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METSÄ GROUP  
SUSTAINABILITY REPORT

**2012**



# WE PROMOTE SUSTAINABLE FUTURE

Metsä Group is a responsible forest industry group whose products' main raw material is renewable and sustainably grown Nordic wood. Metsä Group focuses on tissue and cooking papers, consumer packaging paperboards, pulp, wood products, and wood supply. Its high-quality products combine renewable raw materials, customer-orientation, sustainable development and innovation. Metsä Group's sales totalled EUR 5.0 billion in 2012, and it employs approximately 11,500 people. The Group operates in some 30 countries. Metsäliitto Cooperative is the parent company of Metsä Group and is owned by approximately 125,000 Finnish forest owners.

Sustainability is a driver in everything we do. As our main raw material is renewable wood sourced from sustainably managed forests, our products are recyclable and safe for both people and the environment. We believe that economic growth and sustainability go hand in hand enabling a better quality of life for everyone.







## OUR PRODUCTS STAND ON SUSTAINABLE ROOTS

Sustainability and ethical business practices are a prerequisite for us. We are a responsible business operator with strong roots in bioeconomy and aim to build a more sustainable future.

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**FOREST INDUSTRY IS  
AN IMPORTANT  
CORNERSTONE OF  
THE BIOECONOMY.**

# SUSTAINABLE FUTURE THROUGH BIOECONOMY



The year 2012 was a busy one for us. The Group's performance against the sustainability targets proceeded well. Here we have highlighted some of the key actions we

have taken in order to demonstrate our commitment to a sustainable future and what bioeconomy means from a Metsä Group perspective.

## RENEWABLE, RECYCLABLE, SUSTAINABLE

We use renewable raw materials and turn them into safe and recyclable products. Every part of a tree is used for the purpose it suits best. Logs, the most valuable parts of a tree, are used as building material, treetops and wood from forest thinnings are used to produce pulp for paperboard and paper while the bark and branches are used for energy.

Our major energy source is bioenergy – 83% of the fuels we use are wood-based bio-fuels. Besides our own processes, we also generate energy for use in surrounding neighbourhoods. Over the last two years, Metsä Group completed four major investments to further increase our already high share of bioenergy – and the work continues. In-

## WE USE RENEWABLE RAW MATERIALS AND FUELS TO PRODUCE SAFE AND RECYCLABLE PRODUCTS.

ing the share of bioenergy plays a major part in our efforts to reduce fossil CO<sub>2</sub> emissions and ultimately mitigate climate change.

The wood we procure is 100% traceable and always from sustainable sources. To further promote our sustainable forest management practices, we attained double certifications for our company-owned forests in 2012. Earlier, they were certified according to PEFC, now they are also FSC® certified.

What matters in the end is team work. For this reason, we work closely with our suppliers and partners to ensure sustainability throughout the value chain. Furthermore, solid safety – both of our employees and of our partners – is among our top priorities.

## AIMING EVEN HIGHER

This is the second consecutive Sustainability Report from Metsä Group. While we have received much positive feedback for our first report, we did not want to rest on our laurels;

rather, we wanted to further develop the report to better suit our stakeholders' information needs on our sustainability performance. However, our work is not over yet. In 2013, we will focus our efforts, for example, on creating a sustainability strategy for our supply chain operations as well as developing more systematic practices for stakeholder engagement.

We are committed to the ten principles of the UN Global Compact and we have further strengthened our endeavours to achieve a more sustainable future. We have done much, yet we still continue to aim even higher. We are proud to say that our operations along with the whole forest industry are important cornerstones of today's bioeconomy and that together we are building a more sustainable future.

Sustainably yours,

Riikka Joukio  
SVP, Sustainability and Corporate Affairs  
Metsä Group

## COMMITMENT TO THE TEN PRINCIPLES OF THE UN GLOBAL COMPACT

	PRINCIPLES	READ MORE
HUMAN RIGHTS	#1 Businesses should support and respect the protection of internationally proclaimed human rights.	p. 12–15
	#2 Businesses should make sure that they are not complicit in human rights abuses.	p. 12–15
LABOUR RIGHTS	#3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	p. 12–15, 42
	#4 Businesses should uphold the elimination of all forms of forced and compulsory labour.	p. 12–15
	#5 Businesses should uphold the effective abolition of child labour.	p. 12–15
	#6 Businesses should uphold the elimination of discrimination in respect of employment and occupation.	p. 12–15
ENVIRONMENT	#7 Businesses should support a precautionary approach to environmental challenges.	p. 12–15
	#8 Businesses should undertake initiatives to promote greater environmental responsibility.	p. 12–15
	#9 Businesses should encourage the development and diffusion of environmentally friendly technologies.	p. 12–15
ANTI-CORRUPTION	#10 Businesses should work against corruption in all its forms, including extortion and bribery.	p. 12–15

FSC Licence Code: FSC-C014476



# 2012: SUSTAINABILITY IN ACTION

As for us, sustainability is something that draws on our mission, vision and values. Therefore, sustainability belongs as an integral part to our operations and daily work. Looking back in 2012, we are proud of all our accomplishments to create more sustainable environment for the coming generations.

## THE FUTURE LIES IN BIOENERGY

During the year, we were able to realise many of our bioenergy investments. In the past two years, we have invested in four major bio-energy projects that together reduce the Group's annual carbon dioxide load of fossil fuels by some 200,000 tonnes. Out of these four, three were completed in 2012, whilst one at HUSUM MILL, Sweden was completed already in 2011.

In the autumn, Metsä Board and its co-operation partners completed the construction of a new power plant at KYRO MILL. As fuel, the power plant uses logging residues and other wood raw materials unsuitable for further processing. Metsä Board has also completed a turbine investment at Husum mill. The investment increased the mill's power self-sufficiency from 30 to 50%.

Metsä Fibre's JOUTSENO MILL's new gasification plant produces bioenergy from bark, one of the by-products of pulp production. The renewal makes the mill carbon neutral since no fossil fuels are used during the normal production conditions. Thus Joutseno mill is the first carbon neutral chemical pulp mill in Finland. At the beginning of 2013, a bio-energy heating plant will be finalised at Metsä Wood's KERTO MILL in Lohja. The investment makes it possible to use wood-based energy instead of the coal-based energy previously bought from external providers.

## AWARD FOR ENERGY MANAGEMENT

Metsä Tissue was granted the Energy Masters Award 2012 by Europe's leading networking platform for energy management in the industrial sector, the Energy Masters by Econique Group. The award is for Metsä Tissue's Sustainable Low Carbon Tissue Manufacturing Project that is linked to Metsä Tissue's project to improve energy efficiency by 20% by 2012 from the 2007 level.

## FSC CERTIFICATE FOR THE GROUP'S FORESTS

Metsä Group was granted FSC® certification (Licence Code FSC-C014476) in July covering some 35,000 hectares of the Group's forests in Finland. The forests have already been certified according to PEFC. New Metsä Group's FSC certificate offers forest owners that are contractual customers of Metsäliitto Cooperative, Metsä Group's parent company, the possibility to join the FSC group certificate.

## APPLAUSE BY WWF

The WWF Environmental Paper Company Index rates paper producers on their global ecological footprint in different categories of paper producers. Metsä Group's businesses participated in the tissue paper category (Metsä Tissue) and fine paper category

(Metsä Board). In February, WWF ranked Metsä Tissue the best in the category of public Corporate Responsibility reporting and Environmental Management Systems. Correspondingly, Metsä Board was given the top ranking in the category of Environmental Management and Reporting. The participating paper manufactures have allowed WWF to scrutinise their global paper production on key environmental criteria.

In November, Metsä Board was commended by WWF's Environmental Paper Awards in the category "Transparency" for listing the majority of its uncoated fine papers in WWF's Check Your Paper database.

WWF created the WWF Environmental Paper Awards 2012 to give credit to manufacturers and suppliers that post their brands on Check Your Paper, using WWF's eco-rating method for measuring the environmental footprint of papers.

## UNILEVER'S 'PARTNER TO WIN' AWARD IN SUSTAINABILITY

Metsä Board received a 'Partner to Win' award in sustainability from Unilever in May. The award was presented to Metsä Board for its development of lightweight and sustainable boards, and their significant contribution to Unilever's packaging. Unilever launched the Partner to Win programme in 2011 to work more closely with its key suppliers, ensure faster innovation and invest sustainably throughout its value chain.

## THE LARGEST WOODEN MULTI-STORY BUILDING IN FINLAND

In September, Finland's largest wooden multi-storey residential building project was completed in Viikki, Helsinki. Based on the Metsä Wood Multi-Storey System, the five wooden buildings have three or four floors with a total gross floor area of 6,300 m<sup>2</sup>. A wooden multi-storey building is more eco-efficient and has a smaller carbon footprint than a multi-storey building based on competing construction materials, because the manufacture and transport of wooden construction parts and the construction of the building itself consume less energy. In addition, while growing, the wood has absorbed carbon dioxide from the atmosphere, storing it in wooden constructions throughout their life-cycle.

## WINNER OF THE EXCELLENCE FINLAND COMPETITION

In November, Metsä Fibre won Excellence Finland 2012 and the Quality Innovation of the Year Competition in the large companies category organised by Laatu keskus Excellence Finland. According to the jury, Metsä Fibre's customer orientation and value creation for its customers are prominent throughout the organisation from the management to the production personnel. The development of operations is managed systematically. The safety management model has established safety as a central objective – fewer accidents at work have strengthened the positive attitude of the personnel towards safety. The company's commitment to environmental aspects was also praised.

## RESPONSIBLE REPORTING

As a Group, we published our first Sustainability Report in March 2012. In November, The Finnish Business & Society (FiBS) gave Metsä Group's Sustainability Report 2011 an honourable mention in the responsible reporting competition. The jury justified the award with significant improvement in the level of reporting – Metsä Group tripled the points it had received in previous years.

### METSÄ GROUP'S MATERIAL BALANCE

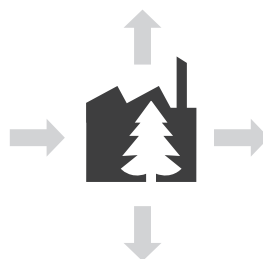
#### EMISSIONS TO AIR (t)

	2012	2011
Biogenic carbon dioxide (as CO <sub>2</sub> bio)	6,884,288	7,089,836
Fossil carbon dioxide (as CO <sub>2</sub> )	962,328	1,200,090
Nitrogen oxides (as NO <sub>2</sub> )	6,432	7,358
Particles	1,817	1,435
Sulphur (as SO <sub>2</sub> )	1,681	2,359



#### PRODUCTION

	2012	2011
Chemical pulp and CTMP (1,000 t)	3,471	3,407
Board (1,000 t)	1,090	1,029
Paper (1,000 t)	786	1,255
Tissue and cooking papers (1,000 t)	589	599
Sawn timber (1,000 m <sup>3</sup> )	1,622	1,576
Plywood (1,000 m <sup>3</sup> )	244	242
Kerto® (1,000 m <sup>3</sup> )	196	199
Other upgrading products (1,000 m <sup>3</sup> )	775	790
By-products sold for energy production (GWh)	2,166	1,964



#### WOOD-BASED RAW MATERIALS

	2012	2011
Wood (1,000 m <sup>3</sup> )	21,116	20,886
Recovered paper (1,000 t)	390	418
Pulp (1,000 t)	287	516

#### OTHER RAW MATERIALS (1,000 t)

Pigments	406	519
Adhesives	79	107

#### ENERGY (GWh)

Purchased fuels	4,583	6,249
Fossil fuels	3,900	4,805
Biofuels	683	1,449
Purchased electricity	2,380	2,674
Purchased heat	200	116

#### WATER USE (1,000 m<sup>3</sup>)

Surface water	254,000	354,000
Groundwater	4,000	11,000



#### DISCHARGES TO WATER (t)

	2012	2011
Waste water flow (1,000 m <sup>3</sup> )	149,096	164,177
Chemical oxygen demand (COD)	43,629	45,921
Biological oxygen demand (BOD)	2,107	3,176
Total suspended solids	3,161	3,304
Nitrogen (N)	637	694
Phosphorus (P)	50	79

#### WASTE (t)

Recycled waste	608,117	718,482
Landfill waste	81,435	69,047
Hazardous waste	2,021	1,970



## WOOD

READ MORE P. 18–21

**TARGET:** We support sustainable forest management. Our wood is 100% traceable and it always comes from sustainable sources. Our target is to sustain the amount of certified wood in our operations above 80%.

**PERFORMANCE:** 82% in 2012



OVER  
**80%**  
OF CERTIFIED WOOD

## SUPPLY CHAIN

READ MORE P. 22

**TARGET:** We are committed to sustainability throughout the whole supply chain. Our target is to have a supplier Code of Conduct included in all new supplier contracts.

**PERFORMANCE:** Code of Conduct included in all new and renewed contracts since June 2011, in total 71 contracts in 2012.



**100%**  
COVERAGE OF SUPPLIER  
CODE OF CONDUCT



**0**  
LOST-TIME  
ACCIDENTS

## WELL-BEING

READ MORE P. 40–41

**TARGET:** Work safety is our top priority. We strive for continuous improvement and our aim is to improve our lost-time accident frequency rate by 10% each year. Our long-term target for lost-time accidents is zero.

**PERFORMANCE:** The lost-time accident frequency rate was 15.7 in 2012.



## ENERGY AND CLIMATE

READ MORE P. 24–27

**TARGET:** We focus on mitigating climate change. Our target is to reduce fossil CO<sub>2</sub> emissions in production by 30% per product tonne by 2020 from the 2009 level.

**PERFORMANCE:** -27% in (2009–2012)

**TARGET:** We ensure efficient energy consumption. Our target is to improve energy efficiency by 10% by 2020 from the 2009 level.

**PERFORMANCE:** 4% in (2009–2012)

CO<sub>2</sub>

-30%



## ETHICAL BUSINESS PRACTICES

READ MORE P. 12–15

**TARGET:** Ethical business practices are the core of all our operations. Our target is to have the whole personnel covered by Code of Conduct training by the end of 2012.

**PERFORMANCE:** The Code of Conduct training started during autumn 2011 and continued throughout 2012. Some 75% of white-collar and a vast majority of blue-collar employees have now been trained.

**TARGET:** We work hard to ensure a healthy work environment. Our target is to keep the sickness absenteeism rate at the best European level and below 3% at all times.

**PERFORMANCE:** Sickness absenteeism was 4.1% in 2012.

## METSÄ GROUP'S SUSTAINABILITY TARGETS



At the end of 2011, we launched our Group-wide sustainability targets – altogether seven of them covering five different sustainability themes. Read more about our performance on the following pages.



# PROMOTING A SUSTAINABLE FUTURE

Global population growth, over consumption and an inefficient use of resources are the main causes of today's unsustainable environmental burden. The macro trends are generating increasing concerns about climate change, water discharges and aerial pollution, the availability of fresh water, declining biodiversity and the debate on priorities in land use.

Metsä Group brings solutions for its part to these global concerns by producing recyclable and biodegradable products from renewable raw material – wood. Our products are excellent alternatives in replacing fossil-based raw materials with renewable bio-based solutions.

Changes in consumption habits to favour renewable and sustainable products are also promoting the mission and the business idea that Metsä Group represents. Our main operating countries have vast forest and water resources. When these resources are being used responsibly they are available for the next generations in the same way as they are for us today.

Wood as a renewable and recyclable raw material offers good growth opportunities for businesses focusing on renewable packaging solutions, hygiene products and wooden constructions, for example.

## RISK MANAGEMENT ON ALL LEVELS

Like all companies, Metsä Group is closely following market signals to detect if any drastic changes are expected in customer behaviour and demand. Metsä Group assesses risks on different levels – Group, Business Area and

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**WE PROMOTE A SUSTAINABLE FUTURE THROUGH RENEWABLE RAW MATERIALS AND RECYCLABLE PRODUCTS.**

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production unit, which also cover supplier operations. At the Group and Business Area-levels, risks are assessed twice a year – one assessment for risks related to Business Areas' strategies and one for risks related to annual



## BIOECONOMY – A WAY OF THE FUTURE

Bioeconomy has many definitions, one of them meaning products manufactured from biologically grown, renewable and recyclable raw materials, energy and resource efficiency, and economic, social and ecological sustainability.

A focus and growing demand for renewable and sustainably produced wood, paper and board-based products are the cornerstones of bioeconomy. The role of bioeconomy is expected to further increase in the coming years, especially as the EU will focus on green growth and on becoming more resource efficient.

Large-scale industrial products and processes which have significant positive impacts on climate change and resource efficiency play in a key role in bio-based societies. To maintain this position requires further improved products, smarter use of raw materials as well as completely new bio-based innovations developed by the current forest products industry.

Metsä Group is a company that already plays a crucial role in bio-based economy development. We are strongly focused on continuing along this path.





planning. Insurance companies perform technical risk surveys at major production units annually focusing on key property damage and business interruption risks.

Our risk assessment management covers the whole value chain from securing the availability of wood to being prepared for possible product liability cases. Risk assessments also cover the entire value chain including all five Business Areas. Our focus on risk management is on preventive damage and loss control. One of the most important tasks of risk management is to ensure undisturbed operations and continuous production, which supports the environmental risk management at the same time. An essential part of Metsä Group's enterprise risk management is the active co-operation with insurance industry.

The major hazard risks such as fires, machine breakdowns and environmental damages, are covered by global insurance policies by insurance companies. Key insurance policies are property damage and business interruption policy as well as general third party and product liability insurance. The centralised environmental risk management is also one of the means to mitigate accidental releases by making use of knowledge transfer within the Group.

#### **CLOSELY SURVEYING THE GLOBAL SUSTAINABILITY RISKS**

Demand for forest biomass, particularly for energy production, is increasing as it is driven by policies and incentives. This may present challenges to the conventional forest products





industry as the availability of wood is under threat due to government subsidies being directed to other wood end-uses.

Climate change is leading to global warming and thus to the transition of vegetation and tree species and even new plant diseases. All these can threaten the current forestry in the Nordic countries in the long run. In the short term, climate change is putting pressure to increase regulations on available energy sources, limit energy use and strive for a more efficient use of resources. These also have a direct impact on the industry in the forms of increased taxation or related costs as well as tighter environmental permits.

Additionally, on the global scale unevenly distributed scarce water sources and the availability of clean water is increasing the need for tighter regulations or even putting a price on all water uses. If overregulated, this may create an additional burden even for companies operating in areas with abundant natural water bodies.

Due to the remote location of Finland and the structure of its economy, the need for

energy and transportation is higher than the average in Europe. As Finland is completely dependent on maritime transport, any increases in the cost of energy and transportation resulting from climate change and energy policies can considerably weaken the relative competitiveness of its energy intensive industries in relation to the EU and external competitors.

The EU's unilateral climate change policies are weakening the global competitiveness of European industries. As long as the major emitting countries are not committed to comparable and equal emission reductions, European companies do not have equal operating conditions in relation to external competitors. Moreover, the EU's unpredictable climate change and energy policies as well as overlapping environmental policies and targets influence investment conditions.

**SUSTAINABILITY IN THE CORE OF THE GOVERNANCE**

Sustainability is integrated into the very core of Metsä Group. Metsäliitto Cooperative, the

parent company of Metsä Group, is owned by some 125,000 Finnish forest owners.

**METSÄLIITTO COOPERATIVE'S CONSTITUTION** states that its primary mission is to support its owner-members and their forest management in the most economically and technically efficient ways, and to follow the principles of sustainable development.

Metsä Group's **MISSION** is to competitively procure, market and upgrade Finnish wood at its own production units. Our **VISION** is to be a focused and profitable Finnish forest industry company that operates in the international market, and one that integrates sustainable development, customer-orientation and innovations in its products and services.

Metsä Group's **VALUES** are responsible profitability, reliability, cooperation and renewal. These values guide the Group in achieving its targets and are seen in our daily activities. We strive to improve the profitability of our company, while at the same time bearing responsibility for the environment and listening to our stakeholder groups. Reliability, cooperation and renewal are the cornerstones of responsible profitability.

**BUSINESS PERSPECTIVE ON SUSTAINABILITY**

Our objectives will be reached by focusing on our strengths and our selected core businesses. We offer sustainable solutions for our clients and meet the demand for sustainable products. Therefore, we continuously develop our operations and operate in a cost-efficient way to achieve profitable growth. Each of the Business Areas has defined its own strategy that integrates sustainability, customer focus and innovations.

**METSÄ TISSUE's** tissue and cooking papers are safe, sustainable and biodegradable, and made of renewable, sustainably managed raw materials. Their environmental impact is minimised throughout the whole product's life-cycle. Metsä Tissue believes in transparency and their environmental performance with targets being monitored carefully and reported openly. Metsä Tissue leads the tissue industry in developing low-impact processes and practices.

**METSÄ BOARD** focuses on ecological and safe light-weight paperboards – the main raw material being pulp produced from renewable and traceable wood. Metsä Board's paperboards are recyclable and fibres can be reused several times in paper production and as energy at the end of their life-cycle. A significant amount of energy consumed by Metsä



Board is generated internally at integrated pulp and board mills.

**METSÄ FIBRE** produces pulp from renewable raw material – wood from sustainably managed forests. They develop the pulp production process for the long term and their mills are leaders in environmental performance. Metsä Fibre knows the environmental impacts of its operations and reduces them systematically. They utilise raw materials with high efficiency and lead the way in the field of energy efficiency. Metsä Fibre is also a major producer of bioenergy.

**METSÄ WOOD**'s customer value proposition is based on high-quality certified wood raw material from sustainably managed forests. Forerunning solutions for industrial customers, builders and renovators are based on wood raw material that is durable, light

and recyclable. Energy and resource efficient production and logistics mean economic use of energy and wood raw materials, as well as the efficient use of side products for developing new products and energy end-uses. Improving occupational safety in the production units is one of Metsä Wood's main targets.

**METSÄ FOREST** encourages the Cooperative's owner-members to use and manage their forest assets in a sustainable manner by providing them with comprehensive services for all stages of forest ownership. With good management, Metsä Forest can ensure the growth and diversity of forests and steady wood production in the future. Metsä Forest supports voluntary forest protection and the vast majority of the wood they procure is sourced from certified forests.



# MANAGING OUR SUSTAINABILITY WORK

Metsä Group's daily sustainability work is guided by the Group's Sustainability Principles as well as the employee and supplier Codes of Conduct.

The Code of Conduct lies at the core of our daily sustainability management that guides our employees when dealing with gifts, possible cases of corruption or in any way advancing business through bribery or blackmail. The Code of Conduct also calls for each employee to report any conduct that he or she believes to be contrary to the policies. A report can be submitted to an employee's superior or to the Group General Counsel.

