METSÄ GROUP

SUSTAINABILITY REPORT 2015

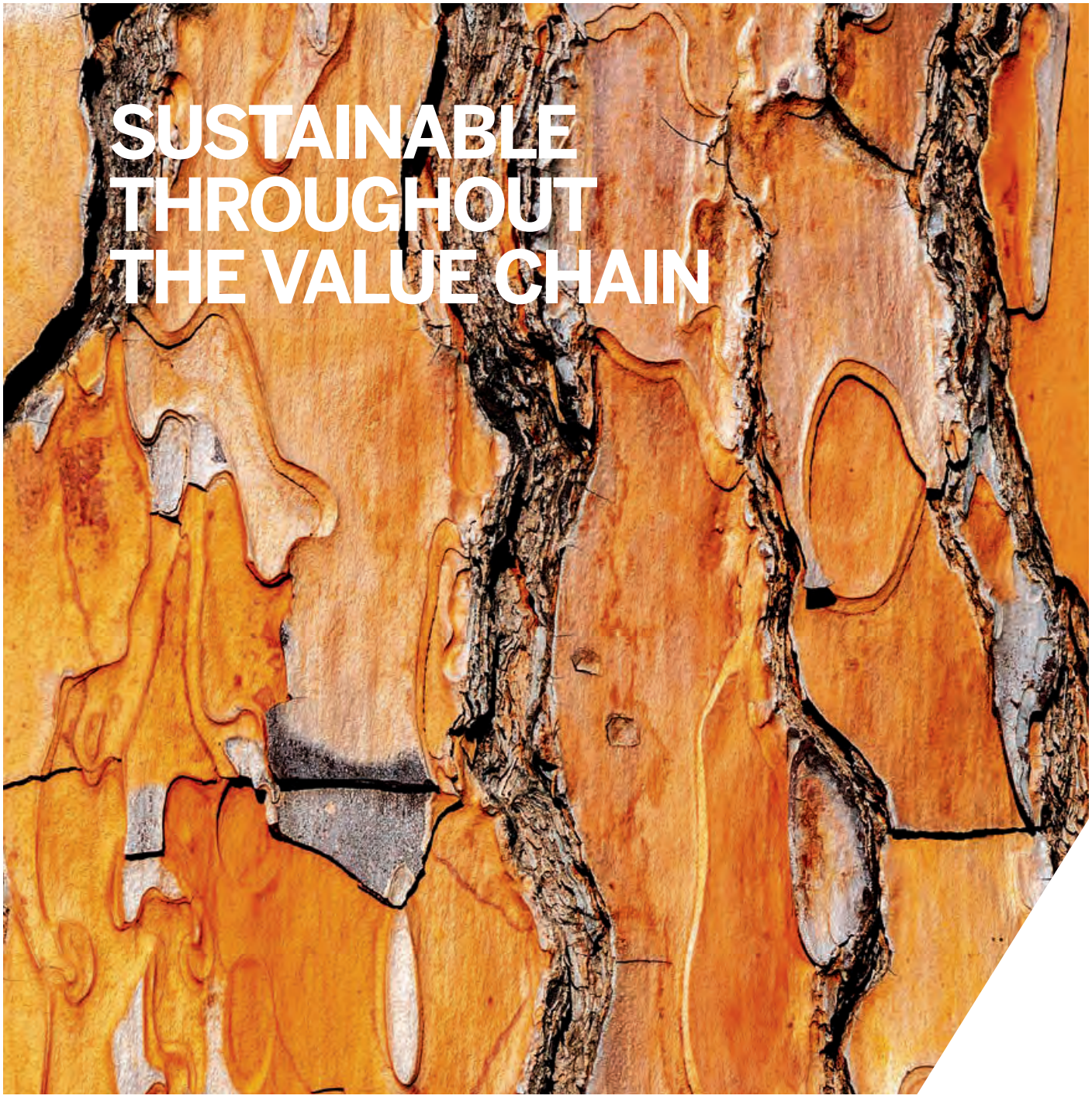
Metsä

INTRODUCING CARTA INTEGRA, THIS REPORT'S COVER MATERIAL

The cover of this report is made of our Carta Integra lightweight paperboard. It is produced at Metsä Board's Äänekoski mill in Finland.

The pulps, comprising 75% of the finished product, come from our mills in Finland. The other raw materials come from reliable suppliers who comply with Metsä Group's Supplier Code of Conduct and Sustainability Principles.

CONTENT



SUSTAINABLE THROUGHOUT THE VALUE CHAIN

METSÄ GROUP is a forerunner in bioeconomy utilising renewable wood from sustainably managed northern forests. Metsä Group focuses on tissue and cooking papers, fresh forest fibre paperboards, pulp, wood products, and wood supply and forest services. Metsä Group's sales totalled EUR 5 billion in 2015, and it employs approximately 9,600 people. The Group operates in some 30 countries.

Metsäliitto Cooperative is the parent company of Metsä Group and is owned by approximately 116,000 Finnish forest owners.

READ ALSO:

Metsä Group Financial Statements 2015

Metsä Group Annual Brochure 2015

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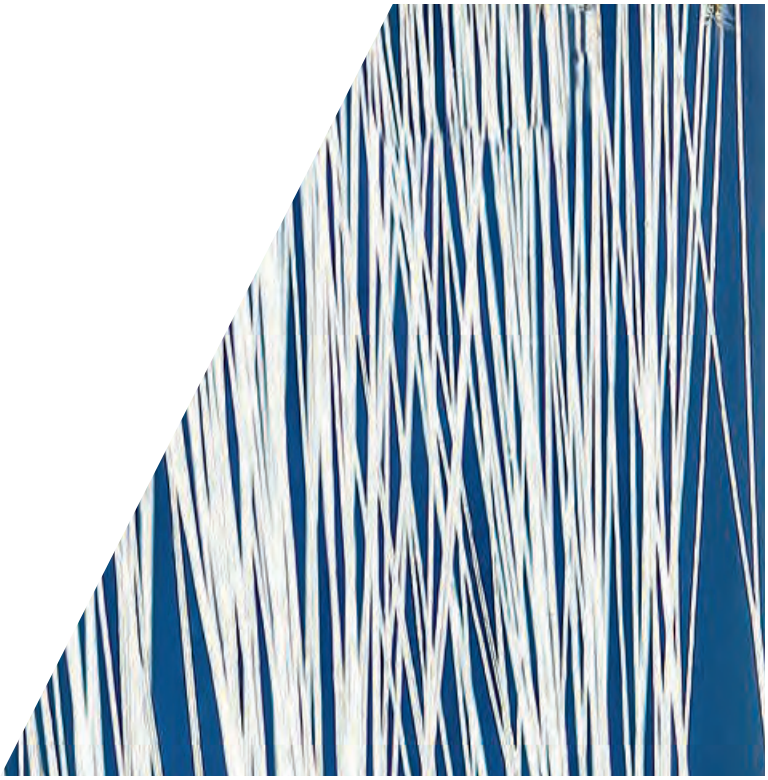
Metsä Group
Sustainability and Corporate Affairs
sustainability@metsagroup.com

This publication is also available online at www.metsagroup.com/sustainability
We value your opinion. Kindly send your feedback on Metsä Group's Sustainability Report to sustainability@metsagroup.com or discuss with @MetsaGroup on Twitter.

YEAR 2015 HIGHLIGHTS



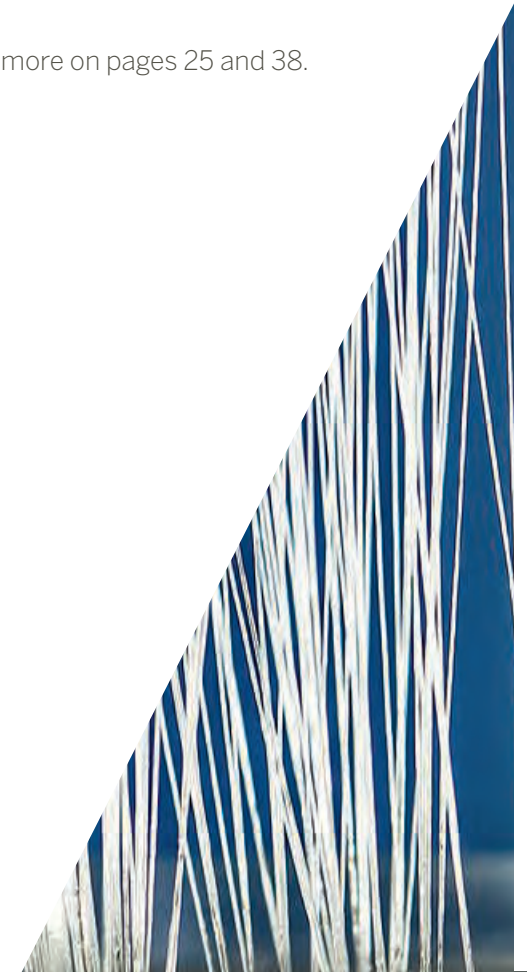
CONSTRUCTION OF THE BIOPRODUCT MILL ON THE WAY

The next-generation bioproduct mill will produce pulp, other bioproducts and bioenergy with

240%

electricity self-sufficiency and is free from all fossil fuels.

Read more on pages 25 and 38.



