 2011, in which an employee was trapped between board cylinders and was killed. The court ordered the three employees each to pay day-fines.

## OPEN DIALOGUE

Employee satisfaction is being continuously monitored. A personnel survey conducted at the beginning of 2013 measured job satisfaction and how the work environment promotes daily work. The survey results were positive

and slightly improved compared to the previous survey, conducted in 2011. The average organisation functionality index for Metsä Board was 8.3. The mill-specific results varied between 8.0 and 8.8 on a scale from 4 to 10. The research conducted 92 per cent of Metsä Board's employees and response rate was 70 per cent.

Metsä Board aims to continuously develop open and transparent dialogue with its stakeholders. The updating of stakeholder engagement began in 2013 in order to map the most essential stakeholders and key current and emerging topics, as well as to create procedures for stakeholder collaboration in 2014.

OCCUPATIONAL SAFETY AND WELL-BEING	2013	2012	2011
Sickness absenteeism, % <sup>1)</sup>	3.9	3.9	4.6
Work injury absenteeism, %	0.3	0.2	0.2
Lost-time accident frequency rate (per million worked hours)	12.2	13.2	16.1

<sup>1)</sup> Per cent of potential working hours

PERSONNEL PER COUNTRY	PERSONNEL 31 DEC. 2013 <sup>1)</sup>	PERSONNEL 31 DEC. 2012 <sup>1)</sup>	NET EMPLOYMENT CHANGE 2013	AVERAGE AGE OF EMPLOYEES 31 DEC. 2013
Finland	1,465	1,536	-71	44.9
Sweden	869	887	-18	47.3
Germany	534	577	-43	47.9
Other countries	248	279	-31	41.5
Total	3,116	3,279	-163	45.9

<sup>1)</sup> Full Time Equivalent



## SAFE AND CLEAN PRODUCTS

Metsä Board's products are manufactured from fresh forest fibre and are safe throughout their life-cycle.

The origin of all raw materials used in manufacturing Metsä Board's products is known. The products meet even the strictest standards concerning food safety: a fresh forest fibre-based paperboard product can be in direct contact with the food products with no taint, odour or anything else harmful being passed on to the food. All Metsä Board's paperboard mills have an ISO 22000 food safety certificate.

Metsä Board's light-weight products generate savings throughout the value chain by reducing the need for raw materials and the volumes to be transported. At the end of their life cycle, products can be recycled.

### CUSTOMER-ORIENTED DEVELOPMENT

Metsä Board carries out long-term work to develop new products and improve current ones. R&D focuses on manufacturing even lighter-weight products in the future, without compromising their end-use properties. New end-use areas are also being continuously sought. The operations are based on being

customer-oriented and on production and resource efficiency.

In 2013, Metsä Board launched renewed light-weight folding boxboards with advanced performance and printing properties. The product enhancement supports the growth of folding boxboard sales. Metsä Board actively participates in different cluster projects in order to find and use new technologies.

In spring 2013, a significant step was taken in growing the kraftliner business, as the production of fully bleached light-weight kraftliners began at Husum mill. The new products will support Metsä Board's core business and replace weakest profitable paper production. In 2014, the share of kraftliner production will be further increased in Husum. In the paper business, the aim is to further streamline the product portfolio.

All Metsä Board mills achieved remarkable savings in variable costs by means of a special development programme. The savings measures will continue in 2014.

Metsä Board works actively to strengthen its position as quality leader and to develop its supplier chain services to the highest level. The Lean SCM project, aiming to make supply chain processes and tools more effective, proceeded as planned in 2013. In paperboard businesses, the target is to complete the project in 2014.

There were no significant product recalls in 2013. Costs incurred by complaints in different parts of the supply chain equalled 0.6 per cent of sales. Mill- and product-specific goals equal 0.3–0.8 per cent of sales.

Metsä Board's R&D costs were approximately EUR 5 million in 2013, or approximately 0.3 per cent of operating expenses (2012: EUR 5 million and 0.3 per cent).



# RESPONSIBILITY THROUGHOUT THE SUPPLY CHAIN

Consumers want to be sure that the products they purchase are sustainable throughout the value chain.

Metsä Board requires that its suppliers' operations are sustainable and supports them in ethical business operations and in committing to responsible operating methods. Raw materials and services are purchased from reliable suppliers who are able to sign the Supplier Code of Conduct that highlights the respect for human rights and importance of a safe working environment and prohibits corruption and bribery. The supplier should also ensure that its subcontractors comply with the same requirements.

In 2013, the Supplier Code of Conduct was included in a total of 107 agreements. The Code is now included in 28 per cent of all signed agreements. Metsä Board's target is that by 2015 the auditing rate of the key critical material suppliers is 100. During the year under review, the purchasing function launched a risk assessment process in order to identify potential risk of raw materials and the countries processing them regarding sustainability.