## SUSTAINABILITY IS THE CORE PRINCIPLE IN ALL OUR BUSINESS OPERATIONS.

During 2012, Metsä Group companies have not been accused of participating in any corruptive activities. Instead, preventive measures were made to management processes. However, altogether three (3) suspected breaches of the Code of Conduct by individual employees were detected, reported and investigated, of which two (2) resulted in a disciplinary action and termination of employment.

Metsä Group's sustainability management is guided also by the Group's Sustainability Principles. Metsä Group has also set out policies and related instructions for all relevant topics, including Environmental, Human Resources, Equal Opportunities and Purchasing policies as well as a Supplier Code of Conduct to guide supply chain operations.

The target of training the whole personnel in the Group's Code of Conduct proceeded

 TARGET	 PROGRESS	 COMMENTS
To have the whole personnel covered by Code of Conduct training by the end of 2012.	The Code of Conduct training started during autumn 2011 and continued throughout 2012. Some 75% of white-collar and a vast majority of blue-collar employees have now been trained.	We will proceed with the target to ensure that the Code of Conduct trainings cover the whole personnel.

well as approximately 75% of all employees were trained. Moreover, the personnel was trained in Human Resources, Equal Opportunities, Security and Information Security Policies. A new target on ethical business practices has been set to train selected personnel in the Group's Sustainability Principles during 2013.

### GOVERNANCE AND RESPONSIBILITIES


As sustainability is the core principle in all business operations, Metsä Group takes shared responsibility for managing sustainability on all operational levels.

Metsäliitto Cooperative's Board of Directors approves the guiding policies and sets the Group's ambition level in sustainability. The Executive Management Team sets the guiding policies, defines both the sustainability and the advocacy targets, and monitors the performance against them.

The Sustainability Steering Team (formerly known as the Corporate Affairs Management Team) surveys sustainability trends and weak signals, analyses the Group's stakeholders' views and evaluates their impact on the Group's businesses. In addition, a new Corporate Affairs Network has been established to provide strategic guidance to corporate affairs management. It identifies relevant policy files and discusses advocacy cases and channels. Both the Sustainability Steering Team and the Corporate Affairs Network has a representa-

tive from each Business Area in addition to relevant corporate function representatives. Both of these governance bodies were headed by Metsä Group's General Counsel.

The Sustainability and Corporate Affairs function prepares the Sustainability Steering Team agenda, supports businesses by providing solutions in sustainability issues, identifies the development needs and coordinates the Group's daily sustainability issues. It also supervises and promotes the Group's interests in legislation and trade policy issues. Furthermore, the function conducts Metsä Group's stakeholder engagement work in topics related to sustainability and in networks such as the World Business Council for Sustainable Development (WBCSD).

[Read more about our stakeholder engagement on pages 34–37.](#) 

In addition to specified governance duties, numerous positions within the Group hold a shared responsibility in managing each theme's specific sustainability issues. See the infograph on the following page.



## WE OFFER SUSTAINABLE CHOICES



### PRODUCTS AND SERVICES

- Sustainable products, services and innovations
- Product safety

**Responsibilities of** Heads of Business Areas: CEOs of Metsä Board, Metsä Fibre and Metsä Tissue; Group Executive Vice President, Metsä Wood and Executive Vice President of Metsä Forest; Senior Vice President, Sustainability & Corporate Affairs and R&D personnel

## WE BRING THE FOREST TO YOU



### SUSTAINABLE SUPPLY

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

**Responsibilities of** Executive Vice President, Metsä Forest; Senior Vice President CPO, Purchasing, together with product category managers; Senior Vice President, Sustainability & Corporate Affairs; Senior Vice President, Logistics and Head of Metsä Forest's Member Services

## THE SMALLER THE ENVIRONMENTAL IMPACT THE BETTER



### ENVIRONMENTAL EFFICIENCY

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

**Responsibilities of** Executive Vice President, Strategy; Senior Vice President, Energy; Heads of Business Areas; Senior Vice President, Sustainability & Corporate Affairs; Vice President, Risk Management; Mill managers and mills' environmental and production managers

## WE CREATE WELL-BEING



### STAKEHOLDERS

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

**Responsibilities of** General Counsel; Chief Financial Officer; Senior Vice President, Sustainability & Corporate Affairs; Senior Vice President, Human Resources; Senior Vice President CPO, Purchasing and Senior Vice President, Communications

### MANAGEMENT APPROACH TO SUSTAINABILITY

Metsä Group's business strategy is based on sustainability including the three pillars of economic, environmental and social responsibility. We offer products and services that enable our customers to improve their environmental footprint and make more sustainable choices. Our main raw material is renewable and sustainably grown wood. All our products are recyclable and good alternatives in replacing many other carbon-intensive products and raw materials.

Our daily work in sustainability management is guided by our Sustainability Principles and the employee Code of Conduct, which are mandatory for all employees to study and follow. In addition, we require our suppliers to comply with our Supplier Code of Conduct. We are also committed to the ten principles of the UN Global Compact.

### ECONOMIC RESPONSIBILITY

Metsä Group's mission is to be a profitable and competitive forest industry group that uses wood grown by its owner-members. Responsible profitability represents the main value of our business operations. To meet this end, we strive to improve the profitability of the Group, bear responsibility for the environment, listen to our stakeholder groups, and at the same time base our operations on ethical business practices. Metsä Group applies principles of good corporate governance and transparent accounting. The whole Group communicates in accordance with the disclosure obligation prescribed for listed companies by the Securities Markets Act and the Finnish Corporate Governance Code.

The key figures by which Metsä Group measures its financial performance include sales and operating result. We acknowledge

## OUR PRODUCTS AND SERVICES ENABLE OUR CUSTOMERS TO MAKE MORE SUSTAINABLE CHOICES.

that our operations have economic impacts on all levels of the communities where we operate – local, national and global. Our contribution to the community's well-being derives from direct and indirect employment opportunities and paying taxes, among others.

Read more about our work in communities on pages 38–39. →

The Group's key financial figures are published in Metsä Group's Annual Report 2012 on pages 4–5. →



#### ENVIRONMENTAL RESPONSIBILITY

We continuously develop the productivity and efficiency of our production units with investments that improve our profitability and result, while enhancing energy and material efficiency as well as environmental performance. Metsä Group follows its environmental impact, for example, in the forms of greenhouse gas emissions, energy and water consumption, and waste generation. One of our most fundamental duties is to guarantee that all our operations are sustainable and all our products are safe for both people and the environment.

Our environmental management is guided by our Environmental Policy and compliance with the ISO 14001 standard for environmen-

tal management. The main principles of the Group's Environmental Policy are Group-wide environmental responsibility, energy and environmental efficiency, the promotion of sustainable forestry and requiring environmental responsibility from our suppliers. Almost all of the Group's production units have a certified ISO 9001 quality system and an ISO 14001 environmental system in place, as well as a certified Chain of Custody forest certification system, enabling the reliable verification of the amount of certified wood in the products. The certified quality and environmental management systems are integrated with a Chain of Custody system which allows the Group to track and control the origin of the wood we use.



## SOCIAL RESPONSIBILITY

Metsä Group highly values its employees and considers them as one of the key elements in long-term profitability and business success. In addition to generating well-being at work, we actively work in the local communities where we operate and in society at large. By behaving responsibly towards our stakeholders, we can also improve their quality of life.

Our daily work on social responsibility is guided by the Equal Opportunities and Human Resource policies. Moreover, our employee and supplier Codes of Conduct both stress the respect for human rights and a safe working environment thus prohibiting the use of forced or child labor.

Metsä Group monitors its employee's satisfaction by conducting annual work functionality research. It aims to be an attractive employer with extensive career and development opportunities so that individuals can continuously develop their professionalism. The certified occupational and product safety

system OHSAS 18001 is in place at most of the Group's production plants.

Metsä Group strives to be an open and equal work community where freedom of association prevails globally. We value diversity, cultural differences and the fair treatment of employees, regardless of their ethnic origin, nationality, religion, political views, gender, sexual orientation or age. Equal opportunities and work against discrimination are applied to all HR processes, for example in recruitment, career opportunities, training and remunerations. Furthermore, it is the responsibility of each employee to report any acts of discrimination they have noticed in their workplace.

## SUSTAINABILITY GOVERNANCE CASES IN 2012

In March 2011, a state enterprise Metsähallitus filed a claim for damages at the District Court of Helsinki, demanding that

## METSÄ GROUP TAKES SHARED RESPONSIBILITY FOR MANAGING SUSTAINABILITY ON ALL OPERATIONAL LEVELS.

Metsäliitto Cooperative and two other forest industry companies jointly pay compensation for alleged damage caused by prohibited cooperation with regard to prices in the raw wood market. The claim by Metsähallitus is pending and relates to the 3 December 2009 decision by the Market Court, according to which the above companies have violated the Act on Competition Restrictions in the raw wood market from 1997 to early 2004. In addition, some municipalities, parishes and a group of Finnish individuals have instituted similar proceedings. Metsäliitto Cooperative considers the claims unfounded in their entirety.

In November 2012, the Espoo district court deemed a former employee of the Group's internal bank, Metsä Group Financial Services, to have committed several frauds against the company. The employee was sentenced to imprisonment for three years. As a result, all internal processes regarding money transfers were reviewed and revised such that individual user rights were reduced and no single employee is in power to control money transfers.

In December 2012 the Keski-Suomi District Court deemed an associated company

Äänevoima Oy to have caused environmental damage resulting from an oil leakage incident which occurred in August 2011. The court ordered altogether four employees of Äänevoima Oy to pay a fine of EUR 7,060 in total. In addition, Äänevoima Oy was ordered to pay a corporate fine of EUR 40,000.

The permit limits for wastewater parameters were exceeded at Svir sawmill in Russia. Svir Timber paid RUB 81,300 for exceeding the permit limits. Additionally Federal Fisheries Agency ordered a fine of RUB 5,500.

No other fines were paid or other monetary or non-monetary sanctions for non-compliance with laws or regulations were received in 2012.

## SCOPE OF THE REPORT

Metsä Group comprises Metsä Tissue, Metsä Board, Metsä Wood, Metsä Fibre and Metsä Forest. This report covers the whole Group, including the production, warehousing and sales units of the Business Areas. Sustainability reporting follows the same principles of consolidation as our Financial Statements.

Metsä Group reports its sustainability performance at the Group, Business Area and product levels. The Sustainability Report 2012 has been prepared according to the Global Reporting Initiative (GRI) guidelines (version 3.1). We have selected the indicators that are most relevant to our operations, products and stakeholders based on an assessment of the most significant sustainability issues for the Group and its stakeholders. In addition to the GRI guideline indicators, the scope of the report includes topics related to the Group that have gained public attention and may have caused a reputation risk in the field of environmental or human resource management.

The Sustainability Report 2012 presents Metsä Group's approach to sustainability management and detailed performance indicator; the Group's Annual Report 2012 includes a summary of the Group's sustainability work. Furthermore, the subsidiaries Metsä Board and Metsä Fibre publish individual annual reports in which their sustainability work is presented.

The sustainability performance data in this report and claims based on that data have been externally assured by an independent third party, Tofuture Oy.

Read more about the assurance process in the Independent Assurance Statement on page 52. →





# RECYCLABLE PRODUCTS FROM RENEWABLE RAW MATERIALS

We offer products and services that enable our customers to improve their environmental footprint and make more sustainable choices. Our main raw material is renewable and sustainably grown wood. All our products are recyclable and good alternatives in replacing many other carbon-intensive products and raw materials.

Metsä Group produces a wide range of high-quality products from renewable northern wood and wood fibre. Our sustainable offering includes tissue and cooking papers; board for packaging and the graphic industry; office papers; pulp; wood products for construction and decoration; and forestry services.

## COMMUNICATING OUR PRODUCTS' ENVIRONMENTAL IMPACT

There is an increasing interest for the environmental impact of our products among our customers. We have various tools to communicate in a traceable and transparent way what the environmental impacts of our products are.

## LIFE CYCLE ASSESSMENT (LCA)

LCA is a technique to assess the environmental impacts associated with all stages of a product's life cycle. Metsä Group uses the LCA to evaluate the environmental impacts of the whole production chain from the early stages of raw material procurement and production to the delivery of the products to our customers. Data collected for the LCA assessment are then used in product declarations as well as for carbon and water footprint calculations.

In October 2012, Metsä Board produced its first Environmental Product Declaration (EPD) for Simcote, a folding boxboard product. The EPD is verified against the International EPD® System's product category rules

for processed paper and paperboard. In addition, Metsä Wood has prepared an EPD for Kerto® laminated veneer lumber.

Read more about case Simcote in various parts of this report.

## CARBON FOOTPRINT – IMPACT ON CLIMATE CHANGE

A carbon footprint is one of the tools used to illustrate a product's climate effect. It demonstrates the carbon dioxide emissions of a process behind the product. Carbon footprint calculations are used to measure the fossil carbon of a product.

## PAPER PROFILE – ENVIRONMENTAL DECLARATION USED BY THE PAPER INDUSTRY

The Paper Profile is a standardised scheme that was jointly developed by leading paper producers in Europe to communicate the environmental performance of paper and board products. The Paper Profile provides information related to the environmental aspects of pulp and paper production, including product composition and emissions, wood procurement and the mill's environmental management systems as average data within a specific reporting period. Metsä Board has issued Paper Profiles for all of its paper and board products since 2001.

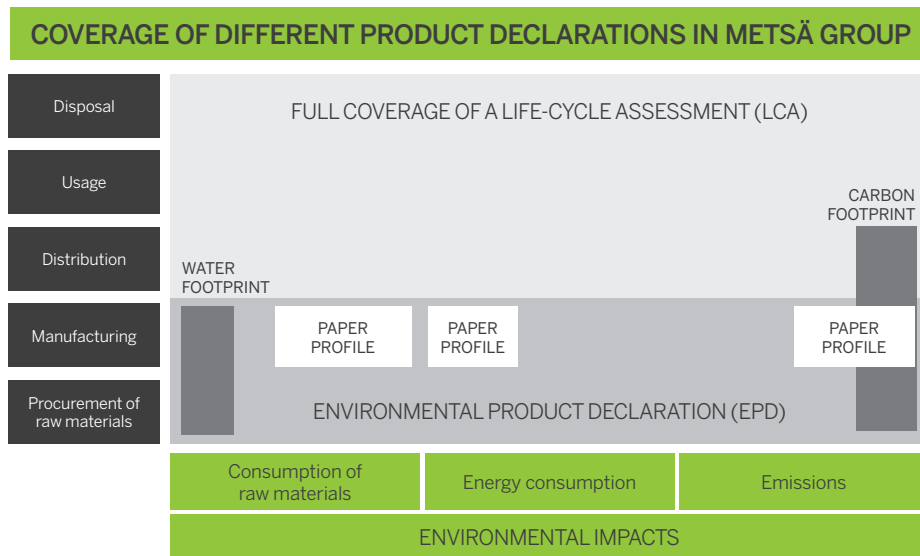
## ECO-LABELS ARE TO HELP CONSUMERS

Eco-labels assist a consumer to understand the environmental impacts of a product. We are involved in the development of eco-label criteria and work continuously to improve our mills' environmental performance to fulfil the criteria. Eco-labels, such as the EU Ecolabel and the Nordic Swan, are especially important for Metsä Tissue's tissue papers, baking and cooking products as well as Metsä Board's office papers. To date, no such commonly agreed eco-label criteria exist for packaging products.

## SAFETY IS A PREREQUISITE

We ensure that all Metsä Group's products and operations are safe and sustainable. We can guarantee that our products, when used as intended, are safe for people and the environment. We have a policy that we know the origin of the materials that we use; moreover, all our raw materials meet or exceed the current legislative requirements.

Ensuring product safety is especially important in products that are used in applications with strict hygiene standards such as





material (2011/696/EU). The definition is based purely on particle size and applies regardless of whether or not the material is naturally occurring, man-made or specially engineered. Metsä Group does not approve of nanotechnology-based new substances until sufficient information regarding their safety becomes available. Metsä Group continues to actively follow-up and participate in the research to gain more knowledge about the risks and benefits related to these areas.

#### STRENGTHENING R&D COOPERATION

In 2012, cooperation between Metsä Group's Business Areas in research and development was accelerated. One goal was to produce a joint overall picture to support the Group's long-term development strategy.

As a result of the work carried out by Metsä Group's R&D Team, with representatives from each Business Area and sustainability, a roadmap until 2020 was drawn up with three key focus areas:

- Improving process efficiency and resource value;
- Renewable raw materials as a competitive edge;
- Value-added products and services.

In 2012, Metsä Group invested EUR 20 million in R&D (EUR 19 million in 2011), which accounts for 0.4% of sales (0.4% in 2011).

food or human contact applications. This mainly applies to packaging boards, napkins as well as baking and cooking products. As a minimum requirement, all our mills that manufacture food contact materials or chemical pulp used in manufacturing these products

are certified according to ISO 22000 or BRC food safety management systems.

Metsä Group does not use genetically modified trees or raw materials. On 18 October 2011, the European Commission adopted a recommendation on the definition of nano-



## OUR PRODUCTS ARE PART OF YOUR EVERYDAY LIFE

In October 2012, Metsä Board produced its first Environmental Product Declaration (EPD) for Simcote, a fully coated folding boxboard produced at Simpele mill in Finland. The EPD's results are based on the Life Cycle Assessment (LCA) approach and the calculations include the operations of raw material sourcing, transportation and use all the way to production operations – in other words the 'cradle-to-gate' approach.

Our products, especially folding boxboards, are part of consumers' everyday lives. One of these is Simcote, which is used for example in food packaging – an essential part of the food chain as the packaging protects the goods between processing and usage by the consumer and therefore decreases food waste. Did you know that up to 40% of food gets wasted due to insufficient packing or the lack of logistical infrastructure? <sup>1)</sup>

We have utilised the Environmental Product Declaration to demonstrate the environmental impacts of a regular cereal box made of Simcote. The size of the carton is 28 cm in height, 19 cm in width and 6 cm in depth with an overall weight of 47 grams.

Under different themes of this report you can follow the cereal carton's environmental impacts during its entire lifetime from raw material procurement to customer-gate, in this case the cereal producer.

### SCOPE OF THE DECLARATION

INCLUDED

Upstream processes



FORESTRY OPERATIONS



ENERGY



OTHER RAW MATERIALS



PACKAGING MATERIALS



Core processes



TRANSPORT



PULP AND BOARD PRODUCTION



WASTE MANAGEMENT



CONVERTING



EXCLUDED

Downstream processes



FURTHER CONVERTING



END-USE



DISPOSAL

1) Dr. Schönweitz, Fraunhofer Institute for Process Engineering and Packaging, 2012



# WOOD WITH SUSTAINABLE ROOTS

Metsä Group's roots are in northern forests – we want to ensure that they are managed in a responsible way for future generations. We operate in areas where forests grow more than they are utilised; where nature management efforts help to maintain their biodiversity; and where they provide livelihoods, sustenance and recreation for people.

## BENEFITS OF NATURE FROM SUSTAINABLY MANAGED FORESTS

The northern forests play a significant role not only as a source of wood raw material, but by providing a wide range of benefits from recreation possibilities and food production to the maintenance of hydrological systems and soil quality. Underlying these ecosystem services there is always a vital and diverse natural environment which is highly valued by us.

Out of the ecosystem services provided by forests, wood generates income to the forest owner. In most cases, our wood originates from family-owned forests, belonging to our owner-members – some 125,000 Finnish forest-owners.

One characteristic of family forestry is that the forests are inherited by successive generations and thus remain in the ownership of the same family. The forests are managed and used responsibly, ensuring that each generation receives its fair share of forest income, as well as the other benefits forests provide. At the same time, we as a Group play a significant regional role in offering work opportunities in rural areas by using the services of local harvesting and transport entrepreneurs.

## KNOWING THE ORIGIN OF WOOD IS KEY TO A RESPONSIBLE SUPPLY CHAIN

Regardless of whether the wood originates from certified or non-certified forests, Metsä

TARGET	PROGRESS	COMMENTS

To sustain the amount of certified wood in our operations above 80%. 82% in 2012

We are constantly aiming to increase the share of certified raw material and are actively promoting forest management certification in areas where we operate.

Group always knows the origin of the wood, ensures its legality and takes measures to prevent the risk of unacceptable practices in the supply chain. Our internal auditing procedures and wood origin tracing system cover the actions of the wood supplier or harvesting contractor together with the origin and nature management audit. Internal auditing thus covers a wide range of sustainability issues from the preservation of nature values and legal origin of the wood to social issues such as safety at work.

Wood suppliers and contractors have also committed themselves to certain sustainability principles which are included in the contracts. The commitments extend to the very beginning of the supply chain, including possible sub-suppliers and subcontractors.

In 2012, Metsä Group companies assessed the impacts of the EU Timber Regulation and the possible development needs in the Group's companies. As some requirements of the Regulation and its practical implementation remained unclear until the end of 2012, additional adjustments after its endorsement in March 2013 are possible.

## OVER 80% OF OUR WOOD COMES FROM CERTIFIED FORESTS

Metsä Group perceives forest certification as an excellent tool to ensure both the sustainability of the supply chain and forestry operations. To further this practice, Metsä Group holds Chain-of-Custody certificates covering all the wood supplied by the company as well as all the production units. Moreover, the main forest areas owned or leased by the

Group companies hold certificates of sustainable forest management. All the certificates are a result of an independent expert verification.

While only some 10% of all the forests in the world have been certified, the target of Metsä Group is to sustain the amount of certified wood in our operations above 80%. Metsä Group is actively promoting forest certification initiatives in the whole wood supply region. In 2012, 82% of the wood supplied by Metsä Group was either PEFC or FSC® (Licence Code FSC-C014476) certified or both (81% in 2011).

## WE HAVE DEFINED 5 ENVIRONMENTAL TARGETS FOR OUR WOOD SUPPLY.

In 2012, Metsä Group was awarded an FSC group certificate that covers the forests in Finland owned by the Group companies. The forests were already certified according to PEFC. At present, the certificate covers around 35,000 hectares. Contractual customers of Metsä Group's parent company Metsäliitto Cooperative in Finland have the possibility to join the FSC group certificate. There is also a PEFC group certification possibility for forest owners, already launched earlier.

## WE EVALUATE OUR ENVIRONMENTAL PERFORMANCE

Metsä Group ensures that the nature management of harvesting operations comply with



legislation and forest certification criteria by regular and extensive field audits. In 2012, the audit results have remained at a good level. One serious malpractice was found and it led to termination of the wood delivery contract with the supplier. In addition to the audit results, one wood delivery contract was terminated as a normal daily operative action due to a failure to fulfil the environmental requirements of Metsä Group.

The results of the national Nature Management Assessment in Finland remained at a high level in 2012. The results are based mostly on 2010–2011 logging site evaluations made by the Forest Centre authorities. The overall result improved from the previous year, especially regarding key habitats and retention trees. Due to the challenging harvesting conditions and consequent soil damages, a slight drawback was noticed in the water protection results. Water protection will remain as one of the key priorities, under which actions will be defined in the Environmental Programme of Metsä Forest.