-34%

FOSSIL CO_2 EMISSIONS PER PRODUCT TONNE SINCE 2009

Read more on page 55.

IMPROVED SCORING IN WWF'S ENVIRONMENTAL PAPER COMPANY INDEX

Read more on page 53.

7%

BETTER ENERGY EFFICIENCY SINCE 2009

Read more on page 55.

PERSPECTIVES ON THE BIOECONOMY

Stakeholders with different backgrounds gathered for a roundtable discussion on the bioeconomy.

Read more on page 5.

METSÄ BOARD HAS FINALISED ITS TRANSFORMATION TO A LEADING EUROPEAN PAPERBOARD COMPANY BY INVESTING EUR 170 MILLION IN DEVELOPING ITS HUSUM MILL IN SWEDEN.

Read more at www.metsaboard.com

SICKNESS ABSENTEEISM

3.9%

Read more on page 31.

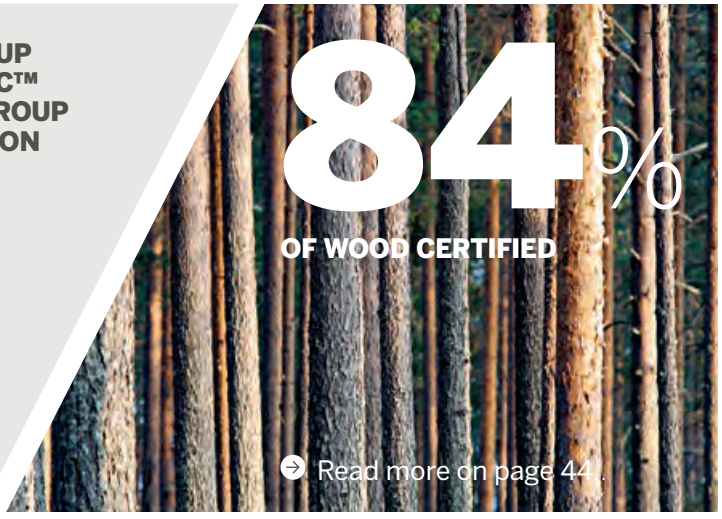
1,000

EMPLOYEES ENGAGED IN GROUP-WIDE SUSTAINABILITY TRAINING

Read more on page 18.

METSÄ GROUP OFFERS PEFC™ AND FSC® GROUP CERTIFICATION TO FOREST OWNERS.

Read more on page 23.



84%

OF WOOD CERTIFIED

Read more on page 44.

OVER

1,000

DAYS WITHOUT ACCIDENTS IN DÜREN, GERMANY

Read more on page 31.

47%

LOWER LOST-TIME ACCIDENT FREQUENCY RATE AT METSÄ WOOD SINCE 2014

Read more on page 30.

A YEAR OF CONCRETE STEPS FOR SUSTAINABILITY AND THE BIOECONOMY

COMMUNICATION ON PROGRESS

This is our **Communication on Progress** in implementing the principles of the **United Nations Global Compact** and supporting broader UN goals.

We welcome feedback on its contents.

The year 2015 has good chances of becoming historically important in advancing sustainability and the bioeconomy. During the year, the major and long-term undertaking, the international agreement on reducing carbon dioxide emissions, was eventually reached in Paris. The global forest industry plays a key role in offering sustainable products and solutions for reaching the targets. As one of the leaders in the industry, Metsä Group continuously works towards improving its performance in this area. Since 2009, we have reduced our fossil CO_2 emissions by 34% and, equally important, we have 100% traceability of our main raw material - renewable wood from sustainably managed forests.

Another large-scale commitment with a successful launch was the United Nations' Sustainable Development Goals (SDGs) that transformed the wide sustainability agenda into concrete targets, making it also a useful guideline in evaluating a company's or any other organization's performance. When evaluating our new bioproduct mill, the biggest forest industry investment ever in Europe against the SDGs, we notice its positive contribution to several goals: climate actions, partnerships, responsible consumption and production as well as life on land and below water. We create value in various ways to our stakeholders in local, national and international operating environments.

Furthermore, our customers have put SDGs on their agendas and in the spirit of global partnerships, one of the SDGs, we aim to work together with them to gain competitive advantage from sustainability throughout the value chain.

PART OF OUR JOBS – EVERY DAY

Sustainability is also part of each Metsä Group employee's job - from the forests and mills to the customer interface. This year, we arranged workshops where we challenged over a thousand of our employees to think deeper about what sustainability means in their daily work. One of the key

METSÄ GROUP

SALES **5.0** BILLION | PERSONNEL **9,600**

METSÄLIITTO COOPERATIVE | GROUP'S PARENT COMPANY | OWNED BY 116,000 FINNISH FOREST OWNERS

METSÄ FOREST	METSÄ WOOD	METSÄ FIBRE	METSÄ BOARD	METSÄ TISSUE
WOOD SUPPLY AND FOREST SERVICES	**WOOD PRODUCTS**	**PULP**	**PAPERBOARD**	**TISSUE AND COOKING PAPERS**
SALES **EUR 1.5 BILLION**	SALES **EUR 0.9 BILLION**	SALES **EUR 1.4 BILLION**	SALES **EUR 2.0 BILLION**	SALES **EUR 1.0 BILLION**
PERSONNEL **900**	PERSONNEL **2,000**	PERSONNEL **850**	PERSONNEL **2,600**	PERSONNEL **2,800**

findings was that our customers are increasingly interested in hearing about our profound work in the field. For example, Metsä Tissue's sales and marketing teams tell us that over 90% of their customers are either interested or highly interested in sustainability topics and are interested in hearing more. The trend is clear.

As Finland is the most forested country in Europe, sustainable use of wood is at the center of our approach towards a bioeconomy. Today, the forests grow more than they are used in the areas where we operate. The new bioproduct mill currently under construction in Äänekoski, Finland, is a concrete step in realizing the bioeconomy. In addition to producing high-quality pulp and new bioproducts, the new mill, with 240% self-sufficiency in electricity, will also provide bioenergy to society as electricity and district heating. Another bioeconomy booster is the ecosystem of small and medium-sized enterprises, a key part of the bioproduct mill concept: by increasing the use of the mill's side streams and creating new business opportunities with them, we will create value to our stakeholders cumulatively in many layers.

Building a successful bioeconomy requires commitment, cooperation and actions from various players and stakeholders in society. To bring stakeholders with different points of view together, we arranged a roundtable discussion on advancing the bioeconomy. The attendees of the event - representatives from the regulators, financiers, NGOs represented by WWF Finland, as well as future research - offered different perspectives on the issue and generated an in-depth and rewarding discussion.

WORKING FOR SUSTAINING BIODIVERSITY IN FORESTS

The increasing use of wood has raised discussions on sustainable logging amounts and biodiversity in forests. Metsä Group's target is to ensure and sustain the biodiversity in forests, an action also required by the Finnish Forest Act and forest certification schemes. Additionally, we cooperate with WWF Finland to annually train our personnel to take biodiversity issues into consideration also in commercial forests.

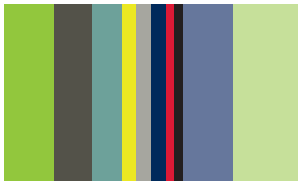
The basic idea of a bioeconomy is to decrease dependency on fossil raw materials and fuels in the long term. The wiser we can utilize the versatile properties of wood, the sooner we can reach the target. Our customers are increasingly taking an interest in choosing solutions that fulfil the requirements of both quality and sustainability.

To keep forging ahead requires insight, persistency and a solution-seeking attitude. With these attributes, we are committed to continue our work for ever better solutions. I hope this report with its practical cases illustrates the importance of this area. We are open to dialogue, so feel free to contact @MetsaGroup on Twitter.

Sustainably yours,
Riikka Joukio

SVP, Sustainability and
Corporate Affairs
Metsä Group

SALES
SALES BY COUNTRY
%



Finland	17
Germany	13
United Kingdom	10
Italy	5
France	5
Sweden	5
Poland	3
Norway	3
Rest of Europe	17
Other countries	22

KEY FIGURES	2015	2014	2013	2012	2011
Sales, EUR million	**5,016**	4,970	4,938	5,001	5,346
Operating result, EUR million	**542**	417	335	241	29
Operating result, excl. non-recurring items, EUR million	**537**	418	343	256	314
Return on capital employed, %	**13.7**	11.1	8.9	6.7	1.1
Return on capital employed, excl. non-recurring items,%	**13.6**	11.4	9.1	7.1	8.5
Equity ratio, %	**43.2**	37.9	37.9	34.7	28.1
Net gearing ratio, %	**25**	46	77	87	132
Investments, EUR million	**492**	143	214	204	227

OUR SUSTAINABILITY THEMES

WE CREATE WELL-BEING

STAKEHOLDER ENGAGEMENT

- Ensuring ethical business practices
- Improving safety at work
- Assuring responsible management
- Contributing to local livelihoods and society

WE OFFER SUSTAINABLE CHOICES

PRODUCTS AND SERVICES

- Turning renewable wood into sustainable, safe and recyclable products
- Providing customer-focused services and solutions
- Innovating for continuous improvement and renewal

WE BRING THE FOREST TO YOU

RAW MATERIALS AND SUPPLY CHAIN

- Promoting sustainable forest management, certification, biodiversity and multiple use of forests
- Enhancing sustainability in the value chain
- Ensuring the traceability of raw materials