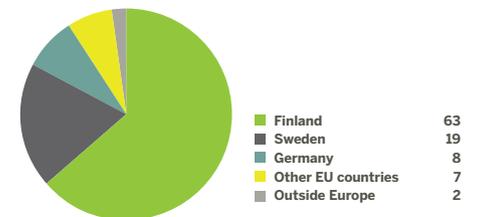
## KNOWING THE ORIGIN OF FIBRES

The wood used by Metsä Board comes from sustainably managed forests. The majority of wood used in Finland comes from forests owned by Metsäliitto Cooperative's members. In 2013, other wood supply countries included Sweden, the Baltic countries and Russia. The origin of wood is verified by means of the PEFC® and FSC® certified Chain of Custody tracing method managed by the Metsä Group's wood supply organisation. Metsä Group's wood supply meets the EU's Timber Regulation requirements, which became effective in 2013.

All Metsä Board's mills hold PEFC® and FSC® Chain of Custody certificates. In 2013, 65 per cent of the wood was from certified forests (2012: 64).

During the year, Metsä Board used approximately 1.4 million tonnes of various types of pulp, of which 1.2 million tonnes were produced at its own mills. Through its holding in Metsä Fibre, Metsä Board had access to 0.6 million tonnes of chemical pulp. Some 0.1 million tonnes of pulp were bought from external suppliers and 0.5 million tonnes were sold outside the company. Some 1 per cent of pulp used by Metsä Board was FSC® certified eucalyptus fibre from Uruguay. Metsä Board requires that its pulp suppliers operate in strict compliance with the law, and report annually on the origin of wood, forest certification and environmental data.

## PURCHASES IN 2013: % OF PURCHASE VALUE PER GEOGRAPHICAL AREA<sup>1)</sup>

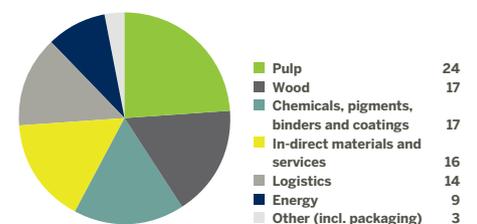


<sup>1)</sup> The figures do not include wood supply.

## IN WOOD SUPPLY TO METSÄ BOARD'S MILLS BY PROCUREMENT AREA IN 2013

	1,000 m <sup>3</sup>	SHARE, %	CERTIFIED WOOD, 1,000 m <sup>3</sup>	CERTIFIED WOOD, %
Sweden	1,789	37	1,375	77
Finland	1,191	25	1,133	95
Baltic countries	1,074	22	310	29
Russia	764	16	337	44
Total	4,818	100	3,155	65

## PURCHASES IN 2013: % OF MATERIAL AND SERVICE VALUE





# MINIMAL ENVIRONMENTAL IMPACT THROUGH EFFICIENT PRODUCTION

Metsä Board's production units are continuously developed in order to reduce environmental impact and risks and to further improve resource efficiency.



Metsä Board's target is to reduce fossil CO<sub>2</sub> emissions in production by 30 per cent per product tonne from the 2009 level by 2020. Due to the latest bioenergy investments, this goal was met in 2013.

Metsä Board's energy-efficiency in 2009–2013 improved by 7 per cent. The target is to improve energy-efficiency by 10 per cent by 2020 from the 2009 level.

In 2013, wood-based bioenergy accounted for 58 per cent, or 12.6 TWh (2012: 55 per cent and 12.6 TWh), of Metsä Board's total energy consumption. The majority of bioenergy is produced using the company's own by-products, such as bark and black liquor. The rest is wood-based fuels originating from process side streams and logging residuals. The majority, or 90 per cent, of the total energy purchased was CO<sub>2</sub> neutral. The total consumption of purchased electricity was 2.2 TWh (2.1 TWh).

Improving energy-efficiency is an integral part of all major investments in production capacity. Efficiency has been improved primarily by modifying equipment, processes and operating methods. In 2013, the focus was on optimising the running of production processes. New opportunities to improve energy-efficiency are being sought by means of energy

analyses and cooperation with equipment manufacturers. The most significant energy-efficiency operations will be completed in 2014. Gohrsmühle, Husum, Joutseno, Kemi, Kyro, Simpele, Tako and Äänekoski mills have an ISO 50001 certified energy-efficiency management system.

## REUSING WATER EFFICIENTLY

Metsä Board continuously looks for ways to reduce the consumption of fresh water in its production by reusing water, among other things.