Metsä Group's and its suppliers' performance in harvesting operations is constantly evaluated by the employees themselves, internal controllers, authorities and external management system auditors. The results of these evaluations are used for measuring the performance and assessing the development needs,

but also as incentives to the personnel whenever appropriate.

#### RESPONSIBILITY IN ACTION

In 2012, Metsä Group defined five main environmental targets for wood supply: maintain biodiversity, decrease the impacts to water, reduce operations' emissions, ensure a legal wood supply and secure the knowledge of the personnel and contractors. These targets were brought into practice via the Environmental Programmes of each country. The action plans included training, rationalisation of transportation as well as the further development of internal control and instructions.

In Finland, Metsä Group participated in a project to develop an easily accessible training for harvester drivers in the field of nature management in forestry operations. The project was managed by the Forestry Development Centre Tapio. The new concept will be tested and introduced more widely in 2013 to accomplish a wider training module – the Nature Management Card. Metsä Group considers the completion of the Nature Management Card, the Nature Management Passport or similar training for harvester drivers as one of the most efficient ways to improve environmental performance in forestry operations.

**SIMCOTE**  
CASE

## CERTIFIED WOOD

The amount of wood needed to produce one cereal carton from Simcote folding boxboard is 117 grams, of which 83% comes from certified forests.



**83%**

## MEETING THE EU TIMBER REGULATION REQUIREMENTS IN WOOD SUPPLY

The majority of Metsä Group's wood supply originates from Finland (some 74% of the whole supply) with part coming from the neighbouring areas around the Baltic Sea. Wood imports from outside the EU come almost entirely from Russia (some 7% of the whole supply). Metsä Group has been one of the pioneers in developing the wood origin tracing systems in Russia. We have gathered wood origin information right from the beginning of our wood supply operations in Russia and used wood supplier and logging site audits to verify the wood origin and sustainability of the wood supply.

We have used digital maps for over ten years to follow the origin of wood and to avoid wood originating from unacceptable sources, such as conservation areas where logging is prohibited. In addition, Metsä Group holds third-party verified Chain-of-Custody certificates for the whole wood supply.

Metsä Group has assessed these measures in relation to the requirements of the EU Timber Regulation, entering into force in March 2013, and found them sufficient, requiring only minor changes. The practical implementation of the Regulation after its endorsement will indicate if there are any adjustments still to be made. Irrespective of this, Metsä Group is updating the maps and wood origin tracing system for Russia in 2013 to maintain the system on a high and modern level.



## SAFEGUARDING NATURE VALUES

Mapping the biodiversity values in the leased forest areas of Metsä Group continued in 2012 in **PODPOROZHYE, RUSSIA**, with emphasis on birdlife. As a result, the working group suggested a number of places to be defined as biologically valuable forests to safeguard the valuable birdlife habitats. The mapping of the biodiversity values of Metsä Group's leased forests in Podporozhye have continued since 2007 and will be continued in 2013.

In the forests owned by Metsä Group in Finland, prescribed burning was used to increase biodiversity. Due to the small size and amount of forest fires in Finland, prescribed burning has become essential for the species dependent on disturbances created by fire. The prescribed burning of retention tree groups is one example of nature management efforts in commercial forests imitating natural processes to safeguard biodiversity.

## TAKING CARE OF OUR WATER RESOURCES

Even though fresh water is not a scarcity in the northern forests, we value these reserves

and strive to minimise our impacts to water resources. The groundwater reserves and different kinds of surface waters from lakes to rivers, streams, ponds and springs are all taken into consideration in our forestry operations.

Decreasing the impacts to water is one of the main environmental targets for Metsä Group's wood supply. In practice, this means that we have defined actions to meet these targets and developed a set of indicators to follow its implementation and efficiency. In 2012, water protection actions included training on the new water protection requirements and the further development of internal control. The efficiency of these actions will be followed in internal and external controls in 2013 and 2014.

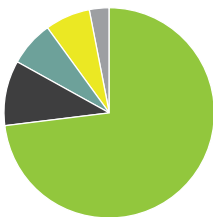
## WORKING TOGETHER FOR SUSTAINABILITY

In Finland, the Forest Biodiversity Programme METSO, initiated in 2008, has continued to gain the forest owners' support and bring valuable forest habitats under METSO protection. In 2012, we continued to offer a service for forest owners that enables them to offer their

valuable forest habitats to the METSO programme via their own local Metsä Group's contact.

Metsä Group participated in a cooperation network under the METSO programme, launched in 2011. The cooperation network aims to develop the nature management of the ecotones of forest areas towards enhancing game species, and consequently other forest dwelling, habitat requirements. The project will continue in 2013. Another stakeholder project with Metsä Group's participation, led by the Forestry Development Centre Tapio, ended in 2012. The project's aim was to develop landscape management practices, establish a network of example plots and produce up-to-date training material. The project also resulted in a landscape management guide for forest owners.

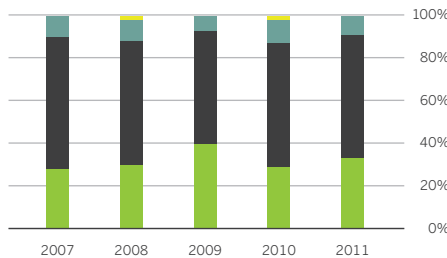
THE GROUP'S WOOD SUPPLIES BY COUNTRY IN 2012



■ FINLAND  
■ BALTIC COUNTRIES  
■ SWEDEN  
■ RUSSIA  
■ OTHER

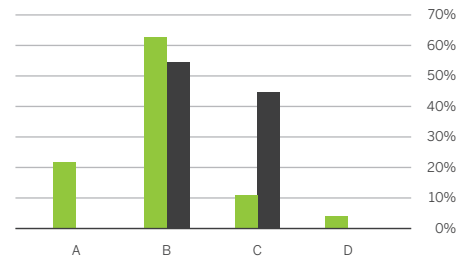
74%  
10%  
7%  
7%  
3%

EVALUATION OF NATURE MANAGEMENT IN STANDS HARVESTED BY METSÄ GROUP IN FINLAND %



■ EXCELLENT  
■ GOOD  
■ FAIR  
■ POOR

SUPPLIER AND LOGGING SITE CLASSIFICATION IN RUSSIA IN 2012 %



■ SUPPLIER AUDITS  
■ LOGGING SITE AUDITS

A = EXCELLENT  
B = GOOD  
C = FAIR  
D = POOR



## COME ON. LET'S GO TO THE FOREST!

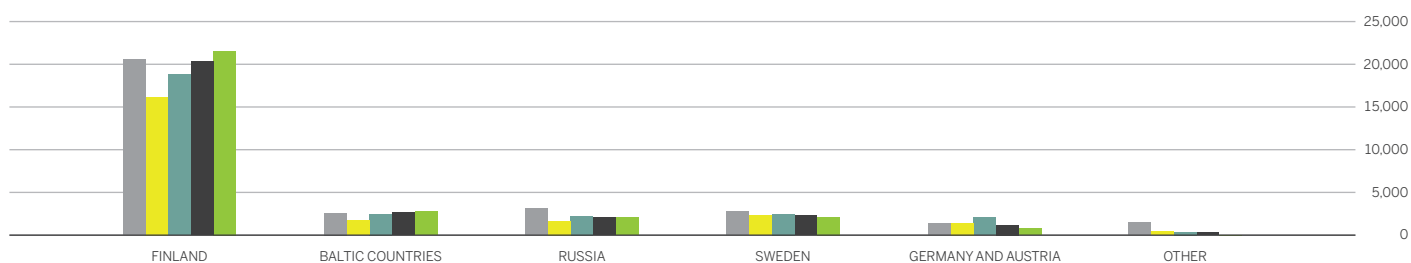
Within the framework of annual Latvian Forest Days, Metsä Forest Latvia together with Priekuli District council organised the event 'Come on. Let's go to the forest!' in May 2012. Around 1,100 visitors including school children, their parents, teachers and other interested individuals attended the event.

Sixteen educational 'forest stops' were created by forest sector professionals in order to introduce different forest products and processes to the visitors. The stops were interactive, allowing the participants to learn with a 'hands-on' approach.

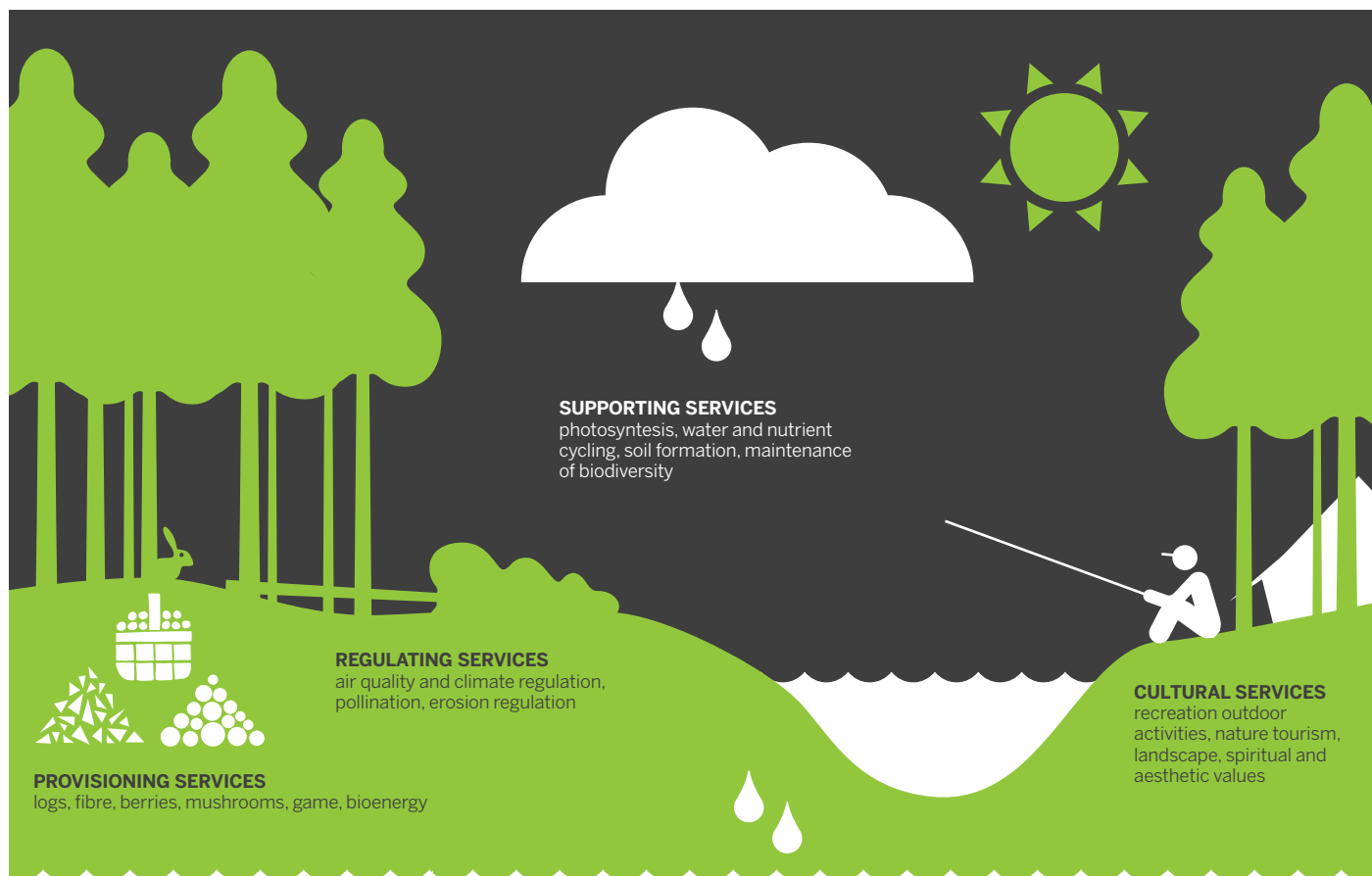
The visitors warmly welcomed the event and expressed their wish to carry on with this tradition and develop it in the future.

**THE GROUP'S WOOD SUPPLIES BY COUNTRY**  
1,000 m<sup>3</sup> (SOLID OVER BARK)

■ 2008 ■ 2009 ■ 2010 ■ 2011 ■ 2012



**ECOSYSTEM SERVICES**



**MAIN FOREST AREAS OWNED OR LEASED BY METSÄ GROUP**

COUNTRY	FOREST OWNER / LEASEHOLDER	TOTAL AREA, HECTARES <sup>1)</sup>	OF WHICH PROTECTED AREAS, HECTARES	CERTIFICATION
Finland	Metsä-Botnia, Metsät Oy	35,034	679 <sup>2)</sup>	PEFC and FSC
	Kirkniemen Kartano Oy	961	217 <sup>2)</sup>	PEFC
Russia	OOO Metsä Forest Podporozhye	215,082	51,658 <sup>3)</sup>	PEFC and FSC
	ZAO Petrovles Podporozhye	55,794	19,714 <sup>3)</sup>	PEFC and FSC

In addition to the areas presented in the table, Metsä Group owns small forest estates in Finland and in Estonia altogether 240 hectares. Further, Metsä Group owns shares (<50%) in the Finnish forest-owning entities Finsilva Oyj and Suomen Metsäsijoitus Oy, and in the Russian forestry holding company Vologodskie Lesopromyshlenniki.

- 1) Including forestry land and other land within the forest estate/area.
- 2) Including nature conservation areas, Natura 2000 areas and conservation programme areas. Small-scale valuable forest habitats and the buffer zones of watercourses are not included in the figures.
- 3) Including forests with a protective function (e.g. forests along watercourses); those with special limitations of the utilisation regime; and biologically valuable forests that have been excluded from commercial use by the company. Strictly protected areas are excluded from the lease areas in Russia. Small-scale valuable forest habitats are not included in the figures.





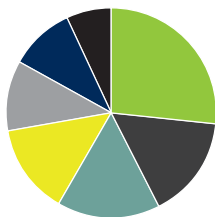
# SUSTAINABLE SUPPLY CHAIN IS A PREMISE

For us, responsible purchasing and a sustainable supply chain are prerequisites that will not be compromised. Sustainability throughout the entire supply chain enables us to secure our own as well as our business partners' long-term success, thus strengthening our aim to be a profitable and responsible business operator. We have set an ambitious target to train all Metsä Group's purchasing personnel on managing sustainability in the supply chain.

Metsä Group Purchasing is organised into 17 main categories, including pulp, energy, logistics, chemicals and pigments as well as indirect materials and services. Purchasing wood raw material is the responsibility of Metsä Forest. The Group's spend in external purchases, excluding wood procurement in 2012, was over EUR 2 billion, slightly lower than in 2011.

Metsä Group focuses on ethical, reliable and environmentally sound suppliers, whose quality and pricing will facilitate long-term cooperation and responsible profitability. Our aim is to develop trusting cooperation with selected key suppliers.

**COMPOSITION OF THE GROUP'S PURCHASES IN 2012**  
% OF MATERIAL AND SERVICE PURCHASES



■ WOOD	27%
■ PULP AND RECOVERED FIBRE	16%
■ INDIRECT MATERIALS AND SERVICES	16%
■ LOGISTICS	14%
■ ENERGY	11%
■ CHEMICALS, PIGMENTS AND FILLERS	10%
■ OTHER (INCLUDING PACKAGING MATERIALS)	7%

## TARGET

To have a supplier Code of Conduct included in all new supplier contracts.

## PROGRESS

Code of Conduct included in all new and renewed contracts since June 2011, in total of 71 contracts in 2012.

## COMMENTS

We will proceed with the earlier target to ensure that sustainability is taken into account in all new contracts. Additionally, we will further develop risk assessment and audit practices on sustainability to identify and audit the risk suppliers from the sustainability point of view.

The majority of our purchases, 99% (98% in 2011), are from Europe, which is our main supply region. Our target is to use local suppliers when feasible. About 88% (87%) of our purchases are from countries where we have our own manufacturing operations.

### SUPPLIER CODE OF CONDUCT IMPLEMENTATION CONTINUES

Metsä Group launched a Supplier Code of Conduct in 2011 in order to ensure that we only cooperate with suppliers who act responsibly. We expect all of our suppliers to commit to sustainability, comply with a high standard of business ethics and follow good working practices.

The Supplier Code of Conduct emphasises the respect for human rights, a safe working environment as well as actions against corruption and bribery. The use of forced or child labour is unconditionally prohibited.

The Supplier Code of Conduct is an integral part of any agreement documentation and has been taken into account in all new and renewed contracts during 2012. This work to broaden the coverage of contracts that include the Supplier Code of Conduct will also continue in 2013.

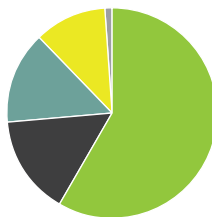
### SUPPLIER AUDITING PROCESS

During 2012, we continued the development of a common monitoring process for our suppliers as well as preparing audit plans for each of the purchasing categories. In 2012, Metsä Group performed 52 supplier audits (83 in 2011).

One of the most important issues is to ensure that there are no incidents of child, forced or compulsory labour in the suppliers' operations. In 2012, no risk for such incidents was identified during the audits.

The process and tools used in the 2012 audits were analysed in November 2012; moreover, identified improvement areas will be further developed in 2013 to improve transparency and the follow-up of agreed activities.

**THE GROUP'S EXTERNAL PURCHASES<sup>1)</sup>**  
BY COUNTRY IN 2012 %



■ FINLAND	58%
■ SWEDEN	15%
■ OTHER EU COUNTRIES	14%
■ GERMANY	11%
■ OUTSIDE EUROPE	1%

1) Wood procurement excluded

# MORE EFFICIENT LOGISTICS

**Logistics plays an important role in Metsä Group's operations. In order for the raw material to turn into final products, several transportation steps are required – transporting the raw materials to our mills, conveying the semi-finished goods between production plants and final delivery to our customers. This efficient and reliable logistics service is possible because of our extensive vendor network.**

We acknowledge that transportation plays a significant environmental impact. For this reason, we aim to continuously seek new, more efficient and sustainable solutions to logistics throughout the whole transportation chain.

An example of our sustainable transportation solution is 'backhauling'. Returning a truck back to the mill with an empty load is by no means sustainable as it requires almost as much time and fuel as a fully loaded one. This is why we favour backhauling, a more sustainable and economic solution in all potential transportation routes. Backhauling means that more than 50% of the route is driven loaded. This is possible, for instance, by improved route planning, driving via more than one loading point, or by loading several materials such as pulp and wood chips on the same vehicle. As Metsä Group aims to increase transport efficiency in all its operations, this target is a key performance indicator and part of the bonus systems in certain positions within the Group.

As in every step of our supply chain, also in logistics, we ensure that sustainability is taken into account in all cooperation with vendors. Our Supplier Code of Conduct is an essential part of our contracts with both wood harvesting and transportation service providers. In addition, we also have a check list defining our partner's liability. We require that all

entrepreneurs, for example, commit to having written work contracts with all employees and provide occupational health care. Furthermore, we are continuously educating harvesting entrepreneurs on forest certification and transportation entrepreneurs on more efficient logistics, which is made possible by improving the design of raw wood collection routes. Moreover, the majority of our contractual drivers in Finland have completed safety card training to ensure accident prevention.

In many areas of Finland, we are also a significant employer as the majority of our road transportation and harvesting providers are entrepreneurs.

Metsä Group's wood raw material, pulp and products are transported by using road, rail, maritime transport and floating. Our focus is to move from road transportation to rail and shipping when feasible.

## CHANGES IN THE BUSINESS ENVIRONMENT

The amendments to the EU's Sulphur Directive regulating ship emissions will come into force from the beginning of 2015. In the International Maritim Organisation's (IMO) regulations the target is to decrease the sulphur content in Sulphur Emission Control

Areas (SECA) – namely the Baltic Sea, the North Sea, the English Channel and the coastal areas of North America. In these areas, the maximum sulphur content of marine fuel will decrease from 1.0% to 0.1% from 1 January 2015. In other European sea areas, the maximum sulphur content of marine fuel will decrease from 3.5% to 0.5% already by 2020 based on the EU Directive. We are investigating all possible low-emission maritime transportation options, considering our routings as well as evaluating alternative modes of transportation.

It has been estimated that the new regulations imposes EUR 200 million extra costs annually for Finnish forest industries. Metsä Group is committed to reduce emissions in a cost-effective way combined with efforts to ensure global level playing field. We are also following carefully all plans and preparations that might further increase environmental regulations in logistics and transportation.



Wood and other raw materials for the folding boxboard needed for a cereal carton, and the product itself are transported by using different vehicles. The main transport mode is ship, when looking at kilometres weighted by the mass of cargo. The folding boxboard travels approximately 2,800 km to the cereal producer's gate, mainly by ship.

## TONNE KILOMETRES BY TRANSPORT MODE

SHIP	ROAD	RAIL
59%	26%	15%



# A KEY PLAYER IN BIOENERGY

Metsä Group is one of the leaders in bioenergy generation within the industry. We have systematically increased the share of bioenergy in energy sourcing. Over the last few years, we have also increasingly expanded our operations to supply wood biomass fuels to third parties.

TARGET	PROGRESS	COMMENTS
To reduce fossil-based CO <sub>2</sub> emissions in production by 30% per product tonne by 2020 from the 2009 level.	-27% (2009–2012)	In 2012, we took major steps towards the target by launching the new bioenergy plants at Joutseno, Kyro and Lohja mills.
To improve energy efficiency by 10% by 2020 from the 2009 level.	4% (2009–2012)	Although specific energy saving actions at mills were completed as planned, the overall energy efficiency improvement was modest in 2012. This was because of low production efficiencies at several production lines after the ramp-up phases following the new investments.

Increasing the share of bioenergy is one of the two main contributors in our efforts to reduce the fossil CO<sub>2</sub> emissions to meet our target. The other key measure is improving energy efficiency. In addition to climate change mitigation and other environmental benefits, work towards these targets also helps Metsä Group to improve its cost efficiency and competitiveness.

## LEADING BIOENERGY PRODUCER AND SUPPLIER

Metsä Group's total energy consumption of 29.0 TWh (31.1 TWh in 2011) decreased by 6% mainly as a result of lower production figures. The share of wood-based biofuels in the Group's own energy production accounted for 83% (80%). The share of wood-based bioenergy of total energy consumption including purchased heat and electricity was 66% (63%).

In addition to its own operations, Metsä Group supplied 2.2 TWh of wood-based biomass from the mills' side streams and 2.0 TWh of forest-based logging residual to external energy producers. In purchased heat,

the share of wood-based solid biofuels accounted for 63% and in purchased electricity 4%.