WE WORK FOR A BETTER CLIMATE AND ENVIRONMENT

RESOURCE EFFICIENCY AND EMISSIONS

- Making efficient use of raw materials, energy and water
- Increasing the value of side streams
- Maximizing the share of bioenergy
- Minimizing emissions to water and air

ETHICAL BUSINESS

Coverage of code of conduct training: 100%

87%

Performance 2015

SAFETY AT WORK

Lost-time accidents frequency annually: -10%

-15%

Performance 2015

WELL-BEING

Sickness absenteeism: <3%

3.9%

Performance 2015

TARGETS AND PERFORMANCE

SUPPLY CHAIN

WOOD

Sustain the amount of certified wood: >80%

84%

Performance 2015

OTHER RAW MATERIALS

All risk-rated raw material key vendors audited by the end of 2015

No high-risk vendors

Performance 2015

LOGISTICS

New target for 2016–2017: Ensuring the sustainability of our main logistics flows

CLIMATE

Fossil CO_2 emissions per product tonne 2009–2020: -30%

-34%

Performance by 2015

ENERGY

Energy efficiency improvement 2009–2020: 10%

7%

Performance by 2015

RESOURCE EFFICIENCY

Process water use per product tonne 2010–2020: -17%

-15%

Performance by 2015

STAKEHOLDER ENGAGEMENT

Metsä Group employs 9,600 people and creates thousands of jobs in logging and transport companies and the retail business, among other sectors. Millions of people use our products every day.

We are an international company with strong roots in Finland and require our employees and suppliers to comply with the highest ethical standards. We invest in safety at work and promote responsible management. We want to be a fair and open neighbour in our local communities.

3.9%
SICKNESS ABSENTEEISM

-15%
LOST-TIME ACCIDENT FREQUENCY SINCE 2014

87%

OF EMPLOYEES TRAINED IN THE CODE OF CONDUCT

CREATING VALUE

Close cooperation with our stakeholders is key in creating value locally, nationally and internationally.

RESOURCES AND COMPETENCES

PERSONNEL
- 9,600 employees in 26 countries
- Personnel turnover 7.9%

Read more on page 28

WOOD AND OTHER RAW MATERIALS
- Supplying 30 million m³ of wood with 100% traceability
- Pine, spruce, birch and aspen from northern European forests

Read more on page 40

ENERGY
- Primary energy consumption 28.8 TWh
- 86% of production made with bioenergy

Read more on page 54

WATER
- Water consumed 294 million m³
- 99% surface water

Read more on page 52

FINANCIAL
- EUR 2,878 million in liquidity and undrawn credit facilities
- Capital employed EUR 4,063 million

Read more on the Financial Statements

RESEARCH, DEVELOPMENT AND INNOVATIONS
- EUR 18 million in R&D
- Networks and bioeconomy partnerships

Read more on page 38

PRODUCTION
- 29 production units in 7 countries in Europe
- Over 20,000 suppliers

Read more on pages 46 and 50

STAKEHOLDERS

Customers and consumers
Research organizations
Sub-contractors and suppliers
Own personnel
Investors and analysts
Shareholders
Authorities, legislators and political decision makers
Media
Corporate networks
NGOs
Trade associations
Other forest owners
Cooperative's owner-members
Local communities
Schools and universities

CREATING VALUE LOCALLY

93.5% permanent employees

EUR **678** million in wages, salaries and benefits (incl. social security and pension costs)

100 school visits and **850** summer jobs

EUR 410 million to Finnish forest owners from wood sales
EUR **300** million to harvesting and transportation entrepreneurs in Finland

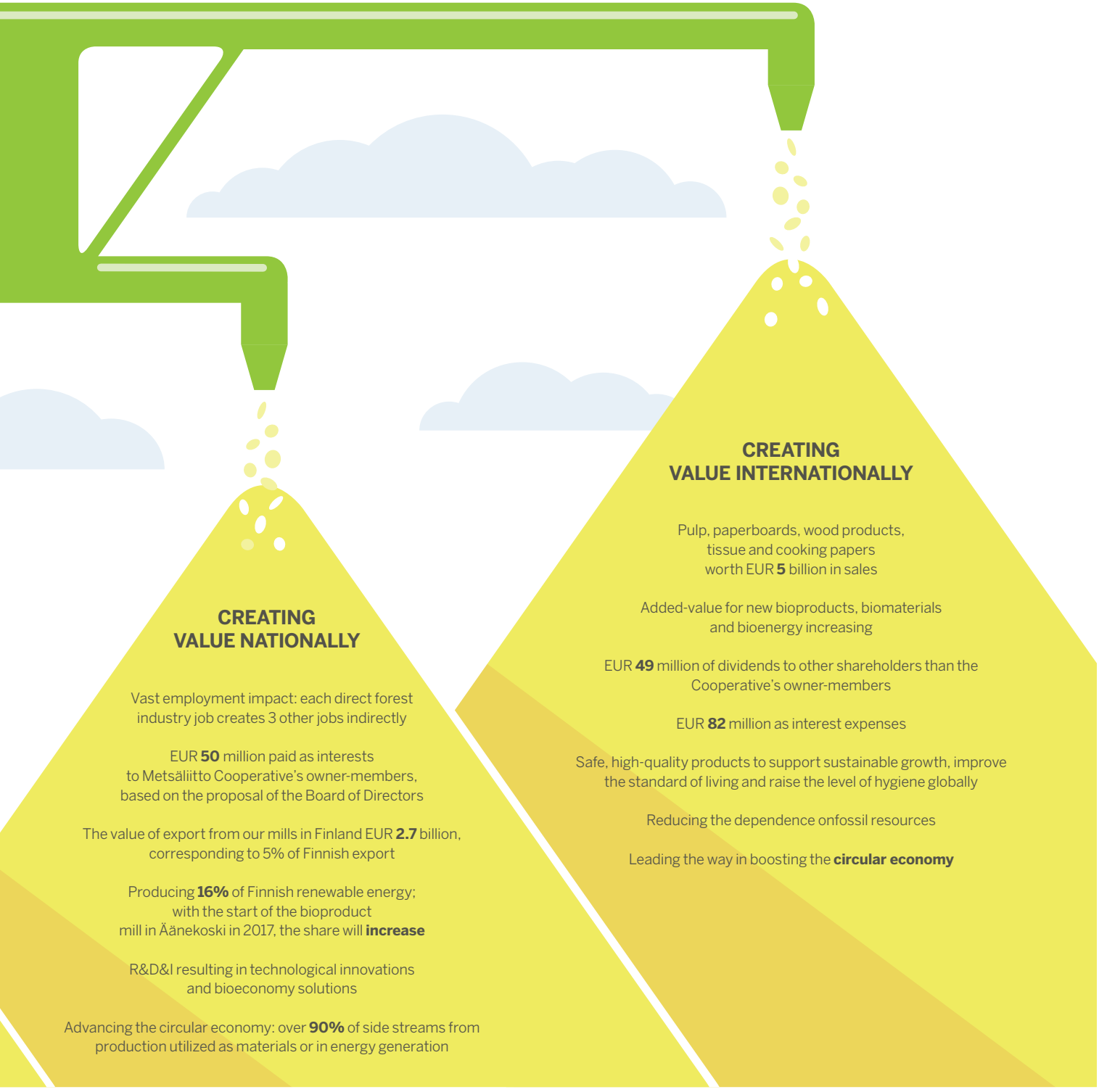
30 million seedlings delivered to forest owners in 2015

86% of purchases* from suppliers in production countries

Supporting the growth of **bioeconomy ecosystems**

*excluding wood

Building the bioeconomy and offering each day better products and solutions is our common interest. Achieving it requires cooperation, reliability, responsible profitability and renewal, which are also the values steering Metsä Group. Our unique know-how in making the most of wood, combined with the global need for renewability and the circular economy opens up new possibilities for making a positive impact.



CREATING VALUE NATIONALLY

Vast employment impact: each direct forest industry job creates 3 other jobs indirectly

EUR **50** million paid as interests to Metsäliitto Cooperative's owner-members, based on the proposal of the Board of Directors

The value of export from our mills in Finland EUR **2.7** billion, corresponding to 5% of Finnish export

Producing **16%** of Finnish renewable energy; with the start of the bioproduct mill in Äänekoski in 2017, the share will **increase**

R&D&I resulting in technological innovations and bioeconomy solutions

Advancing the circular economy: over **90%** of side streams from production utilized as materials or in energy generation

CREATING VALUE INTERNATIONALLY

Pulp, paperboards, wood products, tissue and cooking papers worth EUR **5** billion in sales

Added-value for new bioproducts, biomaterials and bioenergy increasing

EUR **49** million of dividends to other shareholders than the Cooperative's owner-members

EUR **82** million as interest expenses

Safe, high-quality products to support sustainable growth, improve the standard of living and raise the level of hygiene globally

Reducing the dependence onfossil resources

Leading the way in boosting the **circular economy**

PROFITABLE BUSINESS FOR A SUSTAINABLE FUTURE

Today, sustainable solutions are sought in all fields of business and by society at large. Since operating sustainably with northern wood – a renewable and the world's most versatile raw material – Metsä Group is in a strong position to offer solutions in building the bioeconomy. All of our businesses offer alternatives for the use of fossil materials with both the current and upcoming products.