In 2013, the company launched an extensive development project aiming to improve water usage and material efficiency. The purpose of the project was to reduce water use and fibre loss, as well as to improve the efficiency of sludge and wastewater management.

Metsä Board's target is to reduce process water use by 10 per cent from the 2010 level by 2020.

## ENVIRONMENTAL LIABILITIES

Metsä Board has some environmental liabilities remaining from earlier operations in closed or sold industrial sites and closed landfills. In recent years, Metsä Board has been restoring the Niemenranta area in Tampere

where a new high-end residential area is being built. For the most part, the project was completed in 2013.

## ENVIRONMENTAL INCIDENTS

Some minor and short-term non-compliances with environmental permit requirements were reported at Metsä Board's mills in 2013.

At Gohrsmühle mill, the sulphur emission of the power plant momentarily exceeded the limit due to a disturbance in the sulphur removal system. In April at Simpele mill, the nitrogen emissions to water exceeded the permit limit slightly due to a momentary over-dosage of nitrogen into the waste water treatment plant.

A minor amount of wood fibre was released to the surrounding environment at Joutseno mill in September when a blockage in the pulp drying air scrubber became loose. Oily soil and vegetation uncovered by the exceptionally low water level were removed in the body of water adjacent to the Äänekoski mill area. The oil is from the oil spill that happened at the Äänevoima Oy industrial power plant in 2011. There were a few momentary effluents into the river at Simpele mill due to disturbances in pumping in the wastewater treatment plant. The authorities

were informed and corrective actions taken immediately in all cases.

#### IMPROVEMENTS AT PRODUCTION UNITS

Metsä Board's production units carry out systematic work to improve their environmental performance and prevent disturbances.

New low-consistency refiners were installed at Kaskinen pulp mill, reducing the mill's energy consumption considerably. Husum mill started using pitch oil as fuel in the mill's lime kiln, which reduces the mill's fossil CO<sub>2</sub> emissions. Tako board mill's environmental risk analysis was updated.

Several measures were launched in order to promote water and material efficiency. The process water evaporation plant in Kaskinen mill was modernised to improve efficiency. Simpele mill invested in a new circulation water tower and a disc filter that make it possible to efficiently recover fibres and reuse process water. Äänekoski mill utilised a large amount of fibre sludge generated in the board mill's wastewater treatment in the construction of the mill's landfill expansion.

## FROM RENEWABLE RAW MATERIAL TO RECYCLABLE PRODUCTS



SHARE OF METSÄ BOARD'S SELF-PRODUCED ENERGY 50%  
SHARE OF RENEWABLE ENERGY IN METSÄ BOARD 63%

## MATERIAL BALANCE

	2013	2012
<b>PRODUCTION, 1,000 t</b>		
Paperboard	1,291	1,090
Pulp	1,249	1,234
Paper	674	786
<b>WOOD-BASED RAW MATERIALS</b>		
Wood, 1,000 m <sup>3</sup>	4,818	4,805
Pulp, 1,000 t	58	55
<b>OTHER RAW MATERIALS, 1,000 t</b>		
Pigments	404	402
Adhesives	68	79
<b>WATER USE, 1,000 m<sup>3</sup></b>		
Process water	113,207	107,746
Cooling water <sup>1)</sup>	71,559	74,368
	48,212	-

	2013 GWh	2013 %	2012 %	2011 %	2010 %
<b>ENERGY SOURCES</b>					
Wood-based	7,616	58	55	48	50
Nuclear power	2,821	22	23	13	21
Natural gas	815	6	8	15	14
Hydro power	658	5	5	8	4
Coal	637	5	4	12	7
Oil	282	2	3	2	2
Peat	244	2	1	1	0

	2013	2012
<b>EMISSIONS TO AIR, t</b>		
Fossil carbon dioxide (CO <sub>2</sub> )	388,461	482,035
Sulphur (as SO <sub>2</sub> )	944	833
Nitrogen oxides (as NO <sub>2</sub> )	1,920	1,882
Particles	368	440
<b>DISCHARGES TO WATER, t</b>		
Waste water, 1,000 m <sup>3</sup>	71,559	74,368
Chemical oxygen demand (COD)	12,137	14,765
Biological oxygen demand (BOD)	486 <sup>2)</sup>	1,529
Phosphorus (P)	26	20
Nitrogen (N)	245	189
Total suspended solids	2,136	1,605
<b>WASTE, t</b>		
Recycled waste	256,472 <sup>3)</sup>	144,101
Recycled waste, %	96	98
Landfill waste	9,572 <sup>4)</sup>	2,820
Hazardous waste	334	853

1) Not reported in 2012

2) Excluding Husum mill

3) Includes waste from temporary storage to recycling

4) Includes waste from temporary storage to landfill