Since 2009, Metsä Group has systematically developed and grown its own direct wood-based biomass supplies to third party

## LAST YEAR WE COMPLETED THREE MAJOR BIOENERGY PROJECTS THAT FURTHER INCREASE OUR ALREADY HIGH PROPORTION OF BIOENERGY.

energy generators mainly in Finland. Today, Metsä Group is one of the biggest suppliers with customers throughout Finland. Our total of 4.2 TWh supplies of biomass enable our customers to replace fossil fuels and hence reduce their fossil CO<sub>2</sub> emissions, roughly estimated, by some 1,200,000 tonnes annually. Taking into account our own fossil CO<sub>2</sub> emis-

sions of 960,000 tonnes the external supplies more than substitute our climate change effect.

A large share of the Group's purchased electricity was produced by using carbon-neutral energy sources, such as nuclear and hydro power. Together, with wood-based bioenergy, these totalled 79% of all energy sources for purchased electricity. In general, the Group's electricity consumption totalled 4,880 GWh (5,219 GWh).

## INCREASING THE SHARE OF BIOENERGY

In 2012, we completed three major bioenergy projects that further increase our already high proportion of bioenergy. Together, they reduce the Group's annual carbon dioxide load of fossil fuels by some 200,000 tonnes.

A biopower plant was launched in conjunction with Metsä Board's KYRO MILL in October. The plant replaces natural gas with renewable fuels, predominantly bark, whole tree chips, crushed stumps and other wood residues. The plant produces electricity and heat for Kyro mill as well as for the neighbouring district of Hämeenkyrö. The fossil CO<sub>2</sub> emissions from Kyro mill will be reduced by approximately 100,000 tonnes per year. Hereby, the carbon footprints for the folding boxboards and wallpaper base produced at Kyro mill will be reduced by half.

A bioenergy heating plant, which uses wood by-products from production, was completed in Lohja in conjunction with Metsä Wood's KERTO MILL. Metsä Wood and its partners started supplying steam to the mill and district heat to the local community during the last quarter of 2012.

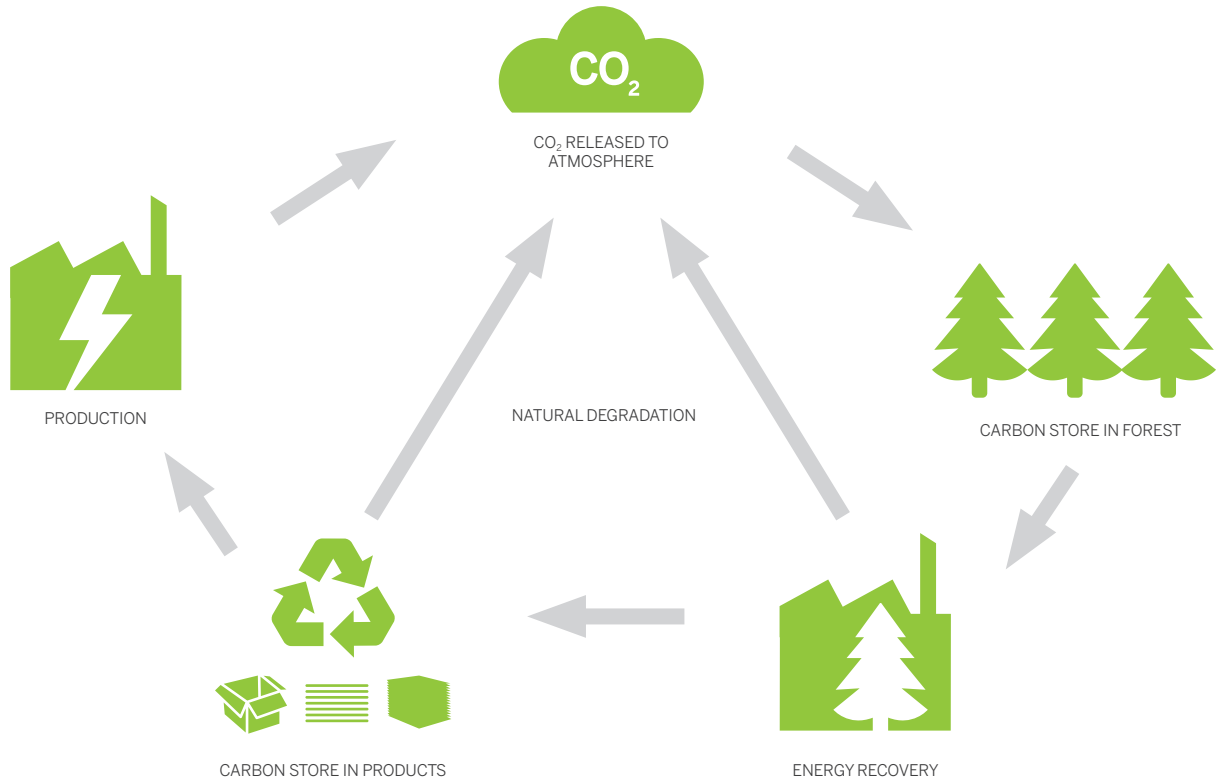
During second half of 2012, Metsä Fibre's new gasification plant at JOUTSENO MILL started to produce energy from bark in the form of biogas, which replaced natural gas in the lime kiln. Hence, the mill will not need any external energy during normal operation. As a result, the mill will be the first carbon-neutral chemical pulp mill in Finland.

Metsä Fibre has also launched a feasibility study to increase the use of renewable fuels at KEMI MILL in Finland. One possible production technology is a gasification plant similar to the one at Joutseno mill. Potential bioenergy investments are also being planned at other mills.

## FOCUS ON ENERGY EFFICIENCY

In 2012, the energy efficiency of Metsä Group's production processes improved further.





The work is supported by the Energy Efficiency Systems that have been in place since 2006. To be compatible with the latest standards, almost all Metsä Board's mills as well as Metsä Tissue's mills in Germany have been granted the new ISO 50001 Energy Management Systems standard certificate.

The target of energy efficiency is to reduce the specific energy consumption of products. The main methods to improve energy efficiency are equipment and process modifications and optimising operations. Efficiency improvements are an integral part of all major investments in production capacity.

New energy efficiency improvement potentials are continuously studied by conducting energy analyses, cooperating with equipment manufacturers and developing procedures internally.

In 2012, altogether 87 actions (135 in 2011) were completed which potentially will reduce electricity consumption by some 101 GWh (54 GWh) and heat by 179 GWh (260 GWh) annually, thus eliminating fossil CO<sub>2</sub> emissions by approximately 38,000 tonnes (47,500 tonnes) a year.

As a result of our long-term target to increase our energy efficiency, we have managed to improve it by 4% since 2009, regardless of the uneven production rates during the ramp-up phases after the capacity increase investments at several mills in 2011 and 2012.

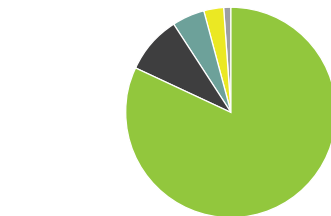
Metsä Tissue was granted the Energy Masters Award 2012 by Europe's leading networking platform for energy management in the industrial sector, the Energy Masters by

Econique Group. The award is for Metsä Tissue's Sustainable Low Carbon Tissue Manufacturing Project that is linked to Metsä Tissue's project to improve energy efficiency by 20% by 2012 from the 2007 level.

**MITIGATING CLIMATE CHANGE**

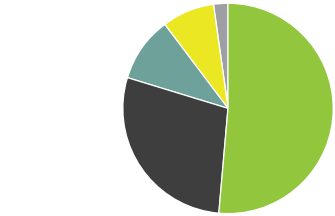
The GHG Protocol Scope 1 covers all direct greenhouse gas emissions, Scope 2 indirect GHG emissions from consumption of

**THE GROUP'S FUEL CONSUMPTION IN 2012**  
%



- WOOD-BASED BIOFUELS
- GAS
- OIL
- COAL
- PEAT
- OTHER FOSSIL FUELS

**THE GROUP'S ELECTRICITY CONSUMPTION IN 2012**  
%



- INTERNALLY CO-GENERATED ELECTRICITY 51%
- PURCHASED NUCLEAR POWER 29%
- PURCHASED FOSSIL-BASED ELECTRICITY 10%
- PURCHASED HYDRO POWER 8%
- PURCHASED WOOD-BASED ELECTRICITY 2%

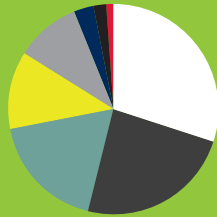
# SIMCOTE CASE

## ENERGY AND CLIMATE

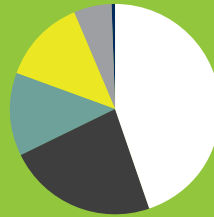
The production of materials needed for one cereal carton made of Simcote folding boxboard generates 41 grams of CO<sub>2</sub> emissions, the main source being pulp and folding boxboard production. The contribution of packaging compared to the total environmental impact of the food-packaging-system is relatively small. Packaging covers 5–10% of the CO<sub>2</sub> emissions for the total food product's carbon footprint including the food stuff.

Source: MTT FutupackEko2010

ENERGY USE BY SOURCE



CO<sub>2</sub> EMISSIONS BY SOURCE



BIOMASS	30%	PULP AND BOARD PRODUCTION	45%
NUCLEAR POWER	24%	PRODUCTION OF OTHER RAW MATERIALS	23%
CRUDE OIL	18%	ENERGY PRODUCTION	13%
PEAT	12%	TRANSPORTATION	13%
NATURAL GAS	10%	FORESTRY OPERATIONS	6%
HARD COAL	3%	PRODUCTION OF PACKAGING MATERIALS	0.3%
OTHER NON-RENEWABLE SOURCES	2%		
OTHER RENEWABLE SOURCES	1%		

purchased electricity, heat or steam and Scope 3 other indirect emissions, such as the production of purchased materials and fuels, transport-related activities, waste disposal, etc.

The Group's fossil carbon dioxide emissions at the mills (Scope 1) decreased by 20% to 962,000 tonnes (1,200,000 tonnes in 2011) due to changes in the production structure and lower production volumes. Geographically, 51% of the emissions were released in Finland.

Emissions of the production of purchased electricity and heat (Scope 2) were 392,000 tonnes (438,000 tonnes). Again, 50% of the purchased energy materialised in Finland.

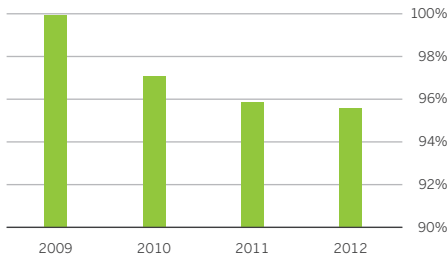
Scope 1 and 2 emissions per tonne of production were 27% lower than in 2009. Our long-term reduction target is 30% by 2020 from the 2009 emission level.

Currently Metsä Group does not have sufficient data for calculating Group-wide emissions from producing and transporting the main raw materials (Scope 3).

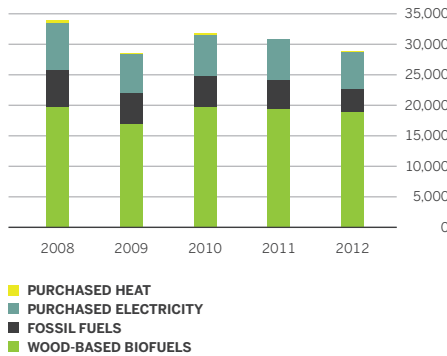
### CHANGES IN THE BUSINESS ENVIRONMENT

In 2012, Metsä Group's mills continued preparations for the EU's third CO<sub>2</sub> Emissions

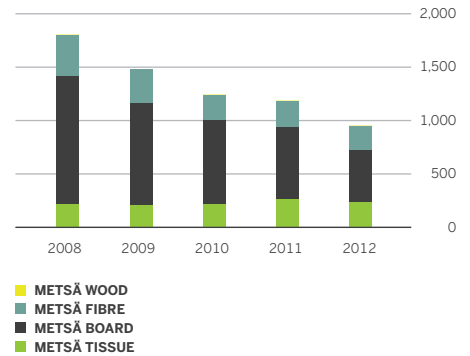
ENERGY EFFICIENCY IMPROVEMENT EXPRESSED AS SPECIFIC ENERGY CONSUMPTION DEVELOPMENT



THE GROUP'S ENERGY CONSUMPTION ON PRIMARY ENERGY LEVEL GWh



GREENHOUSE GAS EFFECT (CO<sub>2</sub> EQUIVALENT) BY BUSINESS AREA 1,000 TONNES



### ENERGY CONSUMPTION BY BUSINESS AREA

	Metsä Tissue		Metsä Board		Metsä Fibre <sup>1)</sup>		Metsä Wood <sup>2)</sup>		Metsä Group total <sup>3)</sup>	
	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011
Wood-based biofuels	0%	0%	17%	19%	45%	41%	2%	2%	65%	63%
Fossil fuels	4%	4%	6%	8%	3%	3%	0%	0%	13%	15%
Purchased electricity	7%	6%	18%	18%	-6%	-4%	2%	2%	21%	22%
Purchased heat	2%	1%	2%	2%	-3%	-4%	1%	1%	1%	0%
<b>Total primary energy</b>	<b>12%</b>	<b>11%</b>	<b>44%</b>	<b>47%</b>	<b>39%</b>	<b>37%</b>	<b>5%</b>	<b>4%</b>	<b>100%</b>	<b>100%</b>

1) Most of the energy that Metsä Fibre produces in excess of its own needs is sold. Metsä Fibre is a net seller of heat and electricity, and also sells part of its bark.

2) Nearly all of the heat purchased by Metsä Wood is produced from the wood material by-products of its production plants.

3) Total energy is shown in terms of fuel, i.e. the quantities of heat and electricity purchased have been converted to the corresponding amount of fuel that would be required to produce them.



Trading Scheme (EU ETS) for the period 2013–2020. Hence, the updated CO<sub>2</sub> emissions permits were nationally applied. Although applied already in 2011, the European Commission's decision on the final

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**ALREADY 83% OF THE  
FUELS USED BY METSÄ  
GROUP ARE BIO-BASED.**

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allocations of free-of-charge CO<sub>2</sub> allowances per mill is still pending. During 2013, the EU is expected to make a proposal on possible structural changes in the EU ETS.

Metsä Group has evaluated the appropriate measures to comply with the Industrial

Emission Directive that comes into force in 2016. Due to more stringent emission limits, minor investments will be required for boilers at several Metsä Group mills.

In 2012, the European Parliament approved a new Energy Efficiency directive which will be effective from 2014. During 2013, national implementation plans will be prepared. For the time being, Metsä Group expects that our Energy Efficiency System and on-going continuous efforts are for the most part sufficient for compliance.

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Emission data at the Group, Business Area and mill levels are available on pages 44–47. →





# PLENTY OF FRESH WATER CLOSE TO OUR OPERATIONS

Global water sources are distributed unevenly. As water is essential in our processes, our mills are located in areas with abundant water sources. Nevertheless, to minimise wastewater emissions and energy consumption, we continuously seek new ways to reduce the use of fresh water in our processes by recycling it effectively.

Metsä Group needs water in all its production processes – it is needed for cleaning and cooling as well as for making steam for thermal energy. As our mills are located in areas with generous water sources our water use does not limit other water use in the same region. Additionally, our process water is cleaned carefully before releasing it back to the nature, ensuring that the environment surrounding our mills is not threatened by our water use.

## PURELY SURFACE WATER

In 2012, our fresh water intake totalled 258 million cubic meters (370 million m<sup>3</sup> in 2011), almost all 98% (97%) was surface water from rivers and lakes. Process water intake decreased to 149,096 m<sup>3</sup> (163,794 m<sup>3</sup>), and cooling water intake to 94,560 m<sup>3</sup> (115,094 m<sup>3</sup>).

As our production sites are located in areas with abundant water resources, the mills' water intake is typically less than 10% of the total flow of a river or a lake. Therefore, we can say that our mills' water intake does not limit other water use in the region. When groundwater is used, the intake volume is determined and carefully controlled according to each mill's environmental permit.

## MINIMISING WATER USE

We continuously seek new ways to reduce the use of fresh water in our processes by recycling

it effectively. This minimises the wastewater emissions and saves energy, thus decreasing the impact on the climate.

The percentage of recycled and reused water varies mill by mill, mainly depending on product quality requirements and local water conditions. Mills have set their own targets and continuous improvement plans for water use in their environmental management systems.

## OUR MILLS ARE LOCATED IN AREAS WITH ABUNDANT WATER SOURCES.

## CALCULATING WATER USE BY PRODUCT

Metsä Board calculated the water footprint of Simcote, a folding boxboard product as part of the product's life-cycle assessment piloted in 2012. A water inventory analysis covering paper production (gate-to-gate) for all tissue products was also completed to enable water footprint calculations later as the method is settled.

## SECURING LOCAL IMPACTS OF WASTEWATER TREATMENT

Process waters are carefully cleaned before they are released back into a river, lake or the sea with most mills operating their own wastewater purification plants. Furthermore, each mill has its own specific environmental permit which sets limits for pollutants.

The main wastewater impacts are eutrophication and oxygen demand caused by phosphorus and nitrogen nutrients and organic matter. The Group's total waste water volume totalled 149 million m<sup>3</sup> (164 million m<sup>3</sup>). The Group's phosphorus load totalled

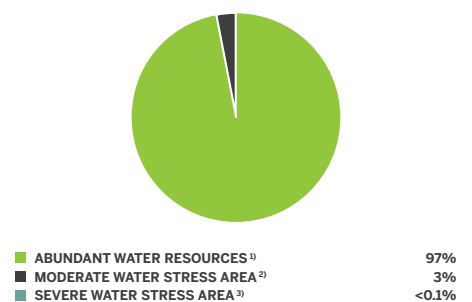
50 tonnes (79 tonnes), and nitrogen load decreased to 637 tonnes (693 tonnes).

## CHANGES IN BUSINESS ENVIRONMENT

In November 2012, the European Commission issued a blueprint to safeguard Europe's waters by developing its water policy in a more sustainable way. In the blueprint, the Commission sets its ambitions for the future of the EU water policy. The main aim is to enhance the implementation of the water framework directive in all member states by 2015 in order to guarantee good quality fresh water for everyone. In addition, the aim is to reduce water scarcity and make water management more efficient. The follow-up actions can set possible restrictions on the use and pricing of water, as well as a mandatory water footprint calculations.

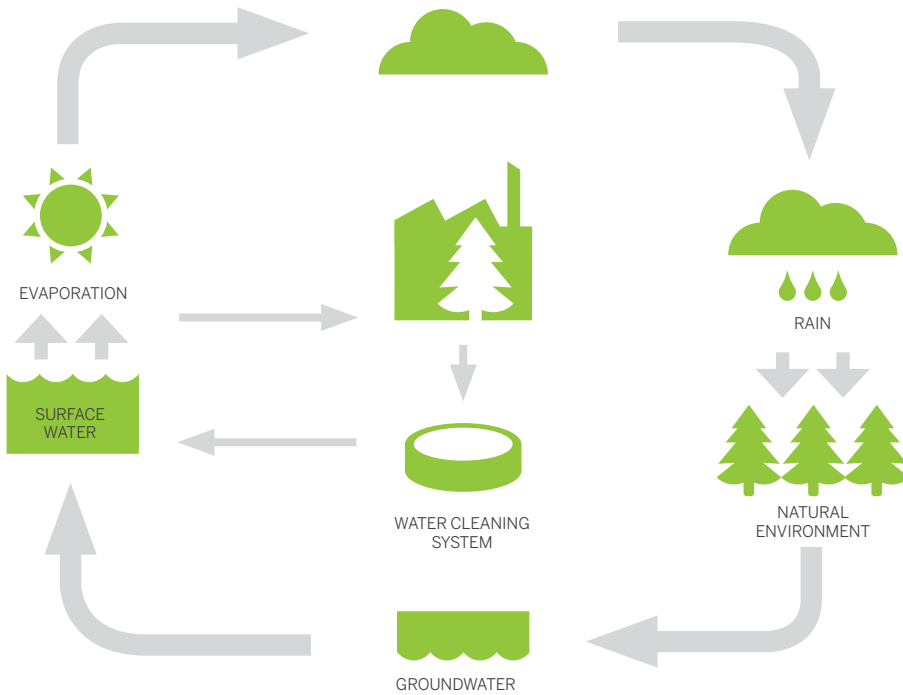
Detailed information on our mills' water use and wastewater discharges are reported on pages 44–47. →

## THE GROUP'S WATER USE BY WATER STRESS INDEX IN 2012



- 1) Water stress index (WSI) <0.1
- 2) WSI=0.1–0.5
- 3) WSI=0.5–1.0

Source: Pfister et al., 2009. The water stress index is calculated based on the total annual freshwater withdrawals versus local hydrological availability.



## WATER CHANGES ITS FORM, BUT DOES NOT DISAPPEAR

Our mills and fibre raw material sources are mainly located in the Nordic countries, which have plenty of good quality fresh water available. Forests play a crucial role in the region's natural water cycle as they filter rainwater before it enters the groundwater or flows into rivers and lakes thus maintaining high-quality water.

Forests do not need irrigation in boreal areas, nor do they lower groundwater levels or otherwise reduce water availability in the region. In commercially managed forests, trees are part of the natural water cycle.

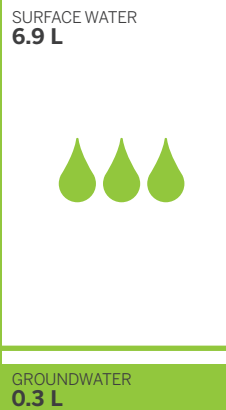
### SIMCOTE CASE

## WATER

Water needed for the production of the folding boxboard for one cereal carton is 7.3 litres. Some 93% of this is related to pulp and folding boxboard production. Calculations include water needed for raw material procurement and production, but exclude water used by growing trees and turbine water from hydropower production.