The bioeconomy is based on the sustainable use of renewable raw materials and is a good example of the natural circular economy. Due to the international climate agreement signed in Paris in 2015, countries around the world are exploring ways to enhance bio-based and low-carbon economies. In this respect, the forest industry's role in enabling this has now been widely recognised.

THE FINNISH BIOECONOMY IS BASED ON FORESTS

The concept of the bioeconomy has become familiar in Finland. A national bioeconomy strategy has been prepared and is one of the key projects of the current Government Programme. Understanding of the bioeconomy has evolved and is today modern and inspiring: it seeks to reduce our dependence on fossil resources, prevent the weakening of ecosystems, and facilitate economic development and the creation of new jobs. Actors in the bioeconomy play an important role in the circular economy, where the manufacture and use of products are designed in a manner that eliminates waste and allows materials to be recycled and retain their value.

In Finland, where Metsä Group has most of its operations, the bioeconomy is largely based on forests due to our vast forest resources, whereas elsewhere in Europe it is mostly associated with agriculture. Generally, the solutions we provide consist of the current forest-based products as well as bioenergy, biomaterials and biochemicals, all of which offer an alternative to the use of fossil-based goods. Read more about bioproducts on pages 38–39.

BIOECONOMY – CUSTOMER'S CHOICE

While some alternatives to fossil-based materials already exist, new ones are urgently needed to make global resource use more sustainable. In this respect, Metsä Group offers competitive, high-quality and sustainable alternatives already today and is one of the leading actors in accelerating the change. Although legislation and guidelines are important tools in making progress, the final decision on how quickly we can move to a bioeconomy remains with the end-users: At what point in time will we choose to buy our food in paperboard packaging instead of plastic wrapping? When shall we build our house of carbon-storing wood instead of extracted materials?

STRONG BELIEF IN THE FUTURE

The need of the bioeconomy and its products call for research, development, innovation, highly competent personnel, funding and favourable legislation. Encouragingly, there is evidence of changes being made in certain markets such as in food packaging where fossil-based materials are being replaced with materials made of renewables. Also wood is gaining popularity as construction material.

Metsä Group uses each part of a tree for the purpose that brings the best value. Also side streams from production are utilized as materials or for energy production. We aim for higher efficiency and lower emissions in our wood and product transports as well as in all our other operations. We work with the best partners for enhancing the circular economy in networks, and increasingly offer sustainable solutions for different needs.

In terms of maximizing value creation through the entire life-cycle, after the primary use, fibre and wood products should be re-used to the next best purpose. This way they are kept in circulation as comprehensively as possible. Wood products and fibre can be re-used for different purposes many times. Burning industrial wood as fuel, which is currently broadly subsidized, should not be favoured as it distorts competition in the raw-material market for wood and does not support the circular economy.

We also work to ensure our competitiveness, which is influenced by changes in both regulation and the pricing of different resources, among others.

In addition to climate and efficiency measures, the availability of water is another critical resource for forest industry processes. Even though water is an unevenly distributed resource globally, most of our production units are located in Finland where the surface water resources are rich. The share of ground water use in all of our operations is less than 2%. Therefore, our asset is our ability to operate around rich water resources where other parties' functions or well-being are not weakened due to the industry's need for water. After purifying the process water with the best available technology, it is returned to waterbodies.

LONG-TERM FOREST RISK MITIGATION

Debate on the sustainable use of forests is a current issue, and one that is developing hand in hand with the bioeconomy discussion. The debate has been gathering opinions from various perspectives such as from forest industry companies, research institutes and NGOs.

In northern Europe, the forests are a vast resource: in Finland, for example, currently some 40% of the annual growth of wood is left unused. Since employing sustainable practices in forest management and use for a long time now, our forests are growing healthily, providing wood today more than ever before. In all of its operations, Metsä Group promotes sustainable forest management and use of wood.

In addition to taking care of the growth of wood and advancing the recreational use of forests, preserving biodiversity is ensured with the PEFC™ and FSC® forest certification schemes in our wood supply areas. Both schemes aim to manage the risks related to the well-being of forests as well as protect waters and other natural values. In Finland and Sweden, the practice of mapping the status of endangered species is exceptionally comprehensive.

Additionally, the renewal and biodiversity aspects are taken into account under the Finnish Forest Act, originating from 1886, that requires the renewal of the forest and comprehensive forest risk management. For example, buffer zones must be left by waterlines in planning and executing harvesting in order to mitigate the effects of nutrient leakages to waterbodies. The legislation also requires measures when procuring coniferous wood to restrain the potential damages caused by bark beetles for the growing stock.

Regular in-time thinning and careful planning of loggings are tools that can both prevent and minimise storm damage. The dense road network in our forests enables access to repair storm damages. Most of the forest roads are open for public and recreational use for all those who want to pick berries and mushrooms or merely hike in forests.

Pests pose a potential risk for forestry all around the world. The phytosanitary risk assessments are carried out by the authorities who regulate the plant health legislation and are responsible for controlling that no new pests are introduced. In 2015, it was announced that Asian long-horned beetles (Anoplophora glabripennis), which had most likely arrived in Finland in overseas transport some years earlier, had infested trees in southern Finland. Instant action was taken by the authorities to prevent further spreading and the situation is further observed.

ENSURING CONTINUITY WITH OPERATIONAL RISK MANAGEMENT

Risk management's purpose is to ensure continuity of operations in the short and long term. At Metsä Group, risk management covers all levels of the value chain from securing wood supply to production units and customer deliveries up to preparedness in the event of any possible product liability cases.

Enterprise risk management at Metsä Group consists of internal risk assessments through the value chain, cooperation with insurance companies as well as systematic loss prevention work to mitigate risks. For example, insurance companies carry out annual risk surveys at the production units, focusing on key property damage risks, e.g. caused by fire, as well as business interruption risks due to property damages and problems in supply of purchased raw materials. Major risks, such as fire, machine breakdowns and environmental damages, are covered by Group-wide insurance program.

FOCUSING ON TOPICS WITH THE GREATEST IMPACT

Sustainability at Metsä Group is driven by the strategy and a focused sustainability approach based on a comprehensive assessment of the most important sustainability topics from our business areas as well as our stakeholders' points of view.

These most significant, i.e. material, topics were defined together with our stakeholders in the materiality process in 2011 and its re-evaluation in 2014. In the assessments, we considered stakeholder expectations and the existing or potential impact to the success of our five business areas. The thorough analysis consisted of management and expert interviews, internal workshops as well as an in-depth evaluation of sustainability trends, risks and best practices. The final results and the implementation plan of the re-evaluation were approved by Metsä Group's Executive Management Team in 2014.

MATERIAL THEMES FROM A PRODUCT'S END-USE BACK TO THE FOREST

Metsä Group's materiality grid consists of twelve topics that are notably important for Metsä Group's businesses as well as for internal and external stakeholders with varying emphasis. Some, such as sustainable forest management and preserving biodiversity, have always been at the heart of Metsä's way of working. With new forest industry investments, such as ours in the bioproduct mill in central Finland, and in Husum, Sweden, we see these subjects attracting new attention from stakeholders such as customers and the NGOs. Increasing the amounts of wood used raises the questions of how much more wood can be utilised sustainably and how will increased harvesting affect biodiversity.

As these questions are vitally important to Metsä Group, we enhance open dialogue and cooperate with different parties to raise awareness of different aspects of sustainable forest management and the use of northern wood in our operating areas.

Our stakeholders are increasingly interested in other material topics such as new bioproducts or contributing to the circular economy with the efficient use of raw materials and production side streams as well as smart manufacturing practices. Resource efficiency, including material and energy efficiency, is also part of a wider global discussion relating to global challenges such as the need to replace fossil materials and fuels. The use of bioenergy plays a significant role here as well.

FOUR SUSTAINABILITY THEMES COVERING ALL OF OUR OPERATIONS

Based on the materiality analysis, our sustainability agenda has been structured under four themes. In this report, each theme is presented with its own colour. 'We offer sustainable choices' describes the issues related to our products and services; 'We bring the forest to you' discusses raw materials and the supply chain; 'We work for a better climate and environment' gathers the resource efficiency and emissions; and 'We create well-being' describes our stakeholder engagement. Read more about these four themes and the related targets as well as our performance starting on page 6.

TOP 12 MATERIAL TOPICS

1. Safety at work
2. Sustainable forest management
3. Product safety
4. Product and process innovation
5. Material and energy effiency
6. Bioenergy
7. Sustainable supply chain
8. Emission to water and air
9. Circular economy
10. New bioproducts
11. Supporting local livelihoods and society
12. Water use

Read more about these topics from colour-marked chapters in this report.

ADVOCACY BUILDS ON TRANSPARENCY

Metsä Group engages in dialogue with numerous stakeholders at the national, EU and international levels, and contributes to the development of regulatory frameworks. Our focus is on the key policy areas such as climate, energy and environmental policies.

We advocate a level playing field for forest-based industries - a situation where all relevant parties have an equal chance of succeeding. We advocate a free market mechanism to promote a sustainable bioeconomy. There should be no public interventions that distort competition in raw material markets. The ultimate aim is to guarantee the global competitiveness of the European forest industry to maintain and increase industrial production in Europe. This is beneficial not only for its economy but also for the climate, environment and the well-being of people.

Why? There are various reasons. Metsä Group, for example, operates in areas with vast natural resources and ensures that they are well managed. The forest certification level in our main wood procurement country, Finland, is about 80% of its entire forest area; in contrast, the share of certified forests in Asia and South America, for example, has only recently reached 2%. At present, certification covers about 10% of forests globally. As our production units are located in areas where there is abundant surface-water resources, our operations do not jeopardize these resources or threaten other uses of water in these areas. Our mills use the best available technology and are top notch in environmental efficiency.

Metsäliitto Cooperative is registered in the EU's Transparency Register, operated by the European Parliament and the European Commission, and has 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 processes, what interests are being pursued and how many resources are invested in these activities.

WE PROMOTE

- the sustainable use of forests to guarantee raw material for the needs of the bioeconomy
- the use of renewable raw materials
- the role of fresh fibre to keep the fibre circulation vital and to enable efficient recycling
- wood construction and wood products as carbon storage
- climate change mitigation by offering substitutes to fossil based products, as well as by improving energy efficiency and increasing bioenergy use
- resource efficiency
- the efficient utilization of production side streams and waste in circular economy
- recyclable and safe bioeconomy products
- product and food safety

Innovation as well as transport and trade policies are also important issues for us.

BIOPRODUCT MILL AT THE CENTRE OF MULTI-STAKEHOLDER DIALOGUE

In 2015, Metsä Group announced an investment in the first, next generation bioproduct mill in the world. Metsä Group engaged in an extensive multi-stakeholder dialogue at the national and EU levels to present the new bioproduct mill concept: its benefits and impacts on the economy, employment, wood supply, environmental impacts, as well as its extremely efficient use of resources and side streams.

One example of this was the Environmental Impact Assessment process for the new bioproduct mill, which increased dialogue and information flow between the authorities, decision makers and Metsä Fibre in Finland. Public stakeholder events were organised as part of the process and continued even after the permit was granted in March 2015.

ACTIVELY PROMOTING GLOBAL SUSTAINABILITY

In 2015, we continued as acting participants of the World Business Council for Sustainable Development (WBCSD) and the forest certification organisations PEFC™ and FSC®. One of the global highlights of the year was the 2015 United Nations Conference on Climate Change, COP 21, where a global climate agreement was achieved.

As a member of the World Business Council for Sustainable Development (WBCSD) and its Forest Solutions Group (FSG), Metsä Group was present in the COP21 that was held in Paris at the end of 2015. The conference agreed on a new international agreement on climate change, applicable to 195 countries, to limit the increases in global average temperature to 2°C compared to pre-industrial levels.

We also participated in the WBCSD Low Carbon Technology Partnership initiative (LCTPi) that was launched at the Paris conference. In the LCTPi, the global forest sector promotes solutions through the sustainable use of forests and the use of forest products as carbon sinks. The Intergovernmental Panel on Climate Change (IPCC) recommends in its Fourth Assessment Report: "In the long term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fibre or energy from the forest, will generate the largest sustained mitigation benefit." The LCTPi demonstrates that businesses are supporting the global solutions to mitigate climate change, and are taking action to help keep our world on the 2°C pathway.

In September, United Nations Member States adopted the Sustainable Development Goals as a part of a new sustainable development agenda. The main focus of these 17 goals is on eradicating poverty and promoting sustainability from the points of view of human well-being, economic growth, sustainability and the planet's carrying capacity. Metsä Group's strategy and sustainability targets are well aligned with the goals that aim at sustainable production and consumption, increasing the use and production of renewable energy and protecting the biodiversity of nature and forests.

FSC Licence Code FSC-C014476

WITH WWF FINLAND AND OTHER NGOS FOR BIODIVERSITY

Metsä Group has been an official partner of WWF Finland since 2011. During 2015, we partnered in a project that resulted in guidelines and training on the management of herb-rich forests and sunlit habitats in commercial forests. Read WWF Finland's Secretary General Liisa Rohweder's comment about the cooperation on page 43.

In partnership with WWF Finland, we also assembled experts and authorities with diverse backgrounds for a roundtable discussion promoting the bioeconomy. WWF also rates our performance in the Environmental Paper Company Index (EPCI). The Index looks at the environmental aspects of a company´s policies and targets, as well sustainable sourcing, the environmental performance of the overall production and transparency of reporting. It raises awareness on key environmental parameters to evaluate the forest, climate and the water footprint of pulp, board and tissue products. Read more about our improved scorings on page 53.

Metsä Group is in direct dialogue with various NGOs in Finland and globally, and also indirectly through its partner networks. The Finnish Forest Industries Federation engages with various environmental NGOs. These include for example the Finnish Association for Nature Conservation, WWF Finland, the Finnish Nature League, Birdlife, the Finnish Society for Nature and Environment, and Greenpeace. Metsä Group also meets NGOs as a member of the Finnish Forest Industries Environmental Committee. As a member of WBCSD, we cooperate with NGOs on a global level. These organisations include WWF

wbcsd

WBCSD

We regularly participate in the operations of the World Business Council for Sustainable Development (WBCSD) and are a member of its Forest Solutions Group (FSG). The FSG aims to promote sustainable forestry and expand the markets for responsible forest-based products through global cooperation. Its agenda focuses on promoting certification and other best practices in sustainable forest management, among other aspects. Its most important ways of working include open dialogue with key stakeholders. The FSG also supports global action to fight climate change.

UN GLOBAL COMPACT

Metsä Group has been committed to the UN Global Compact corporate responsibility initiative and its principles in the areas of human rights, labour, the environment and anti-corruption since 2003. The Group's Sustainability Principles are based on these widely accepted guidelines.

THE GLOBAL COMPACT
WE SUPPORT

CASE

THE BIOPRODUCT MILL SUPPORTS THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

The United Nations Sustainable Development Goals (SDGs) are a useful and concrete framework in reflecting Metsä Group's activities with broader global objectives. Metsä Group's major ongoing investment, the bioproduct mill in Äänekoski, Finland, will support many SDGs.

The bioproduct mill, a pioneer in sustainable industry, will cause no fossil CO_2 emissions since it will only use biobased fuels. Having a direct climate impact, the mill is an important bioenergy producer. As of 2017, it will increase the share of Finnish renewable energy by 2 percentage units.

In addition to pulp and bioenergy, a broad range of other bioproducts and biochemicals will be produced to support responsible consumption. 100% of the production side streams will be upgraded in a unique ecosystem of companies to increase resource efficiency and decrease dependence on fossil resources.

The mill will create 1,500 new jobs in Finland, for example in wood supply and logistics. The investment will significantly support the growth of the Finnish forest-based bioeconomy.

All the wood will come from sustainably managed forests with 100% traceability.

The new, mill with its state-of-the-art technology, will be world class in environmental efficiency regarding emissions to water and air, which will be reduced significantly. Odorous gases, for example, will be captured and converted back to chemicals needed in production. The innovation used is an important step towards a closed chemical cycle.

Operating by the world's richest water resources, the bioproduct mill will not diminish any other party's access to water.

International and the International Union for Conservation of Nature (IUCN).

In 2015, Metsä Board gained success in three different scorings by CDP, (formerly the Carbon Disclosure Project), the international non-profit organization providing a global system for companies and cities to measure, disclose, manage and share vital environmental information. Read more about it on page 26.

DEVELOPING FOREST CERTIFICATION GLOBALLY

Only around 10% of the world's forests are certified; however, 84% of the wood used by Metsä Group has international PEFC™ and FSC® forest certification. We promote forest certification in all of our areas of operation and work for its development internationally. We have a representative at the PEFC International Board of Directors and take part in the work of FSC International. Read more about forest certification and sustainable forest management on pages 42–45.

COLLABORATION WITH THE INDUSTRY ASSOCIATIONS

At the European level, Metsä Group participates in the work of the Confederation of European Paper Industries (CEPI). Metsä Group hold's the Chair for CEPI's Environment and Safety Committee, where we promote environmental policies, food and product safety, the role of renewable raw materials in the circular economy, and resource efficiency. We are also a core member of the Bio-based Industries Consortium, which promotes the bio-based industries and its Public Private Partnership.

In Finland, we are an active member of the Finnish Forest Industry Federation (FFIF). During the Finnish Parliament election campaign in spring 2015, the FFIF together with its members promoted issues important to forest industries. We take part in several national forest industry associations in the main operating countries as well as in several sector-specific associations at the national and European level. In addition, Metsä Group communicates its views directly to decision makers. We provide industry and trade associations as well as legislators and decision makers with information on the impacts of various policies and legislative initiatives on our operational environment.

Read more at metsagroup.com/sustainability

SPONSORSHIPS AND DONATIONS FOR THE WELL-BEING OF CHILDREN

According to Group-wide principles on sponsoring and donations, Metsä Group's sponsorship and donation strategy focuses mainly on sponsoring projects that aim to improve the well-being of children and young people. Support to political activities is subject to a separate approval by the Board of Directors. In 2015, Metsä Group did not give material support to political parties.

CASE

EXPLORING SUSTAINABILITY AS PART OF DAILY WORK FROM MILLS TO SALES

Sustainability is part of everything we do at Metsä Group. To raise awareness of our sustainability approach and the material topics as well as deepen the dialogue with our own personnel, who are one of our key stakeholder groups, we arranged various workshops in 2015. At Metsä Tissue alone they were organised for nearly 400 employees, at all mills as well as for sales and marketing personnel in different countries. Group-wide, the number of employees trained in 2015 was over a thousand.