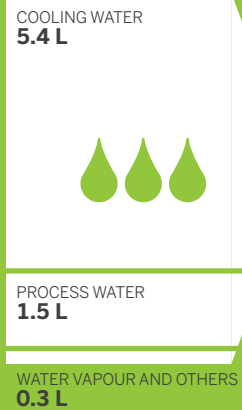
## WATER FLOWS

BOUNDED WATER IN FIBRES AND OTHER RAW MATERIALS  
**0.05 L**

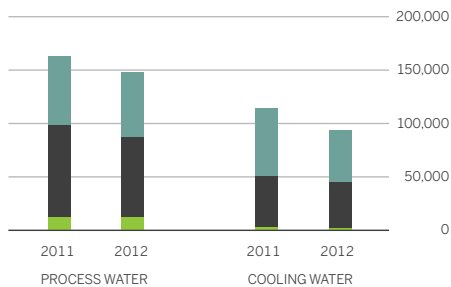


CRADLE-TO-CEREAL  
PRODUCER'S GATE  
FOR ONE CEREAL  
CARTON

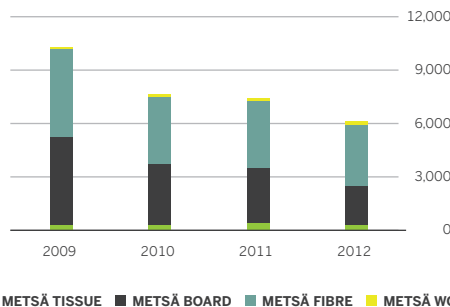
BOUNDED WATER IN BOARD  
**0.05 L**



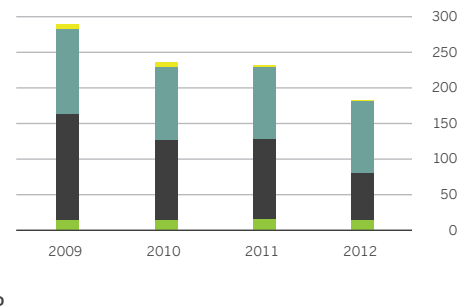
WATER USE BY BUSINESS AREA  
1,000 m<sup>3</sup>



ACIDIFICATION (SO<sub>2</sub> EQUIVALENT) BY BUSINESS AREA  
TONNES



EUTROPHICATION (P EQUIVALENT) BY BUSINESS AREA  
TONNES





# FROM RE-USE TO REDUCE

**Re-using residuals and waste is one way of improving our material efficiency and reducing landfill waste. One important facet of this work is to reduce the amounts of waste generated in our production processes.**

Metsä Group has reduced landfilled waste during recent years as a result of extensive efforts to improve waste re-utilisation. For example, Metsä Group has been involved in several large earth construction projects involving waste re-use during 2012.

We have also invested in R&D on re-use to guarantee a good outlook for the future as well. To ensure minimal impacts and the best re-use potential, we strive to increase the solid content and decrease the organic content of our wastes.

In 2012, the total amount of residuals and waste generated by Metsä Group's production units was 691,572 tonnes (789,493 tonnes in 2011) mainly consisting of fibre sludge, ashes from energy production and lime ash from chemical pulp production. Of this only 81,435 tonnes (69,047 tonnes) was landfilled and 608,117 tonnes representing 88% of the total waste amount was recycled (718,482

tonnes i.e. 91%) for example in bioenergy production or as fertilizer. The amount of hazardous waste was 2,021 tonnes (1,964 tonnes) mainly consisting of oils, chemicals or batteries.

## IMPROVEMENTS IN RE-USE

In 2012, Metsä Group began to look into the possibilities of decreasing the amount of green liquor dreg by diminishing its lime mud content. Lime mud has currently good re-use possibilities, for example as fertilizer. Separating the lime mud from the green liquor dreg could improve the re-use potential of both materials.

## CHANGES IN BUSINESS ENVIRONMENT

Legislation in Finland and Europe is aiming to further decrease the amount of waste and, at the same time, improve the quality and re-use potential of residues. Only allowing inorganic wastes in landfilling and for re-use in earth construction will make the industry seek new solutions for wastes with high organic content from incineration. When the incineration potential and landfilling tax are dependent on the wet weight of the waste, it is clear that in the near future the industry will need to invest in solutions that increase the solid content of

waste. In Metsä Group's operations, deinking sludge is a prime example of incineration potential and also the potential to drastically reduce the amount of waste with increasing solid content.

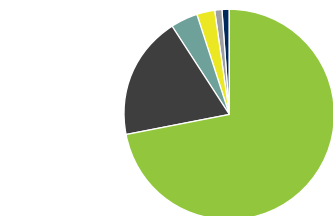
Forest and agricultural fertilisation with industrial by-products and waste-based products is expected to increase globally in the near future. We are following this progress

**ALMOST 90% OF THE RESIDUALS AND WASTE ARE RECYCLED.**

closely and have taken the first steps in forest fertilisation with fly ashes produced at our productions sites. Metsä Forest will provide an ash fertilisation service for forest owners from the beginning of 2013. Both lime mud and fibre sludge also have great potential in fertilisation and soil improvement.

As legislation is driving the industry to reduce and re-use, it will be our challenge to overcome current barriers and opportunity to develop new innovative products and processes.

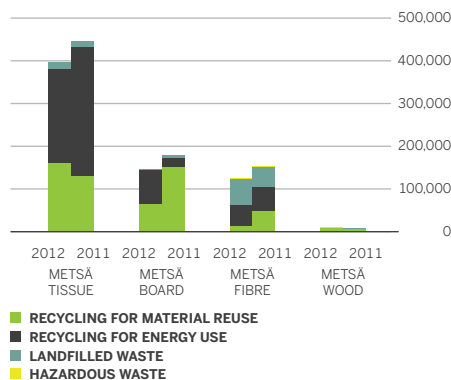
THE GROUP'S RESIDUES BY SOURCE IN 2012  
%



- PROCESS WASTE
- WASTE WATER TREATMENT WASTE
- ENERGY PRODUCTION WASTE
- MUNICIPAL WASTE
- PACKING, ABSORBENT AND FILTER WASTE
- OTHER

- 72%
- 19%
- 4%
- 3%
- 1%
- 1%

WASTE MANAGEMENT BY BUSINESS AREA  
TONNES







Producing folding boxboard needed for one cereal carton generates 1.8 grams of waste that is recycled and 0.4 grams of waste that is landfilled. The amount of hazardous waste accounts for 0.2% of the total waste. Additionally, many side-streams of pulp production are circulated within the pulp mill and utilised in energy recovery, which is not included in the recycling figures. Waste calculation covers only waste originating from the manufacture of pulp and folding boxboard. This accounts for only approximately 8% of all wastes and production residues of the Simcote's LCA (cradle-to-cereal producers gate).

**WASTE BY DESTINATION**  
**% OF TOTAL WASTE FROM PULP AND BOARD PRODUCTION**

**MATERIAL RECOVERY**

**48%**

**ENERGY RECOVERY**

**42%**

**HAZARDOUS WASTE**

**0.2%**

**LANDFILL WASTE**

**10%**







# MINIMISING ENVIRONMENTAL IMPACTS

We regularly assess the environmental risks of our own operations as well as those related to our partners. The environmental impacts and risks related to our operations are mitigated by continuously developing our production processes.

Each mill has environmental permits that set the limits for discharges to water, emissions to air, noise, how to diminish accidental releases and conduct regular environmental risk analyses at production units, among others. In addition, Metsä Group has regular training to prepare for possible emergency situations as well as crisis management teams at the Group, Business Area and mill levels.

## IMPROVING THE ENVIRONMENTAL PERFORMANCE

In 2012, Metsä Group's three bioenergy projects reduce the Group's carbon dioxide load of fossil fuels by some 200,000 tonnes annually. Additionally, we invested in projects that increased the mills' production capacities.

Metsä Group's capital expenditure totalled EUR 204 million (EUR 227 million in 2011). In 2012, Metsä Group received from the Government EUR 2,0 million (EUR 33,000) as a support for investments.

## METSÄ TISSUE

A new gas-fired power plant was completed at **KRAPKOWICE MILL** reducing, for example, the sulphur and particle emissions to air by more than 90% compared to the previous coal-fired power plant. **DUREN, STOTZHEIM** and **ZILINA MILLS** were able to reduce their fresh water use with investments and adjustments in the operation models. **RAUBACH MILL**, on the other hand, reduced its energy use with minor operational adjustments and improvements in the mill's infrastructure.

## METSÄ BOARD

A new biopower plant was taken into operation at **KYRO MILL** in October. The new plant replaces natural gas with renewable biofuels, reducing the fossil CO<sub>2</sub> emissions from the mill by approximately 100,000 tonnes per year. Kyro mill also installed a new treatment system with broader coverage to collect the odorous gases emitted from the effluent treatment plant. Several improvements were also made at the effluent treatment process to improve the stability of the process and ensure sufficient treatment capacity. The mill also reduced its environmental noise by servicing the exhaust fans and replacing any if needed.

**KASKINEN MILL** installed equipment for screening the bottom ash from the power plant boiler in order to be able to reuse the screened sand. This is expected to reduce the amount of waste at the mill by some 1,000 tonnes annually. **SIMPELE MILL** was able to reduce noise with better insulation.

Environmental risk surveys were updated at Kyro and Simpele mills.

## METSÄ FIBRE

**JOUTSENO MILL** took into operation a new gasification plant, which produces biogas to replace the natural gas in the lime kiln. This reduces the fossil CO<sub>2</sub> emissions of the unit by 60,000 tonnes per year and enables the mill to utilise most of the residual bark on-site. Joutseno mill also continued the trial for utilising process residuals such as lime and wood rejects in soil improvement. The spare incinerator for odorous gases was replaced with a new one, improving the usability of the gas treatment

system. At **KEMI MILL**, the new recausticising plant has improved the collection and treatment of mild odorous gases.

**RAUMA MILL** has started new utilisation trials for lime rejects as fertilisers and neutralising chemicals at effluent treatment. The mill has also partially replaced heavy oil by tar oil as fuel in the lime kiln, which reduces the mill's fossil CO<sub>2</sub> emissions.

A development project was initiated in Metsä Fibre to improve the monitoring of air emissions and support the operation of the recovery boilers and lime kilns. The aim is to reduce air emissions with optimised production conditions.

Environmental risk surveys were updated at Äänekoski, Joutseno and Rauma mills.

## METSÄ WOOD

The new biofuel power plant at **LOHJA MILL** enables the full utilisation of low-value by-products at the mill site and reduces the need for transportation. **MERIKARVIA SAWMILL** installed a new economiser for more efficient heat recovery from the power plant flue gases. The mill also renewed and improved the flue gas treatment system for particles to ensure low emissions to air.

A new baling unit for planed wood chips was taken into operation at **KASKINEN'S UPGRADING PLANT**, which reduces noise and enables the further utilisation of the by-products. Improvements were also made in the collection of sawdust, reducing particle emissions to air. **PUNKAHARJU MILL** invested in a new sludge dewatering unit, which will improve the drying efficiency and reduce the amount of sludge waste. The new sawing line at **VILPPULA SAWMILL** reduces noise and improves raw material efficiency.

## ENVIRONMENTAL LIABILITIES

We constantly evaluate and monitor our liabilities from previous operations at closed down, sold or leased industrial properties as well as at decommissioned landfills. We have worked actively to reduce our old environmental liabilities during the past years by remediation work at contaminated sites and landfills. Environmental liabilities are recorded in accordance with the current environmental protection laws and regulations when it is possible that the obligation's amount can be estimated. Our environmental obligations at the end of 2012 totalled EUR 27 million (EUR 26 million in 2011).

## ENVIRONMENTAL INCIDENTS PER UNIT IN 2012

BUSINESS AREA	UNIT	INCIDENTS	CORRECTIVE ACTIONS
METSÄ TISSUE	Mänttä mill	The permit limits for COD, BOD, phosphorous and nitrogen emissions to water were exceeded several times in the first half of the year due to operational problems in wastewater treatment.	Problems were mainly caused by the co-treatment of municipal waste waters. Several changes have been made in the operation parameters of the plant, including an elevated sludge concentration in the biological treatment stage. A more stable operating model was found towards the end of the year.
METSÄ BOARD	Kyro mill	The permit limit for COD, phosphorous and nitrogen emissions to water were exceeded between February and May due to severe operational problems in the biological treatment plant. The suspected primary reason for the problem was insufficient nutrient dosing to the biological treatment stage.	Several corrective actions have been taken, including adjustments in the operation parameters, new aeration units in the activated sludge plant and maintenance of the bioreactor.
	Simpele mill	Permit limit for phosphorous emissions to water was exceeded in February due to excess nutrient dosing into the biological effluent treatment plant.	Changes were made in the nutrient dosing program of the plant and additional training was given to the operators.
	Kaskinen mill	The emission limit for particles to air from the chemical recovery plant was exceeded in May and June due to a broken bag filter in the flue gas treatment.	The broken filter was replaced and the flue gas system checked.
METSÄ FIBRE	Rauma mill	The usability of the strong odorous gases treatment did not reach the permit requirement of 98% as the monthly average in February. This was due to equipment failures and operational problems after a mill-wide electrical blackout.	The broken equipment was replaced and improvements made to reduce the risk of similar incidents.
		Emissions of odorous sulphur compounds (TRS) and particles to air from the smelt dissolver exceeded the permit limit from March to July. This was caused by a human error during maintenance work of the flue gas treatment system. The non-compliance was verified in an annual emission measurement.	New guidelines were issued for maintenance of the equipment. Technical changes were made to prevent the accidental bypass of the flue gas washer.
	Joutseno mill	Emissions of odorous sulphur compounds (TRS) to air from the lime kiln exceeded the permit limit set as the daily average three times during the year. These were caused by temporary operational disturbances.	The daily monitoring of the process and air emissions was improved.

Recent projects include the landscaping of a closed down landfill in Kaskinen and remediation work in the Niemenranta area in Tampere, Finland, to prepare the area for residential and recreational use.

### ENVIRONMENTAL INCIDENTS

All environmental incidents that resulted in major permit violations, claims, compensations or significant media coverage are detailed in the table below. Additionally, minor and short-term non-compliances with environmental permit requirements were reported at Metsä Board's Simpele and Husum mills as well as at Metsä Tissue's Zilina and Pauliström mills. The authorities were informed immediately and corrective actions were taken in all cases. There were no permit violations at Metsä Wood production sites.

Keski-Suomi District Court ordered a total fine of EUR 7,060 for four persons from Äänevoima Oy for causing environmental damage during the oil spill incident which occurred in August 2011. In addition, Äänevoima Oy was ordered to pay a corporate fine of EUR 40,000.

The permit limits for wastewater parameters were exceeded at Svir sawmill in Russia. Svir Timber paid RUB 81,300 for exceeding the permit limits. Additionally Federal Fisheries Agency ordered a fine of RUB 5,500. Cooperation with the authorities has con-

### WE CONDUCT REGULAR ENVIRONMENTAL RISK ANALYSES AND TRAININGS TO PREPARE FOR POSSIBLE EMERGENCY SITUATIONS.


tinued to solve the production problems at the mill. For example, the water volume in the sedimentation basin of the sprinkling water treatment plant will be increased in order to decrease the flow of suspended solids into the local river.

### CHANGES IN THE BUSINESS ENVIRONMENT

The implementation of the EU's Industrial Emissions Directive is in national legislation

proceeding and should be finalised during 2013. Metsä Group follows up the process closely and constantly analyses the effects on its operations.

In May 2012, the European Commission issued the second draft of the revised Best Available Techniques Reference Document (BREF) for the production of pulp, paper and board. According to the Industrial Emissions Directive, the BAT-associated emission limit values set in the document will become the basis for all environmental permits within the pulp and paper industry. Environmental permits of all pulp and paper mills in Europe need to be revised within four years after the publications of the new BREF. Metsä Group has actively participated in the commenting process facilitated by the Confederation of European Paper Industries, CEPI.

Read more about the mills' environmental parameters on pages 44–47. 





# ACTIVE ENGAGEMENT WITH STAKEHOLDERS

**Metsä Group conducted an extensive stakeholder survey as a part of a Group-wide materiality analysis in 2011. Based on the analysis, we identified the most essential themes for our sustainability work. In order to continuously develop the dialogue we have with our stakeholders, we have carried out different activities during the year, which allow us to better engage with our stakeholders and thus improve our operations in a sustainable manner.**

Even though we already accomplished much during 2012, we aim to build a more systematic stakeholder engagement process starting in 2013 to further advance open dialogue with our most important and active stakeholders.

We have classified our main stakeholders and the communication channels in the table on page 37. ➔

## CUSTOMERS' VIEW ON SOCIAL RESPONSIBILITY

During the past two years, Metsä Group's customers have increasingly requested more information on social responsibility. Hence, we decided to execute more customer-specific research by carrying out personal interviews and a detailed survey of expectations related to the Group's social responsibility work. The results in May 2012 both confirmed that the

theme is rapidly gaining importance and reassured us that even though our performance level in social responsibility is high, we need to provide more comprehensive and proactive communication on the issue.

## STAKEHOLDERS' PERSPECTIVE ON FSC® CERTIFICATION

In early 2012, Metsä Group started to test Finland's new Forest Stewardship Council® (FSC®, Licence Code FSC-C014476) certification standard in part of its own forests. Later in the year, it was awarded an FSC group certificate that covers around 35,000

**METSÄ GROUP'S CUSTOMERS INCREASINGLY REQUEST MORE INFORMATION ON SOCIAL RESPONSIBILITY.**

hectares of the Group's forests. As a part of the pilot, Metsä Group gave the possibility to its stakeholders to comment and influence the certification project. We invited several interest groups active in certification in northern Finland to express their opinions about the project; these included: local Reindeer Herders' Associations, the Finnish Association for Nature Conservation, the Finnish Forest Centre, and WWF Finland. The invitation generated an active dialogue about the certifi-

cation and the feedback was altogether positive. The local stakeholders were especially satisfied at being given the possibility to express their opinions.

## THE FOREST INDUSTRY IN SOCIAL MEDIA

Metsä Group is an active member of the Finnish Forest Industries Federation that promotes a competitive and innovative operating environment for the forest industry. As a member company, Metsä Group was involved in a social media analysis that aimed to determine the forest industry's reputation in the social media world and to learn which of our stakeholder groups are present there.

Based on the analysis, the most active stakeholder group in forest industry-related discussions were individual citizens followed by the authorities, non-governmental organisations, scientists, and other professionals as well as media representatives.

The discussions during the study in late spring 2012 focused on global forest legislation, the review of the EU's Sulphur Directive, climate change conferences, palm oil and community involvement. Emerging trends were nanotechnology, bioeconomy and illegal timber. These findings assist Metsä Group to further develop its own presence in social media and also understand which stakeholder groups can be targeted using interactive media channels.

## ADOLESCENTS' VIEWS ON THE FOREST SECTOR

The Finnish Forest Association together with the Finnish Forest Industries Federation conducted a research among young people to determine how they perceive the forest sector as a future employer. The main drivers for the



## INNOVATIVE PARTNERSHIPS

During 2012, Metsä Group has been involved in establishing an international consortium together with approximately 40 European companies to advance the development of bioeconomy. This Bio-based Industries Consortium aims at a new type of innovation partnership with the EU Commission in order to speed up the commercialisation process of new research results.

One of the important targets of the consortium is to strengthen the competitiveness of European industries. This partnership will strengthen the role that traditional, forest-based industries will play in the sustainable bioeconomy of the future. Metsä Group is one of the key players in the area of bioeconomy in Finland.

forest sector were modern innovations such as wood construction, nanotechnology, intelligent packaging and the sector's positive offering – it is sustainable and renewable. Disincentives were negative publicity surrounding redundancies and mill shutdowns, and the stereotypical image of forest professionals – they were seen either as loggers or factory workers. As part of Metsä Group's on-going employer image project, the Group has utilised these results to target possible future employees.

#### COOPERATION WITH WWF FINLAND

Metsä Group signed a two-year cooperation agreement with WWF Finland at the beginning of 2011. The cooperation has so far included for example training, seminars and round table discussions. As an example of these, Metsä Fibre, one of the Group's subsidiaries, offered training to employees in two sessions on themes related to sustainable development such as water, carbon footprint, forest certification as well as eco-labelling and environmental management systems. Within

the cooperation agreement, WWF Finland's representatives joined the dialogue offering insights on the status of the world's forests.

In addition, we actively cooperated with WWF Finland during the testing of the Finnish FSC forest certification standard in forests owned by the companies belonging to Metsä Group. WWF Finland was invited to explore valuable habitats in our forests and join us for the prescribed burning of retention trees.

#### ACTIVE PARTICIPATION IN LOBBYING

Metsä Group follows and takes interest in the development of regulatory frameworks affecting our operations and markets. Our advocacy on these issues is mainly channelled through industry and trade associations at the national, European and international levels in addition to taking direct actions. Metsä Group's overall aim is to promote the image of forest industries and sustainable forest management as part of bioeconomy. We contribute to developing a high-value, low-carbon forest fibre industry by 2050.

We provide industry and trade associations as well as legislators and decision makers with information on our views and impacts on our operational environment. The internal operation model that we use to monitor, identify and analyse main policy files is transparent, and we use different advocacy channels to deliver our message.

Climate change, energy and environmental policies as well as resource efficiency and innovation policies play crucial roles in our advocacy. Moreover, product-related issues, such as product and food safety as well as wood construction, are of utmost importance to us. The forest policy and wood availability are the backbone of our activities.





We also actively follow trade policy issues and promote free trade. We provide decision-makers with information on trade barriers in the countries where we operate.

We are registered in the EU's Transparency register, which is operated by the European Parliament and the European Commission, and signed the Transparency register Code of Conduct. The register provides information on who is engaged in activities aiming at influencing the EU's decision-making process, what kinds of interests are being pursued and what level of resources are invested in these activities.

Metsä Group and its Business Areas follow high moral and integrity in advocacy activities as described in the Code of Conduct and Sustainability Principles.

#### MEMBERSHIPS AND ASSOCIATIONS

Metsä Group, its Business Areas and subsidiaries participate in a number of international, European and national industry and trade associations, and actively take part in steering them. We want to be a credible discussions partner regarding industry associations, legislators and decision-makers.

The forums we are involved in include:

- The World Business Council for Sustainable Development (WBCSD) and its sector-specific network Forest Solutions Group
- The Confederation of European Paper Industries (CEPI)
- The European Confederation of Woodworking Industries (CEI-Bois)

- The Committee of Professional Agricultural Organisation and the General Confederation of Agricultural Cooperatives (Copa-Cogeca) and Nordic Family Forest Owners (NFS)
- The Finnish Forest Industry Federation
- The Confederation of Finnish Industries
- The Confederation of Finnish Construction Industries RT (CFCI)
- Finland Chamber of Commerce
- The UN Global Compact Nordic Network and the UN's CEO Water Mandate
- The forest certification associations: the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC)

Additionally, the Group or its subsidiaries are taking part in several national forest industry associations in the main operating countries, such as the Swedish Forest Industries Federation and the Association of German Paper Factories. There are also several sector-specific organisations in which Metsä Group or the Business Areas participate, such as the European organisation of the tissue producers (European Tissue Symposium, ETS) and the European Organisation of Packaging and the Environment (Europen).

#### COMMITMENT TO THE PRINCIPLES OF THE UN GLOBAL COMPACT

We are committed to promoting sustainable development in all our business activities and operations; to continuously improving our operations; and to conducting business in a responsible way. We have demonstrated our aim by committing to the ten principles of the

UN Global Compact initiative, which highlights the respect for human and labour rights, environmental responsibility and anti-corruption. The Group's Sustainability Principles are also based on these universally accepted principles.