The sustainability workshops aimed to help employees in different roles define the most relevant sustainability issues related to their own work and the products they work with. They also provided them with a better understanding as well as concrete tools required to discuss sustainability topics with their customers.

According to the insight of Metsä Tissue sales and marketing teams, over 90% of their customers and other stakeholders are willing to have or proactively ask for further information about our work regarding sustainability. The issues of increasing importance in customer relations include sustainable forest management, the renewability of wood, and our efforts in using resources ever more efficiently. Safety at work comes first at our mills, closely followed by our efforts to improve energy efficiency.

CASE

COOPERATION WITH ELECTRICITY COMPANIES SIGNIFICANTLY IMPROVES SAFETY AT WORK IN FORESTS

As a result of cooperation between Metsä Group and local electricity companies, Metsä Group's and its harvesting contractors' data and information systems are now showing the location of more than 130,000 kilometres of power lines. As 75% of Finland's land area is covered with forests, a large number of low-voltage lines are located in the forest areas and not usually indicated on basic maps.

The information about the location of the power lines benefits both employees working in the forest and for the society at large, as it significantly reduces the risk of hitting a power line during harvesting or transportation and therefore ensures a more reliable power supply. Around 1,000 harvesters and forwarders operate on Metsä Forest sites every day.

ETHICAL BUSINESS PRACTICES ACROSS THE GROUP

Code of Conduct is the basis for our ethical business practices. It is a compilation of good practices that all employees must apply in all situations. The Code encourages open discussion, a transparent flow of information and fairness in all situations.

There is also a separate Supplier Code of Conduct for our suppliers and our target is to have it included in all new or renewed contracts. Read more about our supplier management on pages 46–49.

Both the Code of Conduct and the Code of Conduct for Suppliers build on the ten universally recognized principles of the United Nations Global Compact, which Metsä Group is committed to. The Code is supplemented by Sustainability Principles, which set out the guidelines for Metsä Group's sustainability management.

SUSTAINABILITY GOVERNANCE STRUCTURE

METSÄLIITTO COOPERATIVE BOARD OF DIRECTORS

Highest body to approve the guiding policies as well as the outlines for sustainability. The annual Sustainability Report is presented to the Board.

METSÄ GROUP EXECUTIVE MANAGEMENT TEAM

Prepares guiding policies, monitors sustainability performance and annually revises the sustainability targets. Sets the key advocacy topics and follows their progress. Sustainability and Corporate Affairs has a permanent sponsor representation at the body.

SUSTAINABILITY STEERING TEAM

Steers sustainability at the operative business level, identifies opportunities and risks as well as approves the sustainability report's contents. Contains representatives from all the business areas as well as from the relevant corporate functions.

SUSTAINABILITY AND CORPORATE AFFAIRS FUNCTION

The Sustainability and Corporate Affairs function supports Metsä Group's businesses in gaining competitive advantage and promotes sustainable operations in Metsä Group throughout the value chain.

Employees are given training as part of their orientation and refresher cources are organized on needs-basis. Training all employees in the Code of Conduct is one of our Group-level sustainability targets. Reporting on behavior contrary to the Code of Conduct is everyone's responsibility and can be done by notifying one's supervisor, the Group's General Counsel or the Compliance Officer. All formal reports are handled through the Code of Conduct process and it can be also used for seeking advice.

HUMAN RIGHTS AND ANTI-CORRUPTION

As stated in the United Nations Guiding Principles on Business and Human Rights (UNGPs), corporations have the responsibility to respect human rights and act with due diligence, and with a good understanding of its existing and potential human rights impacts. Metsä Group acts according to this principle to "know and show" in issues related to human rights. Our Code of Conduct prohibits the use of forced and child labour, and outlines about working conditions and safety at work. We are also preparing a public statement on the UK Modern Slavery Act according to the law.

We work to identify the existing and potential risks related to our entire supply chain. Based on our current knowledge, we recognize that the potential risk for human rights abuses lies in our supplier chain rather than in our own operations; accordingly, we are continuously striving to mitigate this potential risk. In 2015, our focus has been on increase our knowledge of our suppliers. Credit control and procurement have taken a new screening tool into use to evaluate our suppliers. This tool can be used, for example, to ensure that none of our suppliers is on a sanction list due to human rights or other violations. We acknowledge the recent significant increase of refugees and other immigrants in Europe, which might increase the risk of forced labour, and pay special attention to it in our procurement processes. Our new sustainability target for 2016–2017 aims to ensure the sustainability of our main logistics flows of the Group. Read more about it on page 49.

As part of the Code of Conduct process, we also have effective grievance mechanisms in place to ensure access to remedy in any suspected cases of business-related abuses.

All forms of corruption and bribery are prohibited in the Code. We train our employees on anti-corruption, which is included in the Code of Conduct training. This year's additional training focused on sales and procurement personnel; anti-corruption was part of agreement policy and competition training. During the year, we finished our extensive consultations, already started in 2014, with agents acting on our behalf. Advice was given to our own employees in a few cases concerning gifts of unusual value. However, we discovered no confirmed incidents of corruption.

CONSULTATION BETWEEN EMPLOYEES AND MANAGEMENT

Cooperation within undertakings is one of our main ways to be in official dialogue with our employees and prevent any possible disputes beforehand. The cooperation is carried out in each of our business areas with the aim to develop the corporation's activities and provide employees with possibilities to influence the decisions that affect their employment, working conditions and position in the company. The main focus is on the local level where shop stewards represent wider groups of employees.

The multinational European Works Councils (EWCs) acting in our different business areas are important channels for internal communications and consultation between the corporation's management team and personnel. The EWC, comprising elected employee representatives, regularly discusses issues that concern the personnel.

GOVERNANCE CASES IN 2015

In March 2011, Metsähallitus, a state enterprise, filed a claim for damages at the District Court of Helsinki. It demanded that Metsäliitto Cooperative and two other forest industry companies jointly pay compensation for alleged damages caused by prohibited cooperation with regard to prices in the 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 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 December 2015, the District Court of Etelä-Savo deemed a Metsä Group employee to have committed an industrial safety offence. In the accident pieces of dilapidated roof in a warehouse collapsed. Nobody was injured, but the Court ordered the employee to pay day fines and Metsäliitto Cooperative was additionally ordered to pay corporate fines of EUR 100,000. The judgement is under appeal.