See the ten principles of the UN Global Compact on page 3. →

#### WBCSD FOREST SOLUTIONS GROUP

Metsä Group is a member of the World Business Council for Sustainable Development (WBCSD) and a core member in WBCSD's Forest Solutions Group. At the beginning of 2012, Riikka Joukio, Metsä Group's Senior Vice President, Sustainability and Corporate Affairs, was appointed co-chair of the Forest Solutions Group. The group's foremost mission is to provide knowledge and assistance for global stakeholders in order to develop and expand the sustainable forest-based solutions to meet the needs of people now and in the future. Furthermore, WBCSD's Forest Solutions Group aims to support global approaches to climate change by helping to promote the innovations in sustainable forest products.

The Forest Solutions Group has three action teams: Value Chain, Carbon Systems and Forest Resources. The membership underlines the importance of sustainable forest management in the themes of governance; the use of renewable sources, eco-efficiency and the mitigation of greenhouse gases; climate change management; health and safety; stakeholder engagement; human rights and labour standards.



## PREVENTING THE SOCIAL EXCLUSION OF CHILDREN AND TEENS

Metsä Tissue's Serla brand believes that helpful gestures and responsible actions are the path to a better life. By setting an example, Serla wants to encourage everyone to do good deeds locally.

In 2011–2012, Serla supported financially various community projects in Finland and Scandinavia as part of its 'Local Good' campaign. Serla is now continuing this work and has granted EUR 100,000 to the Tukikummit Foundation to help underprivileged children and teens living in Finland. The financial support will go in full towards improving their prospects and circumstances. The funds will be used to cover expenses for which no other funding is available, such as the immediate cost of schooling, training, recreation or travel to visit parents or grandparents. The church welfare fund will handle the practical coordination of these efforts. The donated funds will not support church institutions.



## GENERATION AND DISTRIBUTION OF ADDED VALUE

### MEMBERS OF THE COOPERATIVE

#### VALUE

Interests on members' capital  
EUR million

**40**

2011: 38

Main expectations	Main engagement channels
Competitive and solid return on investment; continuous wood demand; open communication with the management.	High-quality, prompt and diverse services; own contact person, satisfaction survey on services, events, the Internet and extranet, magazine for the members.

### SOCIETY, LOCAL COMMUNITIES AND NGOS

#### VALUE

We generate ca. 11,500 jobs directly and a huge amount of employment opportunities indirectly through suppliers and contractors most of the jobs being in rural areas. Additionally, we focus on local support programmes through e.g. WWF Finland and Tukikummit Foundation.

Main expectations	Main engagement channels
Stable employer; good neighbour; open and transparent communication with stakeholders; compliance with laws and regulations; the sustainability performance of the Group.	Meetings; authority reporting; annual and interim reports; stock exchange and press releases; the Internet; stakeholder feedback; image surveys; cooperation projects; sponsoring; donations; presentations; site visits; cooperation with educational institutions.

### RAW MATERIAL AND SERVICE SUPPLIERS

#### VALUE

Purchases of materials, raw materials and services  
EUR million

**3,462**

2011: 3,770

Main expectations	Main engagement channels
Active dialogue with the purchasing organisation and the supplier; long-term contracts; profitability of the Group; acceptable payment terms.	Meetings and negotiations; supplier assessment and audits; partnership projects; the Internet and stakeholder magazines.

### EMPLOYEES (CURRENT AND POTENTIAL)

#### VALUE

Wages and benefits (incl. social security and pension costs)  
EUR million

**710**

2011: 863

Main expectations	Main engagement channels
Safe working environment; stable employer with good reputation; high-quality management practices; competitive benefits; continuous development opportunities; open internal communication.	Personnel development assessments; employee satisfaction surveys; training programmes; internal communications (incl. intranet, newsletters and magazine); national statutory employee bodies; European Works Council.

### CUSTOMERS AND END-USERS

#### VALUE

Sales  
EUR million

**5,001**

2011: 5,346

Main expectations	Main engagement channels
Performance, quality and safety of the products; pricing; clear business structures and responsibilities; sustainability performance of the Group and throughout the supply chain.	High-quality products and services; personal contacts; customer satisfaction surveys; training, cooperation projects; trade fairs and seminars; the Internet, stakeholder magazines and annual reports; product information and life cycle calculations.

### EQUITY AND DEBT INVESTORS, ANALYSTS

#### VALUE

Interests  
EUR million

**126**

2011: 135

Main expectations	Main engagement channels
Competitive return on investment; open and transparent dialogue with the management.	Annual General Meetings; meetings and roadshows; Capital Markets Day; annual and interim reports; stock exchange and press releases; the Internet and stakeholder magazines.

### NATIONAL AND EU-LEVEL LEGISLATORS AND DECISION MAKERS, INDUSTRY AND TRADE ASSOCIATIONS

#### VALUE

We are active members in various industry and trade associations and contribute to their work. We engage also with policy-makers and provide them with information and from our part contribute to the regulatory framework and policies. Mutually we are updated on the latest policy developments and can prepare ourselves proactively for regulatory changes.

Main expectations	Main engagement channels
Provide information on our views and impacts on our operational environment. Active membership in industry and trade associations.	Transparent internal operation model to monitor, identify and analyse main policy files. Proactive contribution to policy-making and policy implementation by providing accurate and relevant information to industry associations, legislators and decision-makers. Active participation in industry and trade association's work. Regular face-to-face contacts; contributing to public consultations and hearings; information sharing. Maintain and enhance our networks at the international and national level.

### MEDIA

#### VALUE

Building awareness of the company and the industry through media to general public.

Main expectations	Main engagement channels
Transparency; active and open communication.	Meetings and interviews; press events and site visits; annual and interim reports; publications; the Internet; stock exchange and press releases; image surveys.



# WELL-BEING FOR EVERYONE

We acknowledge that Metsä Group's operations have an effect on people and the surrounding communities in many ways. As Metsä Group is a regional player that operates in some 30 countries and has production units in nine, we recognise our responsibility to various stakeholders.

For us, sustainability is the only way to operate – we want to improve the quality of life and thus provide well-being.

## COOPERATIVE – WHERE OUR ROOTS LIE

Metsä Group's parent company, Metsäliitto Cooperative's mission is to create value for the wood grown by its owner-members – some 125,000 Finnish forest owners. For this rea-

**ESPECIALLY IN REMOTE AREAS METSÄ GROUP CREATES VALUE IN SEVERAL WAYS.**

son, sustainable forestry is a principle we will not compromise as we aim to increase the value of our owner-members' forests and conserve forests for future generations' use. We recognise that as a company, we can have a strong influence – the total forest area owned by our members' amounts to about one-half of

all Finnish privately-owned forests, altogether around 5.3 million hectares.

## CREATING PROSPERITY IN COMMUNITIES

Where Metsä Group operates locally, especially in remote areas, we create value in several ways. We generate significant employment opportunities directly by employing 11,500 persons, and indirectly for our partners and subcontractors. Our supplier network consists of 20,000 vendors.

Our operations enable many services that would otherwise diminish; moreover, we prevent migration loss, for example, by generating new employment opportunities. We thus know our responsibility and the impact we might cause; for instance, when we invest in existing or start new projects, or if we need to cease operations.

## VALUE FOR NATURE

As our main raw material comes from nature, we understand the importance of preserving the environment and carrying out our operations as sustainably as possible. The forest

industry as a sector has thus acknowledged its impact on nature surrounding the mills and has systematically invested in environmental protection. With joint efforts, the forest industry has been able to drastically minimise its emissions and continuously develop effective environmental management together with its stakeholders over the past two centuries.

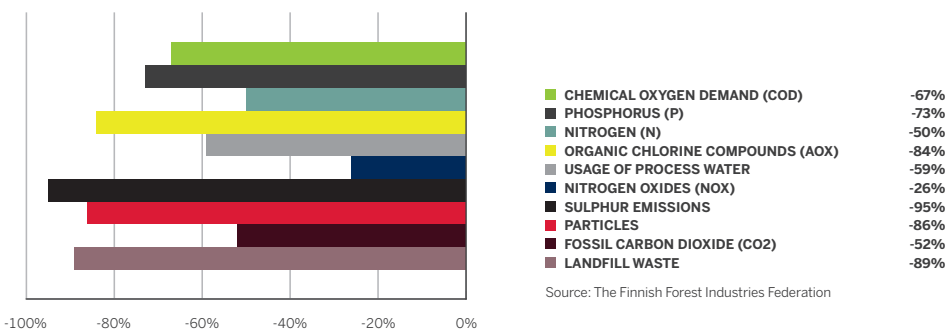
It is no wonder therefore that many creatures have found mill areas safe and friendly places to dwell. Metsä Fibre's RAUMA PULP MILL well illustrates that mills and biodiversity go hand in hand. Wooded areas, a rocky shoreline, banks of reeds and even a small lake nestle within the mill fence.

## FAVOURING SUSTAINABILITY AND YOUTH IN SPONSORSHIP

During 2012, we carried out many activities, such as sponsorships and collaboration activities, with our stakeholders in various communities and organisations. The biggest sponsorship was Metsä Tissue's Serla brand's EUR 100,000 support to the Tukikummit Foundation in Finland, which was part of Serla's Local Good campaign. In addition, Metsä Group and its Business Areas sponsored selected small-scale local projects.

Metsä Group has a shared sponsorship and donation strategy for the whole Group covering all Business Areas. According to the strategy, sponsoring aims to support the Group's business operations and product marketing, and build a positive corporate image. In sponsoring, we favour youth and sustainability projects, especially those dedicated to improve the well-being of children and young people. Metsä Group has decided not to sponsor political associations, religious organisations, motor sports or private individuals, including athletes.

EMISSIONS REDUCTIONS RELATIVE TO FINNISH PULP AND PAPER INDUSTRY PRODUCTION IN 1992–2011 %





## A TRIP TO THE MILL AND FOREST BY LOCAL TRAIN

The wood's journey from forest to packaging, the pulp mill and its diverse natural environment, and Metsä Group's sustainable forestry were the theme of the Forest Parade tours. Metsä Fibre's Rauma mill organised these guided tours in its mill area with the Kake-kaupunkijuna (Kake city train) each Sunday during July and August.

In addition to a ninety-minute talk, the visitors were given 'Close To Nature', a booklet containing pictures of the birds and mammals living in the mill environment photographed by Ari Ahlfors, a controller at the mill.

Despite the wet summer, the tours were very popular with the train full every Sunday. As a result, the Forest Parade tours will also take place in summer 2013.







# ATTITUDE IS THE KEY TO SAFETY AT WORK

For us, the fundamental requirement in everything we do is safety. It applies to our working environment, the products we offer and the well-being of our employees, suppliers and cooperation partners.

TARGET	PROGRESS	COMMENTS
To improve our lost-time accident frequency rate by 10% each year. The long-term target for the lost-time accidents is zero.	15.7 in 2012 i.e. -14%	Business Areas together with HR and Safety functions are working closely with our personnel to reach the target of zero accidents. All units monitor safety statistics on a monthly basis.
To keep the sickness absenteeism rate below 3% at all times.	4.1% in 2012	Our early intervention-process has been implemented throughout the Group and we are constantly training our management and personnel to deal with causes of sickness absenteeism.

We continuously develop and promote occupational safety and well-being at work. We believe that the level of safety reflects the overall quality of Metsä Group's operations. Above all, occupational safety depends on the right attitude.

## PREVENTION IS EVERYTHING

Preventive safety work is essential to ensure a safe and healthy working environment.

Consequently, safety at work must be conducted systematically and consistently at all levels of the organisation. If any issues arise they must be addressed immediately. For this reason, we continuously communicate internally about safety issues, set goals and indicators for preventive safety work, and develop our ability to identify risks. In 2012, the lost-time accident frequency rate was 15.7 (18.3 in 2011).

Although we persistently strive for new ways of improving occupational safety at Metsä Group and aim to prevent all work-related injuries and accidents, we still have work to do. In July 2012, the death of an employee at Krapkowice mill in Poland was the result of human error. The accident was immediately investigated and solutions for corrective actions were taken in order to prevent similar accidents in the future.

## OUR GOAL IS HEALTHY PERSONNEL

We believe that healthy, motivated and satisfied personnel is one of our strongest assets. We have implemented a unified global model to support our employees' work capacity, which includes early support, an assessment of work capacity and a personal work capacity plan. This process helps to create a caring working environment and enables the equal treatment of all employees. In addition to cooperating closely with occupational health-care providers, our supervisors are given tools and training to identify any potential situations that can threaten the employee's ability to well-being at work. We encourage our employees to take a more proactive approach to their own health by providing information on stress-preventive actions, for example. We also support recreational activities such as sports and culture in different ways.

As we aim for a healthy working environment, we have set a target to keep the sickness absenteeism rate at the best European level within the industry and below 3% at all times. In 2012, we came closer to the target with a rate of 4.1% (4.4% in 2011).

Absenteeism and accident rates are monitored through Group-wide targets and reporting. Local Occupational Health and Safety Committees play an important role in training and facilitating health and safety at the local level. These committees cover 100% of our employees in all main operating countries.

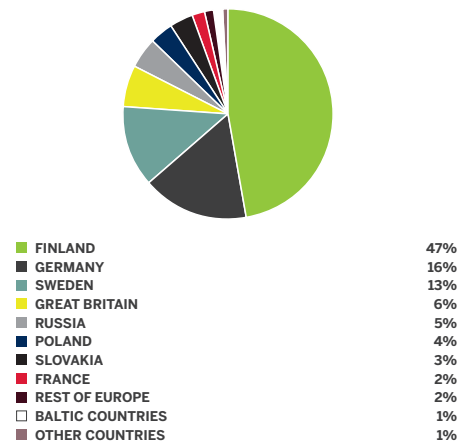
## WELL-BEING INDICATORS BY BUSINESS AREA

	Metsä Tissue		Metsä Board		Metsä Fibre		Metsä Wood		Metsä Forest		Metsä Group total	
	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011
Work accident absenteeism, %	0.2	0.2	0.2	0.2	0.3	0.1	0.3	0.4	0.1	0.1	0.2	0.2
Work related fatalities, nro of cases	1	0	0	1	0	0	0	0	0	0	1	1
Sickness absenteeism, % <sup>1)</sup>	4.8	5.1	3.9	4.6	4.2	4.8	4.9	4.7	2.1	1.4	4.1	4.4
Lost-time accident frequency rate <sup>2)</sup>	11.3	13.6	13.2	16.1	7.7	6.9	32.4	37.4	2.3	3.2	15.7	18.3
Organisational functionality research	<sup>6)</sup>	8.4	<sup>6)</sup>	8.2	8.4 <sup>3)</sup>	8.3	8.0	<sup>5)</sup>	8.2 <sup>4)</sup>	8.0		
Organisational functionality research response rate, %	<sup>6)</sup>	74	<sup>6)</sup>	70	78	77	82	<sup>5)</sup>	93	80		

1) Per cent of regular working hours 2) Lost-time accident 1 frequency rate. Accidents at work per million worked hours 3) Metsä Fibre Finland (excluding Svir Timber) 4) Metsä Forest Finland (covers wood operations in Finland) 5) Was not conducted in 2011 6) Was not conducted in 2012



**THE GROUP'S PERSONNEL BY COUNTRY IN 2012**  
%, ON 31 DEC 2012

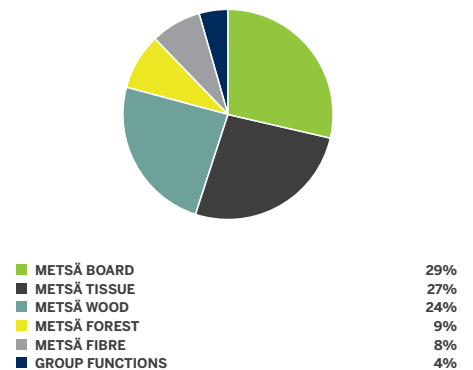


## WE SUPPORT WELL-BEING AT WORK

A practical example of our actions for well-being of employees is a three-year research project that began in 2012 conducted by Metsämiesten Säätiö Foundation. The practical research work is carried out and coordinated by the Finnish Institute of Occupational Health. At Metsä Group, the project applies Metsä Forest's procurement and logistics organisations. The aim is to study how changes in the service concept affect the wood procurement personnel's well-being at work. The focus is on procurement and logistic specialists as well as harvesting and transport entrepreneurs and their personnel. During the first year of the project and supported with a questionnaire, the Finnish Institute of Occupational Health carried out interviews with entrepreneurs and Metsä Forest's white-collar employees in harvesting and logistics, some 40 persons. In addition, 360 persons responded to a survey.

We will continue this project in 2013 and utilise the findings of the interviews and questionnaires. The objectives for 2013 is to provide a documented process for proactive actions to support well-being at work; identify health risks at an early stage; and develop effective preventive actions in everyday work. Geographically, the work covers the whole of Finland, including our partners, entrepreneurs and their employees.

**THE GROUP'S PERSONNEL BY BUSINESS AREA IN 2012**  
%, ON 31 DEC 2012

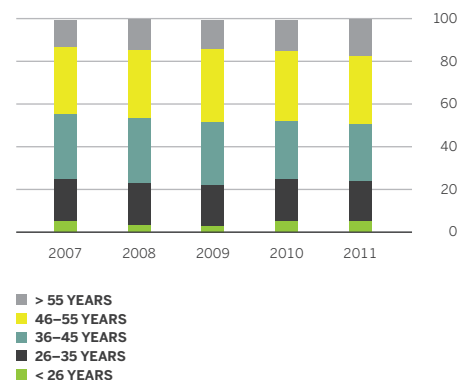


### THE GROUP'S PERSONNEL DATA

EMPLOYEES	2012	2011	2010	2009	2008
Number of employees <sup>1)</sup>	11,447	12,525	12,820	13,592	16,729
Share of permanent employees, % <sup>2)</sup>	94.0	94.2	94.0	95.0	96.0
Average age, years <sup>2)</sup>	44.1	43.8	43.5	44.0	43.7
Average years served, years <sup>2)</sup>	16.3	15.6	15.2	16.8	16.1
Employee turnover, % <sup>2) 3)</sup>	12.0	7.8	6.9	11.2	7.7
Ration between men/women, % <sup>2)</sup>	78/22	79/21	81/19	81/19	79/21
Share of women in management, % <sup>4)</sup>	9.7	12.9	11.1	8.3	5.1
Sickness absenteeism, % <sup>2) 5)</sup>	4.1	4.4	4.2	4.3	4.2
Work accident absenteeism, % <sup>2) 5)</sup>	0.22	0.22	0.28	0.27	0.25
Number of work related fatalities, nro of cases	1	1	1	1	0
Number of occupational diseases, nro of cases <sup>6)</sup>	2	-	-	-	-

1) Full-time equivalent (FTE) 2) The figures covered 99% of Metsä Group employees in 2010–2012. In 2008–2009 they covered 97% of employees. 3) The figure includes also redundancies caused by restructuring of business. 4) Management includes Board of Directors, Executive Management Team and Business Areas' management teams. 5) Per cent of potential working hours. 6) The figure covers 85% of Metsä Group employees.

**THE GROUP'S AGE DISTRIBUTION**  
%





# A RESPONSIBLE AND ATTRACTIVE EMPLOYER

**Metsä Group promotes good management practices. We train our managers, supervisors and employees to understand and follow our policies and guidelines. In 2012, we conducted an e-learning program on Group policies for the majority of white-collar employees.**

Metsä Group's Code of Conduct and Sustainability Principles guide its employees in the field of social responsibility taking into consideration the aspects of human rights and child or forced labour. Correspondingly, the Sustainability Principles state that our employees are free to associate with or join any union. In 2012, 98% of our employees in Finland were covered by collective bargaining agreements, of whom 75% were known to be members of trade unions. Metsä Group applies country-specific collective bargaining agreements.

We promote equal opportunities and emphasise that discrimination may lead to disciplinary actions. It is the responsibility of

## WE CONTINUOUSLY MONITOR EMPLOYEE SATISFACTION.

each employee to report any discrimination. Any formal complaints will be systematically handled through the Group's Code of Conduct practices. One suspected case of discrimination was reported and investigated in 2012; however, it did not lead to any disciplinary action.

We conduct a formal employee consultation process in our main operating countries. We also develop Metsä Wood's, Metsä Board's and Metsä Tissue's employee dialogue across countries through the European Works Council (EWC), a Europe-wide forum of communication between management and employ-

ees. During 2012, the most discussed themes were work safety and well-being at work. Also on the agenda was the issue of organisational functionality and how the current economic situation in Europe will affect the future of our businesses and employees. The main objective is to ensure that cooperation and mutual communication in working towards common goals is according to mutual values. In addition, we have several practices for informal cooperation with our labour union representatives.

In all operating countries, Metsä Group conforms to the country-specific laws and agreements in terms of employment.

### CHALLENGING TIMES

In 2012, we completed the strategic review within Metsä Group. The actions in Metsä Board included the shutdown of the Alizay mill in France, the discontinuation of the unprofitable business at the Gohrsmühle mill in Germany, divestment of the Premium Paper operations of the Reflex mill and the restructuring of the coated paper business including the closure of Äänekoski paper machine in Finland. The Reflex mill restructuring included cooperation with external partners to ensure continued employment of approximately 300 employees. In addition, tissue production, converting and supply chain operations at Konstancin-Jeziorna mill near Warsaw, Poland, have been discontinued.

The restructuring of these businesses affected a total of 2,893 employees during 2012, of whom 724 were made redundant and 92 contracts ended due to other reasons such

as retirement or the non-renewal of fixed-term contracts. Total of 848 employees were temporarily laid off in 2012. In addition, one restructuring of businesses process has started during 2012 but it is still in-process. Total of 268 employees is affected by this restructuring process. We comply with all local agreements and legislation in redundancy situations and assist the redundant employees in finding new job opportunities with individual support.

At the end of 2012, Metsä Group had a total of 11,447 employees (12,525 in 2011), of whom 94% were permanent employees while 6% had temporary contracts. Part-time employees accounted for 7% of all Metsä Group's personnel at the end of 2012.

As the roots of the company are in Finnish forestry and majority of our operations are in Finland, therefore almost half of our employees are based in Finland including a large share of senior management. The share of personnel by country represents the countries where we have operations.

### INVESTING IN THE FUTURE

In 2012, a decision to transfer financial services from 13 European countries to one centralised Shared Service Center in Gdansk, Poland was made. The new center involves approximately 100 new jobs. Those who will be redundant have been given support according to the Group's guidelines and local regulations.

Furthermore, in 2012 we provided over 1,000 summer jobs and internships. For us, employing youth and students is extremely important in several ways. We provide jobs in remote areas and enable young people to receive their first experience in work life. This helps us to ensure that we are an attractive employer in the eyes of tomorrow's potential employees also in the future.

In 2012, we continued the annual CEO's competition for productivity and innovation and received close to a hundred good ideas for improvement. Four best ones were awarded with monetary prizes. These ideas assist us in further developing our operations and practices to be more productive and innovative.