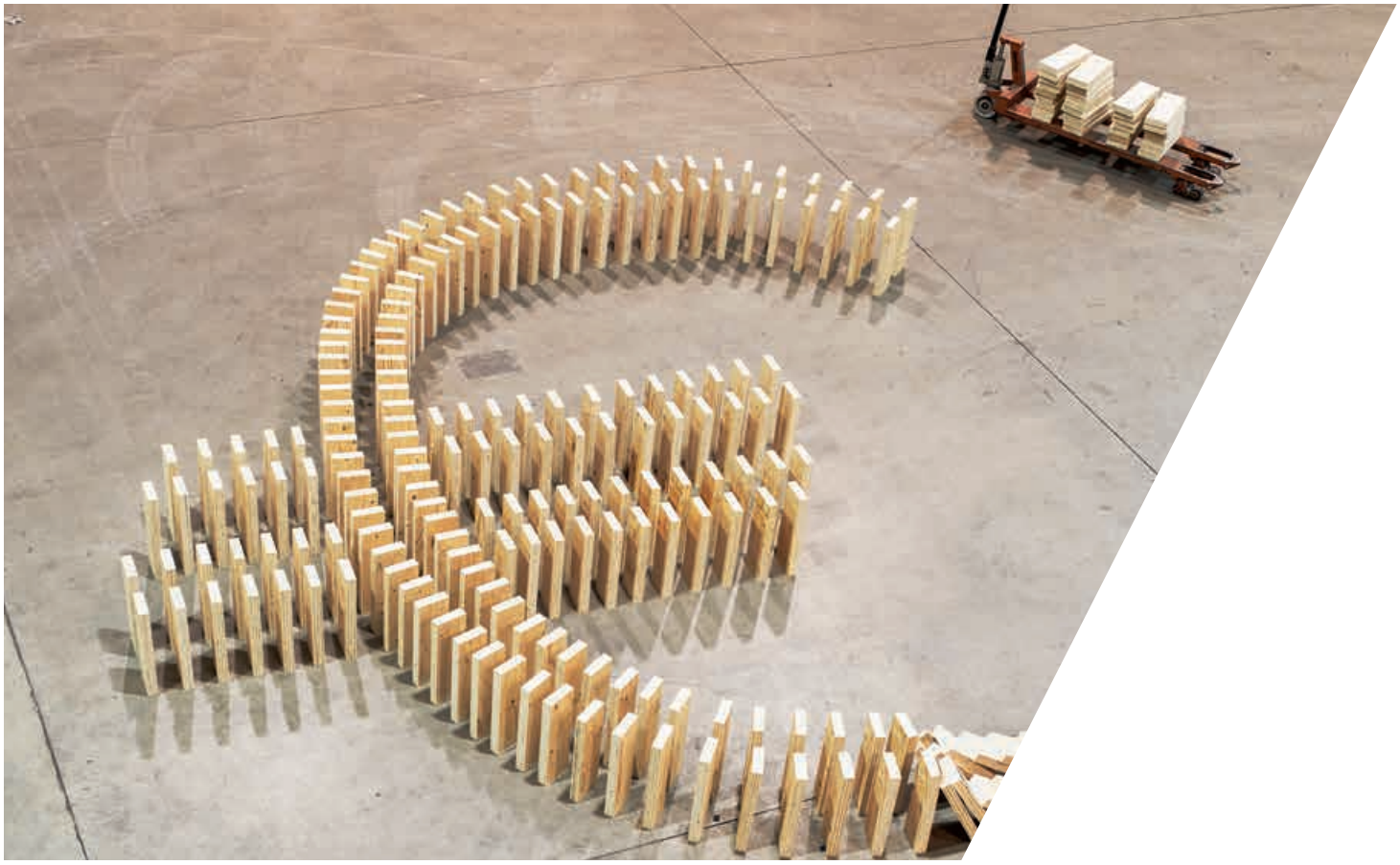
CASE

NEW STAKEHOLDER DIALOGUE IN SOCIAL MEDIA

Metsä Group introduced new channels for stakeholder communications in 2015. We are now active on Twitter and LinkedIn, and have both Facebook and Instagram profiles. Our employees are also encouraged to participate in dialogue based on their own fields of expertise. Being active in social media increases the transparency of our operations and provides good opportunities to discuss issues that are important to our stakeholders. We want to be known as a strong and responsible thought leader in the forest industry.

Active presence in social media has opened doors for new dialogues with our stakeholders and the concerns brought to our attention by them. In May 2015, a discussion about gender equality in working life stormed in social media. A female technology student, who applied for asummer job at a forest industry company in Finland, posted her experience on Facebook. The person felt that she was mistreated due to her gender as she inquired about the summer position over the phone.

Over the next days, the Facebook post with hashtag #vaikkaolennainen ("#even though I'm a woman") was shared 13,000 times and acknowledged by the online and printed news media as well. Although the student never specified the company by name, Metsä Group investigated the case internally and publicly apologized for one person's insensitive comments at one of its mills. It was clearly stated that the company's policy is to provide equal opportunities for all job applicants. Metsä Group's openness was also positively recognized in the media.



TRANSPARENCY IN TAX MANAGEMENT

Metsä Group Tax Policy, approved by the Board of Directors, was established to govern the main tax principles applied in the Group. It also helps to recognize and control relevant tax risks.

According to the policy, all tax decisions made within Metsä Group and all other measures and actions that affect taxation must be legal and in accordance with the applicable tax laws and regulations. All tax decisions are based on sound commercial reasons and proactively support the goals of the Group's business activities. Corporate structures and other arrangements created only for tax reasons are not implemented.

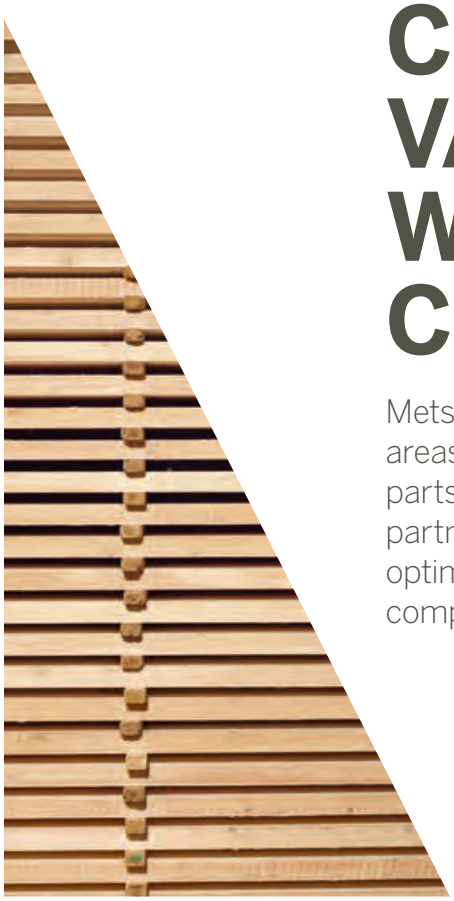
All transfer prices between Group companies, relating to both the sale of goods and services, shall be set on an arm's length basis following the relevant legislation as well as the Organisation for Economic Co-operation and Development (OECD) Transfer Pricing Guidelines. Costs and income are allocated to the company they belong to. Profits or losses can only be transferred from one unit to another by applying the methods allowed by the tax laws and rules in the countries concerned. All tax decisions and other actions affecting taxation are properly documented.

Metsä Group is committed to full tax compliance and a good working relationship with the tax authorities in various jurisdictions. Taxes are reported, collected and paid in a timely manner according to the laws and regulations in each jurisdiction where Metsä Group operates.

GROUP-LEVEL TAX MANAGEMENT

The management of the tax affairs within Metsä Group is conducted by the Group-level tax team in close cooperation with the management of the Group companies. The tax team monitors tax risks involved in business transactions and advises the Group companies in implementing the tax principles in their daily business as well as in business restructurings. The use of external tax advisors is controlled by the tax team to ensure appropriate and adequate planning and structures, which are in accordance with the tax principles of Metsä Group.

Documentation requirements, for instance country-by-country tax reporting, will significantly increase the administrative burden of tax management in the future. Tax team closely follows the developments in both international and domestic tax legislation and implements the relevant changes in business structures and transactions as well in tax reporting within Metsä Group.

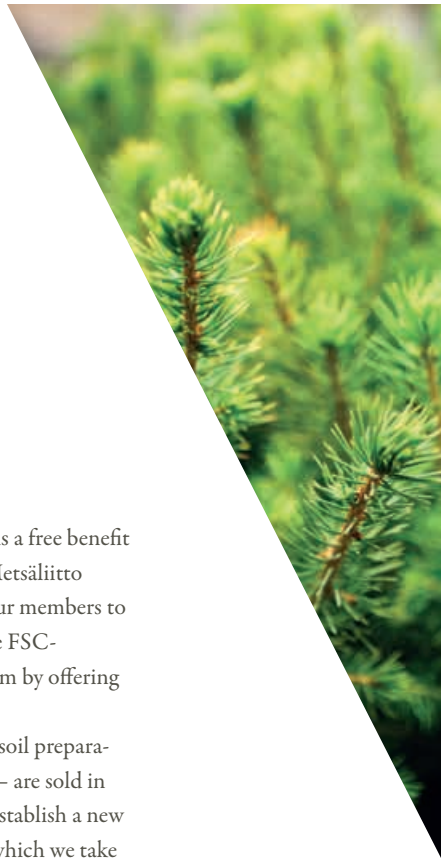


CREATING VALUE WITH OUR CUSTOMERS

Metsä Group comprises five business areas that each represent different parts of our unique value chain. We partner with our customers to discover optimal solutions and achieve increased competitive advantage.

METSÄ FOREST

SERVICES TO SUPPORT SUSTAINABLE FORESTRY



Metsä Forest serves both forest owners and the wood refining industry. We are the market leader in wood trade and energy wood in Finland.

We supply all the wood Metsä Group uses and provide the owner-members of Metsä Group's parent company, Metsäliitto Cooperative, as well as other forest owners, with extensive services in wood trade and in forest and nature management.

We can trace 100% of the wood we use back to the forest stand level and know that all the wood we purchase originates from sustainably managed forests. Our forest management is based on extensive and internationally high-quality forest data. All our owner-members have their own designated forest specialist who helps them in the management of their forest property. Forest management plans are tailored to combine the forest owner's own goals with sustainable and profitable forestry. We also map valuable nature habitats without cost for our owner-members.

Membership in PEFC™ is a free benefit for the owner-members of Metsäliitto Cooperative. We also help our members to join the FSC® (Licence Code FSC-C014476) certification system by offering FSC group certification.

Regeneration services – soil preparation, seedlings and planting – are sold in order to help forest owners establish a new forest. We offer a service in which we take responsibility for the new stand until it is well-established.

The e-services we provide for our owner-members are the most advanced in the market. They ensure that both they and our forest professionals always have round-the-clock access to up-to-date forest data at the office, in the forest and at home.

CUSTOMER'S VIEW

FSC GROUP CERTIFICATION FOR METSÄ FOREST CUSTOMERS

Helsinki-based **Päivi Renman** and her siblings inherited a forest area in eastern Finland in 2008. They opted for a turnkey agreement with Metsä Group for the management of their forest. "We want to take good care of our forest but we lack the expertise ourselves," says Renman.

As part of the service package, their forest was included in the Metsä Group FSC group certificate. Metsä Group employees took care of the group certification procedures on behalf of Renman and her siblings, who were also given a presentation about the FSC compliant management of their forest. In accordance with the FSC criteria, the certificate does not cover the areas surrounding their summer cottage and the nearby lake – areas where Renman and her siblings love to pick berries.

"As forest owners, we are committed to complying with the FSC criteria, while Metsä Group's professionals are responsible for the actual forest management," says Renman.

Joining the certification through Metsä Group was easy, and there is high demand for FSC certified wood in the market. "With FSC certification, I'm expecting an even more consistent demand for our wood."