### HIGH-QUALITY EVERYDAY MANAGEMENT

Metsä Group's management processes aim to ensure that each employee has clear goals and the tools to be successful. The right people in the right positions at the right time and with the right skills are the cornerstones of well-being at work. Good management practices





support organisational efficiency and provide opportunities for personal and professional development.

Management practices and HR systems are designed to support high-quality everyday management, and to provide tools for setting targets and monitoring performance. Goals for professional development are also part of the management process. The managers' self-service tool (MSS) supports them in providing the quality of leadership that all employees are entitled to.

#### OUR GOAL IS A SATISFIED EMPLOYEE

In 2012, Metsä Group hired 183 new employees in Finland and 373 abroad. For all permanent, fixed-term and part-time employees we provide the benefits required by local legislation such as occupational health care, insurance against occupational diseases, parental leave and retirement benefits. In addition, we support our employees' recreation possibilities.

We continuously monitor employee satisfaction. In 2012, we unified our employee satisfaction survey to cover all five Business Areas and developed the questionnaire to include also aspects of well-being at work and safety. The survey reflects the personnel's views on their working environment and its development. The results are carefully analysed and appropriate development actions are included in the annual planning. This process improves working conditions and helps the Group and its Business Areas reach their strategic goals. On a scale of 4 to 10, Metsä Group had an overall job satisfaction rating of 8.25 in 2012

(8.22 in 2011) with a response rate of 82% (75% in 2011). The next survey will be carried out in 2013.

Metsä Group has a Group-wide development discussion process for white collar employees that supports the strategy implementation and motivates the personnel to reach the set targets. As a part of this Personnel Development Appraisal (PDA) practice is a Group-wide bonus system which terms and target group is decided by the Board of Directors annually. In 2012, Metsä Group paid as salaries, wages and benefits (including social security and pension costs) EUR 710 million (EUR 863 million in 2011).

#### CONTINUOUS LEARNING AND DEVELOPMENT

Metsä Group offers its employees the possibility to enhance their competences through training, internal job rotation and other learning opportunities. We post all job opportunities internally on our intranet site for all personnel. Our employees are encouraged to widen their work experience within the Group. The average years served in Metsä Group is 16.3 (15.6 in 2011).

Each employee has the right to work-related training and development. The employee's annual personal development plan is made for the forthcoming year in the PDA. In 2012, 96% of Metsä Group's white collar employees in Finland and 90% abroad held PDA discussions.

Metsä Group's development programmes cover all organisational levels. We run programs on technical skills as well as management and supervisory skills in all Business

**SIMCOTE**  
CASE

## WORK HOURS

In addition to issues covered in the Environmental Product Declarations, some of the human related issues can also be measured at the product level.

For example, producing the Simcote folding boxboard for one cereal carton takes

**0.38** seconds.

When calculating the human resources required for the annual production of these cereal cartons, it means approximately

**5.7** man years

at Joutseno, Äänekoski and Simpele mills. In addition, the mills produce a number of products to various customers.

Areas. At the Group level, we continued the annual management development programme, Challenger, for the fifth time running. At the Business Area level, there are strategic business training programmes for key personnel. Trainee programmes continued in Finland and Sweden. Local development programmes are also organised based on needs. All development projects include training on change management and new processes. In 2012, Group's Human Resource Development function organised 148 training days and a total of 845 employees attended these trainings and development programs.



# SUSTAINABILITY DATA BY UNIT IN 2012

## METSÄ TISSUE

Mill	Country	Personnel			Production (1,000 t)		Management systems				Chain of Custody			
		Number of employees <sup>1)</sup>	Accident rate <sup>2)</sup>	Sickness absenteeism % <sup>3)</sup>	Tissue and cooking papers		ISO 9001	ISO 14001	ISO 50001	OHSAS 18001	ISO 22000/BRC	PEFC	FSC®	CO <sub>2</sub> bio
Mänttä <sup>5)</sup>	Finland	448	32.9	5.0	116		x	x <sup>4)</sup>			x	x	x	0
Düren	Germany	108	0.0	6.0	17		x	x	x	x	x	x	x	0
Kreuzau	Germany	425	4.4	7.7	149		x	x	x	x	x	x	x	0
Raubach	Germany	292	4.2	4.8	50		x	x	x	x	x	x	x	0
Stotzheim	Germany	327	7.6	7.7	21		x	x	x	x	x	x	x	0
Krapkowie	Poland	320	14.2	3.1	30		x	x <sup>4)</sup>		x		x	x	0
Žilina	Slovakia	398	4.2	2.1	79		x	x <sup>4)</sup>		x		x	x	0
Katrinefors	Sweden	352	10.2	5.0	74		x	x <sup>4)</sup>				x		0
Nyboholm	Sweden	192	21.2	2.2	26		x	x <sup>4)</sup>				x		6,296
Pauliström <sup>6)</sup>	Sweden				23		x	x <sup>4)</sup>				x		10,893
Others <sup>7)</sup>		173			4.1									0
<b>Metsä Tissue Total</b>		<b>3,035</b>	<b>11.3</b>	<b>4.8</b>	<b>589</b>									<b>17,189</b>

1) Full-time Equivalent on 31 December 2012 2) Lost-time accident 1 frequency rate. Accidents at work per million worked hours 3) Per cent of potential working hours 4) ISO 14001 standard includes the Energy Efficiency System (EES) 5) Includes Tissue and Baking and Cooking businesses 6) Pauliström mill's personnel figures are included in Nyboholm mill's figures 7) Including personnel from technology operations and supply chain. Naro Fominsk's personnel included. Including production and environmental figures of Warsaw mill which was closed in April 2012

## METSÄ BOARD

Mill	Country	Personnel			Production (1,000 t)		Management systems				Chain of Custody			
		Number of employees <sup>1)</sup>	Accident rate <sup>2)</sup>	Sickness absenteeism % <sup>3)</sup>	Chemical pulp and CTMP	Board and paper	ISO 9001	ISO 14001	ISO 50001	OHSAS 18001	ISO 22000/BRC	PEFC	FSC®	CO <sub>2</sub> bio
Joutseno BCTMP	Finland	54	22.6	2.6	273		x	x	x	x	x	x	x	0
Kaskinen BCTMP	Finland	77	32.3	1.6	252		x	x		x		x	x	93,410
Kemi	Finland	103	0.0	3.9		343	x	x	x	x	x	x	x	0
Kyro	Finland	254	16.8	5.8		209	x	x	x	x	x	x	x	0
Simpele	Finland	314	24.3	4.4		227	x	x	x	x	x	x	x	131,318
Tako	Finland	211	20.0	4.8		192	x	x	x	x	x	x	x	0
Äänekoski	Finland	203	9.8	3.6		191	x	x	x	x	x	x	x	96,798
Gohrsmühle	Germany	507	13.2	4.5		41	x	x	x	x	x	x	x	0
Husum	Sweden	856	9.9	3.8	709	674	x	x	x			x	x	1,492,717
Others <sup>4)</sup>		700												26,220
<b>Metsä Board Total</b>		<b>3,279</b>	<b>13.2</b>	<b>3.9</b>	<b>1,234</b>	<b>1,876</b>								<b>1,840,463</b>

1) Full-time equivalent on 31 December 2012 2) Lost-time accident 1 frequency rate. Accidents at work per million worked hours 3) Per cent of potential working hours 4) Includes personnel from sales and logistics operations, management and subsidiaries. Emissions and waste originate from Äänevoima's production of energy sold for external use.

## METSÄ FIBRE

Mill	Country	Personnel			Production (1,000 t)		Management systems				Chain of Custody			
		Number of employees <sup>1)</sup>	Accident rate <sup>2)</sup>	Sickness absenteeism % <sup>3)</sup>	Chemical pulp	Sawn timber	ISO 9001	ISO 14001	ISO 50001	OHSAS 18001	ISO 22000/BRC	PEFC	FSC®	CO <sub>2</sub> bio
Joutseno	Finland	140	4.0	3.9	606		x	x	x	x	x	x	x	1,280,036
Kemi	Finland	191	13.0	6.1	539		x	x	x	x	x	x	x	1,298,671
Rauma	Finland	125	9.4	3.6	573		x	x	x	x	x	x	x	1,168,876
Äänekoski	Finland	160	11.7	5.2	519		x	x	x	x	x	x	x	954,185
Svir Timber	Russia	127	4.1	2.5		221	x	x <sup>4)</sup>		x		x	x	17,855
Others <sup>5)</sup>		133												
<b>Metsä Fibre Total</b>		<b>876</b>	<b>7.7</b>	<b>4.2</b>	<b>2,237</b>	<b>221</b>								<b>4,719,622</b>

1) Full-time equivalent on December 2012 2) Lost-time accident 1 frequency rate. Accidents at work per million worked hours 3) Per cent of potential working hours 4) Svir Timber's ISO 14001 standard includes the Energy Efficiency System (EES) 5) Includes personnel from sales operations, a subsidiary and management

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Emissions to air (t)				Discharges to water (t)				Water use (1,000 m <sup>3</sup> )			Solid waste (t)			Mill
CO <sub>fossil</sub>	SO <sub>2</sub>	NO <sub>2</sub>	Particles	COD	BOD	Phosphorus	Nitrogen	Total suspended solids	Water sourcing	Waste water	Recycling	Landfill	Hazardous	
13,724	0	6.0	0	516	55	2.0	27	125	5,270	5,272	91,475	2,618	34	Mänttä <sup>5)</sup>
41,733	0	43	0	57	6.1	0.3	0	6.1	1,533	613	267	0	42	Düren
86,727	11	90	0.05	377	16	0.8	0	16	2,349	1,589	103,292	7,451	40	Kreuzau
23,836	0	3.6	0	138	5.0	0.3	0	5.0	495	495	45,152	135	16	Raubach
10,253	0.2	9.7	0	50	2.3	0.1	0	2.3	319	235	3,046	0	241	Stotzheim
8,409	35	33	28	42	3.4	0.4	4.2	4.6	612	577	19,926	917	0	Krapkowitz
14,196	0	7.0	0	139	10	0.5	0	10	1,102	1,024	45,790	2,979	7.9	Žilina
12,041	0	5.3	0	244	36	0.5	17	12	3,106	2,277	70,224	50	26	Katrinefors
10,483	2.4	19	6.1	6.6	0.8	0.03	1.3	1.8	285	285	2,131	0	10	Nyboholm
6,004	0.4	16	11	42	16	0.05	0.7	4.4	328	328	2,073	0	15	Pauliström <sup>6)</sup>
11,594	70	24	13	33	1.0	0.05	0	1.0	134	98	3,027	1,059	0.2	Others <sup>7)</sup>
<b>239,002</b>	<b>120</b>	<b>257</b>	<b>58</b>	<b>1,644</b>	<b>152</b>	<b>4.9</b>	<b>50</b>	<b>188</b>	<b>15,533</b>	<b>12,793</b>	<b>386,404</b>	<b>15,209</b>	<b>432</b>	<b>Metsä Tissue Total</b>

Emissions to air (t)				Discharges to water (t)				Water use (1,000 m <sup>3</sup> )			Solid waste (t)			Mill
CO <sub>fossil</sub>	SO <sub>2</sub>	NO <sub>2</sub>	Particles	COD	BOD	Phosphorus	Nitrogen	Total suspended solids	Water sourcing	Waste water	Recycling	Landfill	Hazardous	
19,982	0	13	12	404	18	0.2	9.5	8.5	5,032	571	41,041	13	24	Joutseno BCTMP
4,959	75	170	24	2,005	147	1.5	18	236	11,445	3,169	2,488	1,055	0	Kaskinen BCTMP
3,904	0	1.7	0	482	20	0.8	34	93	8,530	6,512	7,129	865	13	Kemi
53,449	0	52	0	543	110	1.2	20	196	3,009	4,438	49,744	45	14	Kyro
66,127	122	25	1.8	290	23	1.3	12	44	23,392	4,392	4,160	91	59	Simpele
75,996	0	74	0	143	62	1.0	0.9	31	3,153	2,458	4,274	332	63	Tako
2,851	7.3	79	1.2	603	222	0.6	3.7	130	3,476	3,341	3,724	198	14	Äänekoski
126,798	310	208	3.0	50	17	0.7	5.8	34	2,993	2,742	29,526	2.6	50	Gohrsmühle
119,086	298	1,229	398	10,244	911	12	85	834	46,716	46,745	2,137	218	616	Husum
8,882	22	31									40	1.2		Others <sup>4)</sup>
<b>482,035</b>	<b>833</b>	<b>1,882</b>	<b>440</b>	<b>14,765</b>	<b>1,529</b>	<b>20</b>	<b>189</b>	<b>1,605</b>	<b>107,746</b>	<b>74,368</b>	<b>144,262</b>	<b>2,821</b>	<b>853</b>	<b>Metsä Board Total</b>

Emissions to air (t)				Discharges to water (t)				Water use (1,000 m <sup>3</sup> )			Solid waste (t)			Mill
CO <sub>fossil</sub>	SO <sub>2</sub>	NO <sub>2</sub>	Particles	COD	BOD	Phosphorus	Nitrogen	Total suspended solids	Water sourcing	Waste water	Recycling	Landfill	Hazardous	
77,375	139	1,067	145	5,819	93	7.8	113	246	38,290	16,918	6,093	14,004	66	Joutseno
68,036	150	1,041	194	8,060	97	7.1	156	495	41,706	17,041	43,041	21,628	30	Kemi
47,936	155	1,055	339	8,480	105	5.0	53	259	14,814	12,376	10,314	15,819	0	Rauma
39,992	265	778	411	4,792	100	5.4	73	349	38,764	15,199	1,901	10,987	39	Äänekoski
214	6.3	41	3.4	18	1.9	0.09	1.2	6.5	219	140	8,043	226	0.3	Svir Timber
														Others <sup>5)</sup>
<b>233,553</b>	<b>715</b>	<b>3,981</b>	<b>1,092</b>	<b>27,169</b>	<b>397</b>	<b>25</b>	<b>397</b>	<b>1,356</b>	<b>133,793</b>	<b>61,674</b>	<b>69,392</b>	<b>62,664</b>	<b>135</b>	<b>Metsä Fibre Total</b>





## METSÄ WOOD

Mill	Country	Personnel			Production (1,000 m <sup>3</sup> )		Management systems			Chain of Custody			
		Number of employees <sup>1)</sup>	Accident rate <sup>2)</sup>	Sickness absenteeism % <sup>3)</sup>	Wood products		ISO 9001	ISO 14001 <sup>4)</sup>	OHSAS 18001	PEFC	FSC <sup>®</sup>	CO <sub>2</sub> bio <sup>↑</sup>	CO <sub>2</sub> fossil <sup>↑</sup>
Reopalu	Estonia	37	0.0	2.3	sawn timber	65					x	7,800	114
Eskola	Finland	12	0.0		sawn timber	56		x	x	x	x	0	0
Hartola	Finland	46	58.1	3.0	glulam production	21	x	x		x		159	0
Karihaara <sup>5)</sup>	Finland	2			sawn timber	-				x	x	-	-
Kaskinen TC and Thermowood	Finland	57	27.4	3.1	further processing	101	x	x	x	x		11,540	0
Kolho <sup>6)</sup>	Finland				further processing	31	x	x	x	x		0	472
Kyrö	Finland	78	46.8	4.9	sawn timber	197	x	x		x	x	20,085	465
Lappeenranta	Finland	70	47.3	9.3	sawn timber	205	x	x		x	x	22,088	0
Lohja	Finland	163	50.2	7.6	Kerto <sup>®</sup>	89	x	x		x	x	0	0
Merikarvia	Finland	79	30.2	3.7	sawn timber	185	x	x	x	x	x	20,079	649
Punkaharju	Finland	446	41.4	8.5	plywood and Kerto <sup>®</sup>	147	x	x		x	x	0	0
Renko	Finland	74	24.1	2.0	sawn timber	267	x	x	x	x	x	26,498	259
Suolahti	Finland	452	59.3	7.6	plywood	194	x	x		x	x	89,790	683
Vilppula	Finland	143	32.6	4.1	sawn timber	415	x	x	x	x	x	50,325	542
Boulleville and Honfleur	France	128	35.5	2.7	further processing	102				x		0	0
Casteljaloux	France	34	59.2	0.9	further processing	20				x		4,130	0
Aichach	Germany	88	48.0	4.3	further processing	23				x		1,529	28
Boston	Great Britain	308	15.0	3.2	further processing	241	x	x	x	x	x	0	423
Grangemouth	Great Britain	104	19.7	2.2	further processing	55	x	x	x	x	x	0	0
King's Lynn	Great Britain	48	31.6	1.3	further processing	125	x	x	x	x	x	0	278
Newport	Great Britain	28	15.7	1.8	further processing	30	x					0	652
Widnes	Great Britain	86	27.0	2.6	further processing	48	x	x	x	x	x	0	0
Others <sup>7)</sup>		266										52,991	3,172
<b>Metsä Wood Total</b>		<b>2,749</b>	<b>32.4</b>	<b>4.9</b>		<b>2,616</b>						<b>307,014</b>	<b>7,737</b>

- Not reported

1) Full-time equivalent on 31 December 2012 2) Lost-time accident 1 frequency rate. Accidents at work per million worked hours 3) Per cent of potential working hours 4) ISO 14001 standard includes the Energy Efficiency System (EES) 5) Operations at Karihaara saw mill have been suspended until further notice since 1 July 2009 6) Kolho's personnel figures are included in Kaskinen TC and Thermowood figures 7) Includes personnel from sales operations and management. Emissions to air originate from Biokraft's and Kumpuniemen Voima's production of energy sold for external use.

Metsä Wood's emissions to the water occur only in plywood production processes. St. Petersburg planing plant in Russia is not included in the figures above.

## METSÄ FOREST

Country	Personnel			Wood procurement 1,000 m <sup>3</sup>	Management systems		Chain of Custody	
	Number of employees <sup>1)</sup>	Accident rate <sup>2)</sup>	Sickness absenteeism % <sup>3)</sup>		ISO 9001	ISO 14001	PEFC	FSC <sup>®</sup>
Estonia	27	0.0	0.3	1,203	x	x	x	x
Finland	605	3.8	1.9	21,907	x	x	x	x
Latvia	76	0.0	1.1	1,429	x	x	x	x
Russia, St. Petersburg	17				x <sup>4)</sup>	x <sup>5)</sup>	x	x
Russia, Podporozhye	279	0.0	2.9	2,120 <sup>6)</sup>	x <sup>4)</sup>	x	x	x
Sweden	3			2,155	x	x	x	x
Others				939 <sup>7)</sup>				
<b>Metsä Forest Total</b>	<b>1,007</b>	<b>2.3</b>	<b>2.1</b>	<b>29,753</b>				

1) Full-time equivalent on 31 December 2012 2) Lost-time accident 1 frequency rate. Accidents at work per million worked 3) Per cent of potential working hours

4) Included in Metsäliitto Cooperative's quality systems (ISO 9001) 5) Included in Metsäliitto Cooperative's environmental systems (ISO 14001)

6) Includes all wood procurement from Russia 7) Includes wood supplies from other countries (Germany, Austria, Lithuania, France)

## METSÄ GROUP

	Personnel			Wood procurement 1,000 m <sup>3</sup>	Production			
	Number of employees <sup>1)</sup>	Accident rate <sup>2)</sup>	Sickness absenteeism % <sup>3)</sup>		Wood products 1,000 m <sup>3</sup>	Chemical pulp and CTMP 1,000 t	Board and paper 1,000 t	Tissue and cooking papers 1,000 t
<b>Metsä Group total</b>	<b>11,447</b>	<b>15.7</b>	<b>4.1</b>	<b>29,753</b>	<b>2,837</b>	<b>3,471</b>	<b>1,876</b>	<b>589</b>

1) Full-time equivalent on 31 December 2) Lost-time accident 1 frequency rate. Accidents at work per million worked hours 3) Per cent of potential working hours

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Emissions to air (t)			Discharges to water (t)				Water use (1,000 m <sup>3</sup> )			Solid waste (t)			Mill
SO <sub>2</sub>	NO <sub>2</sub>	Particles	COD	BOD	Phosphorus	Nitrogen	Total suspended solids	Water sourcing	Waste water	Recycling	Landfill	Hazardous	
0.01	7.9	7.7	0	0	0	0	0	0	0	0	0	6.5	Reopalu
0	0	0	0	0	0	0	0	0.5	0	4.0	4.0	2.0	Eskola
0	0.2	0.2	0	0	0	0	0	0.8	0.1	13	7.1	6.5	Hartola
-	-	-	-	-	-	-	-	-	-	-	-	-	Karihaara <sup>5)</sup>
0	11	11	0	0	0	0	0	16	2.0	54	14	0.5	Kaskinen TC and Thermowood
1.5	0.6	0.3	0	0	0	0	0	13	0	6.0	12	15	Kolho <sup>6)</sup>
0.03	21	20	0	0	0	0	0	7.4	6.4	39	4.7	4.2	Kyrö
0	22	22	0	0	0	0	0	162	88	87	0	1.5	Lappeenranta
0	0	2.4	2.8	1.3	0.01	0.02	0.3	83	72	60	101	96	Lohja
0.05	21	20	0	0	0	0	0	6.0	2.8	1,270	20	2.0	Merikarvia
0	0	0	41	21	0.02	0.1	1.9	164	42	3,389	32	175	Punkaharju
0.02	27	26	0	0	0	0	0	85	1.4	69	3.8	8.2	Renko
0.2	80	13	7.3	6.7	0.2	0.4	9.9	434	35	248	55	83	Suolahti
1.7	51	50	0	0	0	0	0	0.6	0	167	27	6.7	Vilppula
0	0	0	0	0	0	0	0	5.1	0	187	0	0	Boulleville and Honfleur
0.06	4.4	18	0	0	0	0	0	10	0	17	11	18	Casteljaloux
0.001	1.6	1.5	0	0	0	0	0	1.4	1.3	187	0	38	Aichach
0	0.8	0	0	0	0	0	0	0	0	1,714	196	71	Boston
0	0	0	0	0	0	0	0	0.2	0.2	40	78	25	Grangemouth
0.02	0.4	0.04	0	0	0	0	0	2.2	2.1	200	54	35	King's Lynn
0.05	0.9	0.09	0	0	0	0	0	7.5	7.4	4.0	84	5.0	Newport
0	0	0	0	0	0	0	0	0	0	305	39	3.6	Widnes
9.3	64	34											Others <sup>7)</sup>
<b>13</b>	<b>312</b>	<b>226</b>	<b>51</b>	<b>29</b>	<b>0.23</b>	<b>0.50</b>	<b>12.0</b>	<b>999</b>	<b>260</b>	<b>8,059</b>	<b>740</b>	<b>601</b>	<b>Metsä Wood Total</b>

#### Data measurement techniques

The calculation coverage of the environmental parameters follows that of the financial accounting with the following corrections:

- Only material flows to and from industrial sites are included.
- Discharges to water through external waste water treatment plants (typically municipal) are taken into account assuming an 85% reduction for COD. Emissions of BOD, phosphorus and suspended solids are calculated according to the flow with the following residual concentrations: BOD 10 mg/l; total phosphorus 0.5 mg/l; and total suspended solids 10 mg/l. The total nitrogen emission is regarded as zero because there is surplus nitrogen in municipal waste waters and the reduction of our BOD binds nitrogen to biomass thus reducing the plant's total nitrogen emission.
- The emissions of external waste water treated at our waste water treatment plants are not included. The allocation of emissions between internal and external inflows is carried out assuming theoretical COD reductions for each inflow which are then corrected according to the real COD reduction for the whole plant. Other emissions are allocated according to the flow.

The calculation coverage is the same as in Metsä Group's sustainability report 2011. Compared to 2011, the production structure has changed as a result of either decreased or ceased production volumes at some mills and increased volumes at others. While this structural change alone has changed emissions from +4% to -20% depending on the parameter in question, its effect on total energy use has been very small (-1%).

Total energy consumption is expressed as primary fuel consumption and calculated assuming 40% energy efficiency for purchased electricity production and 85% energy efficiency for purchased heat production.

Environmental impacts, acidification and eutrophication are calculated by multiplying impact-causing emissions by coefficients. Acidification is expressed as sulphur dioxide equivalents. The coefficient for sulphur is 1 and for NO<sub>x</sub> 0.7. Eutrophication is expressed as phosphorus equivalents. The coefficient for total phosphorus is 1; for BOD 0.0088; for total nitrogen 0.14; and for NO<sub>x</sub> 0.0041. The greenhouse effect only consists of carbon dioxide emissions and has a coefficient of 1.

In mill specific data, discharges from waste water plants serving several mills are allocated to mills using the methodology explained above. Emissions from power plants separate to mill units are also allocated to mills using the energy. In this allocation, the value of 1 MWh of electricity is double the value of 1 MWh of heat.

Waste volumes are reported including the moisture.

Emissions to air (t)			Discharges to water (t)				Water use (1,000 m <sup>3</sup> )			Solid waste (t)				
CO <sub>2</sub> bio	CO <sub>2</sub> fossil	SO <sub>2</sub>	NO <sub>2</sub>	Particles	COD	BOD	Phosphorus	Nitrogen	Total suspended solids	Water sourcing	Waste water	Recycling	Landfill	Hazardous
6,884,288	962,328	1,681	6,432	1,817	43,629	2,107	50	637	3,161	258,000	149,096	608,117	81,435	2,021

The Sustainability Report 2012 has been prepared according to the Global Reporting Initiative (GRI) G3 guidelines (version G3.1). We have selected those indicators most relevant to our operations, products and stakeholders. The table specifies also where you can find more information on each indicator. We have self-declared our reporting to be Application Level A+ of the GRI G3.1 Guidelines. Tofuture Oy has checked our reporting and has confirmed it to be Application Level A+.

AR Metsä Group Annual Report 2012  
 FS Metsä Group Financial Statements 2012  
 SR Metsä Group Sustainability Report 2012

■ GRI core indicator

● Fully reported  
 ○ Partially reported

## GRI TABLE

1.	STRATEGY AND ANALYSIS	More information	Reporting level
1.1	Statement from the CEO	AR p. 2-3	●
1.2	Description of key impacts, risks and opportunities	SR p. 2-3, 8-11, AR p. 6-7	●
2.	ORGANISATIONAL PROFILE		
2.1	Name of the organisation	AR and SR coverpages, FS p. 120	●
2.2	Primary brands, products and /or services	AR p. 12-13	●
2.3	Operational structure of the organisation	SR p. 12-15, AR p. 4, 12-13	●
2.4	Location of the headquarters	AR and SR coverpages, FS p. 120	●
2.5	Countries where the organisation operates	AR p. 8-9	●
2.6	Nature of ownership and legal form	FS p. 120	●
2.7	Markets served	AR p. 8, FS p. 67	●
2.8	Scale of the reporting organisation	FS p. 47-84, SR p. 10-11	●
2.9	Significant changes during the reporting period	FS p. 36	●
2.10	Awards received in the reporting period	SR p. 4-5	●
3.	REPORT PARAMETRES		
	<b>Report profile</b>		
3.1	Reporting period	1 Jan - 31 Dec 2012	●
3.2	Date of the previous report	March 2012	●
3.3	Reporting cycle	Annual	●
3.4	Contact point for questions	SR back cover, sustainability@metso.com	●
	<b>Report scope and boundary</b>		
3.5	Process for defining the content of the report	SR p. 15, 34	●
3.6	Boundary of the report	SR p. 15, 47, FS p. 47-48	●
3.7	Limitations on the scope or boundary of the report	SR p. 15, 47	●
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities etc.	FS p. 47-48, 96-97	●
3.9	Data measurement techniques and the bases of calculations	SR p. 15, 47	●
3.10	Explanation of the effect of any re-statements of information	SR p. 15, 47	●
3.11	Significant changes in the scope, boundary or measurement methods applied	No changes, SR p. 15, 47	●
	<b>Assurance</b>		
3.13	External assurance for the report	SR p. 52	●
4.	GOVERNANCE, COMMITMENTS AND ENGAGEMENT		
	<b>Governance</b>		
4.1	Governance structure	FS p. 120-125 Corporate Governance Statement	●
4.2	Position of the Chair of the Board of Directors	FS p. 120-125 Corporate Governance Statement	●
4.3	Independent and/or non-executive directors on the Board of Directors	FS p. 120-125 Corporate Governance Statement	●
4.4	Mechanisms for shareholders and employees to provide recommendations to the highest governance body	FS p. 120-125 Corporate Governance Statement	●
4.5	Executive compensation	FS p. 126-127 Corporate Governance Statement; Executive remuneration is based on the Group-level and personal targets, which depend on the person's area of responsibility incl. issues related to sustainability.	●
4.6	Ensuring processes to avoid conflicts of interest	FS p. 120-125 Corporate Governance Statement	●
4.7	Determining the composition, qualifications, and expertise of the members of the highest governance body and its committees	FS p. 120-125	●
4.8	Statements of mission or values, codes of conduct and sustainability principles	SR p. 10, 12-13, AR p. 5	●
4.9	Procedures of the highest governance body for overseeing the organisation's identification and management of economic, environmental, and social performance, incl. relevant risks	SR p. 12-15, FS p. 120-125 Corporate Governance Statement	●
4.10	Processes for evaluating the highest governance body's own sustainability performance	SR p. 12-15, FS p. 120-125 Corporate Governance Statement	●
	<b>Commitments to external initiatives</b>		
4.11	Addressing the precautionary approach	SR p. 3, 8-11, FS 120-125	●
4.12	Externally developed sustainability charters, principles or other initiatives	SR p. 2-3	●
4.13	Memberships in associations	SR p. 36	●



4.	GOVERNANCE, COMMITMENTS AND ENGAGEMENT	More information	Reporting level
	<b>Stakeholder engagement</b>		
4.14	List of stakeholder groups engaged by the organisation	SR p. 34–37	●
4.15	Basis for the identification and selection of stakeholders	SR p. 34	●
4.16	Approaches to stakeholder engagement	SR p. 34–37	●
4.17	Responding to key topics and concerns resulting from stakeholder engagements	SR p. 34–37	●
	<b>ECONOMIC INDICATORS (EC)</b>		
	<b>MANAGEMENT APPROACH TO ECONOMIC RESPONSIBILITY</b>	SR p. 12–15	●
	<b>Economic performance</b>		
EC1	Direct economic value generated and distributed	SR p. 37,	●
EC2	Risks and opportunities due to climate change	SR p. 10	●
EC3	Coverage of the organisation's defined benefit plan obligations	FS p. 85 Notes to the Financial Statement 25. Retirement Obligations; Financial reporting is prepared in accordance with the International Financial Reporting Standards (IFRS).	○
EC4	Significant financial assistance received from the government	SR p. 32, FS p. 69	●
	<b>Market presence</b>		
EC6	Policy, practices and the proportion of spending on locally-based suppliers	SR p. 22	●
EC7	Procedures for local hiring and proportion of senior management hired from the local community	SR p. 42; Group-wide policy for local hiring does not exist.	○
	<b>Indirect economic impacts</b>		
EC8	Development and impact of infrastructure investments and services	SR p. 37–39; Due to developed infrastructure in our operating countries, no major in-kind or pro bono investments have been made in 2012.	○
EC9	Indirect economic impacts	SR p. 34–37, 38–39	○
	<b>ENVIRONMENTAL INDICATORS (EN)</b>		
	<b>MANAGEMENT APPROACH ENVIRONMENTAL RESPONSIBILITY</b>	SR p. 12–15	●
	<b>Materials</b>		
EN1	Materials used	SR p. 5	●
EN2	Percentage of materials used that are recycled input materials	SR p. 5	●
	<b>Energy</b>		
EN3	Direct energy consumption	SR p. 24–27	●
EN4	Indirect energy consumption	SR p. 24–27	●
EN5	Energy saved due to conservation and efficiency improvements	SR p. 4, 24–27	●
EN6	Renewable energy-based products	SR p. 16–17, 24–27, AR p. 14–21	●
EN7	Initiatives to reduce indirect energy consumption and reductions achieved	SR p. 24–27	○
	<b>Water</b>		
EN8	Water usage by source	SR p. 5, 28–29, 44–47	●
EN9	Water sources significantly affected by the withdrawal of water	SR p. 28–29	●
EN10	Percentage and total volume of water recycled and reused water	SR p. 28	○
	<b>Biodiversity</b>		
EN11	Location and size of protected areas and areas of high biodiversity value outside protected areas	SR p. 18–21	●
EN12	Significant impacts of activities, products and services on biodiversity	SR p. 20	●
EN13	Protected or restored habitats	SR p. 18–21	○
EN14	Managing impacts on biodiversity (incl. engagement with relevant stakeholders)	SR p. 34–35	○
	<b>Emissions, effluents and waste</b>		
EN16	Total direct and indirect greenhouse gas emissions	SR p. 24–27	●
EN17	Other relevant indirect greenhouse gas emissions by weight	SR p. 24–27; Currently Metsä Group does not have sufficient data for calculating Group-wide emissions from producing and transporting the main raw materials (Scope 3).	○
EN18	Reduction of greenhouse gas emissions	SR p. 6–7	●
EN19	Emissions of ozone-depleting substances by weight	Not relevant in Metsä Group's operations as ozone depleting substances are related to energy production and are emitted only in a very limited extent.	●
EN20	NO <sub>x</sub> , SO <sub>x</sub> and other significant air emissions	SR p. 5, 44–47	●
EN21	Water discharges	SR p. 5, 44–47, 28–29	●
EN22	Waste by type and disposal method	SR p. 5, 30–31, 44–47	●
EN23	Total number and volume of significant spills	SR p. 32–33	●
EN24	Transported, imported, exported or treated hazardous waste	SR p. 30–31, 44–47	○
EN25	Water bodies and related habitats affected by the discharges of water	SR p. 18–21, 28–29	○
	<b>Products and services</b>		
EN26	Initiatives to mitigate the environmental impacts of products	SR p. 16–17	●
EN27	Percentage of products and their packaging materials that are reclaimed by category	SR p. 16–17, 30–31; All Group's products are recyclable or biodegradable. Paper and board recycling is organised by local municipalities and excat data related on recycling rates is not available.	○
	<b>Compliance</b>		
EN28	Fines and sanctions for non-compliance with environmental laws and regulations	SR p. 32–33	●
	<b>Transport</b>		
EN29	Environmental impacts of transportation	SR p. 23, 24–27	○
	<b>Overall</b>		
EN30	Environmental expenditures and investments	SR p. 32–33, FS p. 39, 87, 102	●

INDICATORS FOR LABOR PRACTICES AND DECENT WORK (LA)		More information	Reporting level
<b>MANAGEMENT APPROACH TO LABOR PRACTICES</b>		SR p. 12–15	●
<b>Employment</b>			
LA1	Breakdown of workforce	SR p. 41, 42–43, 44–47; The Group-level data reported. The regional breakdown by gender is not considered as material.	○
LA2	Employee turnover	SR p. 41, 42–43; Breakdown of new hires by age, gender and region not considered as material.	○
LA3	Employee benefits	SR p. 42–43	●
LA15	Return to work after parental leave	Not material as the work contracts continue unchanged after the parental leave.	●
<b>Labour/management relations</b>			
LA4	Collective bargaining agreements	SR p. 42–43	●
LA5	Minimum notice period(s) regarding operational change	SR p. 42–43	●
<b>Occupational health and safety</b>			
LA6	Workforce represented in formal joint management health and safety programs	SR p. 42–43	●
LA7	Rates of injury, occupational diseases, lost days and fatalities	SR p. 40–41; Geographical breakdown not considered as material.	○
LA8	Education, training, counselling, prevention, and risk-control programs	SR p. 40–41; Not material in Metsä Group's operations.	○
<b>Training and education</b>			
LA10	Average hours of training	SR p. 43; The training of employees is reported in days per year.	○
LA11	Programs for skill management and lifelong learning	SR p. 42–43	●
LA12	Employees receiving regular performance and career development reviews	SR p. 42–43	●
<b>Diversity and equal opportunity</b>			
LA13	Composition of governance bodies and breakdown of employees	SR p. 41, FS p. 131	●
<b>Equal remuneration for women and men</b>			
LA14	Ratio of basic salary and remuneration of women to men	SR p. 40; The ratio not reported. A Group-level comparison is not possible to obtain.	○
<b>HUMAN RIGHT INDICATORS (HR)</b>			
<b>MANAGEMENT APPROACH TO HUMAN RIGHTS</b>		SR p. 12–15, 22	●
<b>Investment and procurement practices</b>			
HR1	Percentage of significant investment agreements and contracts that include clauses incorporating human rights concerns	SR p. 22; We expect all our supplier to comply with our Supplier Code of Conduct. Currently no data collection system available to report the actual percentage.	○
HR2	Significant suppliers and other business partners screening for human rights	SR p. 22	●
HR3	Employee training on human rights	SR p. 7, 15, 43–43; No data available on the number of hours devoted to the training.	○
<b>Non-discrimination</b>			
HR4	Incidents of discrimination and corrective actions taken	SR p. 42	●
<b>Freedom of association and collective bargaining</b>			
HR5	Operations and significant suppliers identified for the risk of not to exercise freedom of association or collective bargaining	SR p. 3, 22; No geographical risk assessment currently available.	○
<b>Child labour</b>			
HR6	Operations and significant suppliers identified as having significant risk for incidents of child labour and measures taken to eliminate it	SR p. 3, 22; No geographical risk assessment currently available.	○
<b>Forced and compulsory labour</b>			
HR7	Operations and significant suppliers identified as having significant risk for forced or compulsory labour and measures taken to eliminate it	SR p. 3, 22; No geographical risk assessment currently available.	○
<b>Indigenous rights</b>			
HR9	Incidents of violations involving rights of indigenous people and actions taken	Metsä Group's operations have no significant impact on the rights of indigenous people. No incidents detected in 2012.	●
<b>Assessment</b>			
HR10	Percentage of operations that have been subject to human rights reviews	Not material to Metsä Group's operations.	○
<b>Remediation</b>			
HR11	Grievances related to human rights field	No reported grievances related to human rights in 2012.	●
<b>SOCIETY INDICATORS (SO)</b>			
<b>MANAGEMENT APPROACH TO SOCIETY</b>		SR p. 12–15, 34–37, 38–39	●
<b>Local communities</b>			
SO1	Management of impacts on communities in areas affected by activities	SR p. 38–39, 42–43; No Group-wide community engagement or impact assessment programmes available.	○
SO9	Operations with negative impacts on local communities	SR p. 38–39, 42–43	●
SO10	Prevention and mitigation measures implemented in operations with negative impacts on local communities	SR p. 38–39, 42–43	●
<b>Corruption</b>			
SO2	Percentage of business units analysed for risks related to corruption	SR p. 8–11, 12, FS p. 124; Corruption is included in the Internal Audit's risk assessment procedures.	○
SO3	Employees trained in organisation's anti-corruption policies and procedures	SR p. 7, 12	●
SO4	Actions taken in response to incidents of corruption	SR p. 12–15	●

SOCIETY INDICATORS (SO)		More information	Reporting level
<b>Public policy</b>			
<b>SO5</b>	Participation in public policy development and lobbying	SR p. 35–36	●
<b>SO6</b>	Contributions to political parties, politicians and related institutions	No political contributions in 2012.	●
<b>Anti-competitive behaviour</b>			
<b>SO7</b>	Anti-trust and monopoly court cases	SR p. 12–15, FS p. 40	●
<b>Compliance</b>			
<b>SO8</b>	Sanctions for non-compliance with laws and regulations	SR p. 12–15	●
<b>PRODUCT RESPONSIBILITY INDICATORS (PR)</b>			
<b>MANAGEMENT APPROACH TO PRODUCT RESPONSIBILITY</b>		SR p. 16–17	●
<b>Consumer health and safety</b>			
<b>PR1</b>	Product safety	SR p. 16–17	●
<b>PR2</b>	Total number of incidents of non-compliance with regulations and voluntary codes concerning product safety	No incidents reported in 2012.	●
<b>Product and service labelling</b>			
<b>PR3</b>	Product information	SR p. 16–17; End-use and disposal not included in the Environmental Product Declaration.	●
<b>PR4</b>	Non-compliance with regulations and voluntary codes concerning product information	No incidents reported in 2012.	●
<b>PR5</b>	Practices related to customer satisfaction	AR p. 23, SR p. 37	●
<b>Marketing communications</b>			
<b>PR6</b>	Programmes for adhere to laws, standards and voluntary codes related to marketing communications	Not material in Metsä Group's product marketing communications. Vast majority of the Group's sales are from business to business operations.	●
<b>PR7</b>	Non-compliance with regulations and voluntary codes on marketing communications	No incidents reported in 2012.	●
<b>Customer privacy</b>			
<b>PR8</b>	Number of complaints regarding breaches of customer privacy and losses of customer data	No incidents reported in 2012.	●
<b>Compliance</b>			
<b>PR9</b>	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products	No incidents reported in 2012.	●



# INDEPENDENT ASSURANCE STATEMENT

## TO THE MANAGEMENT AND STAKEHOLDERS OF METSÄ GROUP

### SCOPE AND OBJECTIVES

The Management of Metsä Group commissioned us to perform a limited assurance engagement on the Metsä Group Sustainability Report 2012 ("the Report"). The assurance engagement was conducted in accordance with the AA1000 Assurance Standard (2008) and as a type 2 engagement.

We have duly performed a limited assurance engagement, the objective of which was to evaluate:

- Metsä Group's adherence to the AA1000 Accountability Principles of inclusivity, materiality and responsiveness;
- the reliability of performance information presented in the Report according to the Quality of Information Principles defined in the Global Reporting Initiative Guidelines; and
- the GRI application level of the Report.

### RESPONSIBILITIES OF THE MANAGEMENT OF METSÄ GROUP AND THE ASSURANCE PROVIDERS

Metsä Group's Management is responsible for the preparation of the Report and the performance data and statements presented therein, which the company management has approved. Our responsibility as assurance providers is to express a conclusion based on our work performed. The criteria used for our assessment include the Global Reporting Initiative Guidelines and Metsä Group's own internal reporting guidelines.

### ASSURANCE PROVIDER'S INDEPENDENCE AND COMPETENCE

An assurance provider is required to be independent and impartial from the reporting organisation. During 2012 we were not committed to any assignments for Metsä Group that would conflict with our independence, nor were we involved in the preparation of the Report. Our assurance team consists of competent and experienced responsibility reporting and assurance experts, who have the necessary skills to perform an assurance process. Further information, including a statement of competencies related to the team can be found at: [www.tofuture.eu](http://www.tofuture.eu).

### BASIS OF OUR OPINION AND LIMITATIONS

Assurance providers are obliged to plan and perform the assurance process so as to ensure that they collect adequate evidence for the necessary conclusions to be drawn. The procedures selected depend on the assurance provider's judgement, including their assessment of the risk of material misstatement adhering to the reporting criteria.

We have performed the following procedures:

- Assessment of the procedures Metsä Group has in place to ensure adherence to principles of stakeholder inclusivity, materiality and responsiveness.
- Interviews with four members of the Metsä Group Executive Management Team and two other senior management representatives to gain an understanding of the major impacts, risks and opportunities related to Metsä Group's sustainability agenda.
- Interviews with Metsä Group specialists responsible for sustainability performance data collection at Group-level and in selected sites.
- Review of Group-level systems and procedures to generate, collect and report sustainability performance data for the Report.
- Evaluations of Group-level calculations and data consolidation procedures and internal controls to ensure the accuracy of data.

- Review of data sources, data generation and reporting procedures at the following sites in Finland and Sweden: Metsä Board Äänekoski mill, Metsä Fibre Äänekoski mill, Metsä Forest Tampere wood supply unit, Metsä Tissue Pauliström and Nyboholm mills and Metsä Wood Vilppula sawmill.

### CONCLUSIONS

#### ADHERENCE TO AA1000 ACCOUNTABILITY PRINCIPLES

- **Inclusivity:** Metsä Group has found to have procedures in place for stakeholder involvement, and the company has made a commitment to active stakeholder dialogue.
- **Materiality:** Metsä Group has conducted a materiality review in 2011 and defined material sustainability issues for the Report.
- **Responsiveness:** Metsä Group has adequate policies, guidelines and procedures in place to respond to stakeholders' expectations.

#### RELIABILITY OF PERFORMANCE INFORMATION

We have reviewed the basis of the sustainability information provided in the report. Based on our review, nothing has come to our attention that would suggest, that the report does not give, in all material issues, a fair and balanced view of Metsä Group's sustainability performance, or that the information presented in respect to all material issues would not be reliable with regard to the reporting criteria.

#### GRI APPLICATION LEVEL

The Report corresponds to the GRI application level A+.

#### OBSERVATIONS AND RECOMMENDATIONS

Based on our limited level assurance engagement, we present the following observations and recommendations, which do not affect the conclusions presented above.

- Sustainability data for the Report is collected from different data sources with distinct procedures. Internal controls of data are relying on competences and availability of some key persons. We recommend that Metsä Group develop further Group-level sustainability data gathering and reporting procedures towards a more systematic process which is completely documented in order to confront reporting risk management and change management issues.
- Sustainability management procedures are firmly established at Metsä Group. Based on the materiality assessment conducted in 2011 Metsä Group has defined a Group-wide sustainability agenda and related targets. We recommend that Metsä Group further develops the implementation of sustainability targets in order to ensure business value and integration of sustainability agenda to business operations at all levels of the organisation.

Espoo, Finland, 14<sup>th</sup> March 2013

Tofuture Oy

Sustainability Assurance

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