METSÄ WOOD

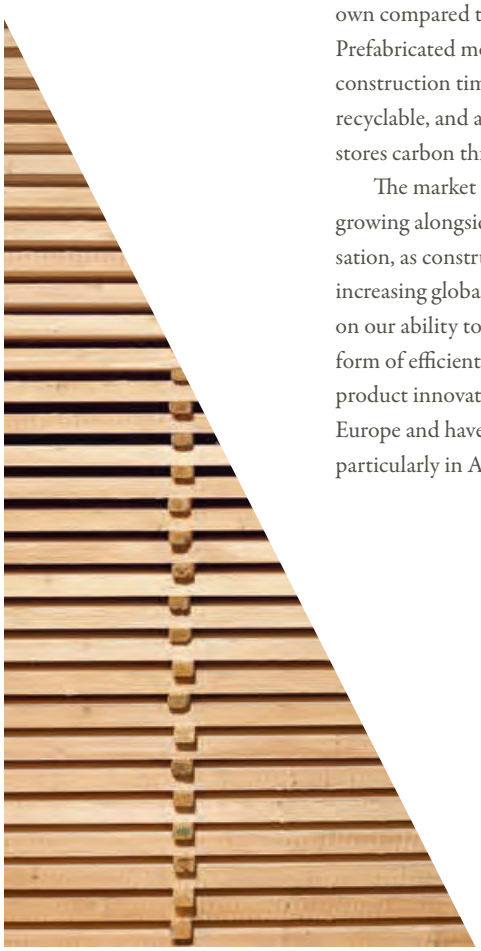
WOOD PRODUCTS FROM NORTHERN WOOD

Metsä Wood offers competitive wood products for construction, industrial customers and distributor partners. We manufacture products from northern wood, a sustainable raw material of premium quality.

Our key strength is industrial efficiency delivered through commitment, reliability and quality. We use 100% traceable wood from northern forests, and our facilities are surrounded by these forests, which ensures a reliable supply.

The northern wood has multiple excellent properties. As a building material, it is lightweight, fast to build with, and sustainable. The strength-to-weight ratio of wood is in a class of its own compared to other building materials. Prefabricated modular wood elements also shorten construction time significantly. Wood products are recyclable, and as a renewable raw material wood stores carbon throughout its life cycle.

The market for wood products is continuously growing alongside population growth and urbanisation, as construction and transport volumes are increasing globally. Metsä Wood's success is based on our ability to create value for customers in the form of efficient ways of operating and new product innovations. We hold a strong position in Europe and have ambitious growth targets, particularly in Asia and the United States.



CUSTOMER'S VIEW

METSÄ WOOD AND SAINT-GOBAIN BUILDING DISTRIBUTION – FOR A SUSTAINABLE FUTURE TOGETHER

Saint-Gobain Building Distribution is Europe's leading building materials merchant. With 63,000 employees in 27 countries, the Building Distribution Sector has a solid network of generalist and specialist trading brands serving the renovation, new building and home improvement markets. Cooperation between Saint-Gobain and Metsä Wood expands over several countries in Europe.

As a partner of Saint-Gobain, Metsä Wood has committed to their responsible purchasing and environmental timber policies. For Saint-Gobain this is a strict requirement in selecting partners.

"We wish to partner only with companies who are committed to sustainability through biodiversity, legality and promotion of certified and responsibly grown and harvested timber", says **John Groen**, Procurement & Marketing Manager Timber & Panels at Saint-Gobain Building Distribution. "Sustainable forest management and 100% traceability of wood are a prerequisite to us."

Saint-Gobain recognises Metsä Wood as a model supplier with regards to sustainability. "This is supported by the findings in our Responsible Together Tool, which records traces the commitments of the suppliers in sustainability. We are aligned with Metsä Wood in our commitment to sustainability."

METSÄ FIBRE

INVESTING IN A FOREST-BASED BIOECONOMY

Metsä Fibre is a world-leading producer of bioproducts and bioenergy. The main brand is Botnia. We are strengthening our position in the softwood pulp market by investing in a new bioproduct mill in Äänekoski.

The products – sustainably and cost-efficiently produced softwood and birch pulp – are specially developed for the production of high-quality tissue and writing papers, specialty products and board. The pulps are made from a completely renewable raw material. With four pulp mills in Finland, we are also a significant producer of bioenergy.

Metsä Fibre is currently building the first, next-generation bioproduct mill in the world in Äänekoski, central Finland. In addition to high-quality pulp, it will produce a broad range of traditional bioproducts such as tall oil, turpentine, bioelectricity and wood fuel. Potential new products created from production side streams include lignin products, producer gas, sulphuric acid, textile fibres, biocomposites, fertilizers and biogas.

The mill is designed to allow for a broad and diverse range of products manufactured by a unique bioeconomy ecosystem of companies.

Operating in the same mill integrate with Metsä Fibre's existing Äänekoski mill, the American company CP Kelco is already partnering with Metsä Fibre in Äänekoski. What do they have to say about the current partnership and the planned mill?

CUSTOMER'S VIEW

CP KELCO AND METSÄ FIBRE – PARTNERS IN THE BIOECONOMY

CP Kelco is the innovation leader in the modification of cellulose-based raw materials. With bioproducts derived from natural, renewable raw materials, CP Kelco is an excellent partner for Metsä Fibre.

"Cellulose is one of the key raw materials for the production of our bioproducts and Metsä Fibre is one of our key raw material suppliers. Reliable supplies of cellulose with consistent quality and on-time deliveries are critical for our business," says

Oliver Ruppert, Technology & Capabilities Senior Manager CMC at CP Kelco. "It is also important that the key raw material is renewable in order to have an aligned approach across the entire value chain."

CP Kelco's CMC (carboxymethyl cellulose) products, manufactured from celluloses and supplied to CP Kelco by Metsä Fibre and other suppliers, are used in a wide variety of applications. These include paper making, detergents as well as several food and beverage applications such as ice cream. CMC works as a thickener, viscosity modifier and emulsion stabilizer.

Oliver Ruppert has closely followed the planning and building of the new bioproduct mill: "Metsä Fibre's sustainability mindset is very strong and the new investment into the bioproduct mill is a great example where multiple elements are combined to become a world class sustainability company."

METSÄ BOARD
PREMIUM PAPERBOARDS SUSTAINABLY

Metsä Board is a leading European producer of folding boxboards and white linerboards made from fresh forest fibre. Our lightweight paperboards are developed as the perfect fit for consumer goods, retail-ready and food service packaging.

The pure fresh forest fibres Metsä Board uses in its products are a renewable resource, traceable to their origin in northern sustainably managed forests and recyclable after use.

In 2015, Metsä Board gained success in three different scorings by CDP, (formerly the Carbon Disclosure Project), the international non-profit organization providing a global system for companies and cities to measure, disclose, manage and share vital environmental information.

Scoring 100/100, we were identified as a Nordic leader for the quality of the climate change related information it discloses to investors and the global marketplace, and awarded a position on the Nordic Disclosure Leadership Index (CDLI). The position was earned by disclosing high quality carbon emissions and energy data through CDP's climate change programme.

Secondly, Metsä Board achieved leadership status in the materials sector of the CDP's Forest programme. Of the 180 global respondents for CDP's forests information request, only nine were awarded leadership status.

Last but not least, Metsä Board gained A-list status for its actions to improve water security and better manage this shared resource. It was the only forest industry company and the only European company on the A-list.

CUSTOMER'S VIEW

METSÄ BOARD – BEST PERFORMER AMONG L'ORÉAL'S PACKAGING COMPONENTS SUPPLIERS

At the end of 2013, **L'Oréal** presented its commitments with regard to Sustainable Development by 2020 through the "Sharing Beauty With All" programme.

"Suppliers are an integral part of the environmental, social and ethical commitments made by L'Oréal," says **Mathieu Dufour**, Purchasing Category Director – Printing & Specialties at L'Oréal. "The Group's objective is that by 2020, 100% of L'Oréal's strategic suppliers will be involved in our sustainability programme." Currently its suppliers' activities represent 28% of L'Oréal's carbon emissions.

Consequently, since 2009, L'Oréal has involved its suppliers in measuring and reducing its carbon footprint by asking them to work with the CDP in the CDP Supply Chain programme.

Metsä Board has been participating in the CDP supply chain programme since 2013, improving their scoring year on year to reach 100 B in 2015. "Among our Packaging Components suppliers, Metsä Board is the best performer for 2015. It demonstrates once again Metsä Board's action and commitment to tackle climate change."

CDP™ CLIMATE DISCLOSURE LEADER 2015

METSÄ TISSUE

COMFORT AND HYGIENE

Metsä Tissue offers tissue paper products to households and professionals in Europe and is the world's leading supplier of baking and cooking papers. Our main brands are Lambi, Serla, Mola, Tento, Katrin and SAGA.

Our Katrin products and solutions bring well-being and functionality to public washrooms, hotels, schools, restaurants, industrial workplaces and healthcare environments. The Katrin range includes tissue hygiene products, professional wiping and cleaning towels, napkins, compatible dispensers and supplementary accessories.

Our customers and partners gain cumulative benefits with Katrin: we ensure that environmental, social and economic impacts are in perfect balance. According to research[1)], drying your hands with a paper tissue is the most hygienic way as it decreases the amount of bacteria on the finger pads by up to 76% and on the palms by up to 77%. When comparing to drying hands with a warm air dryer the total number of bacteria was found to increase on average on the finger pads by 194% and on the palms by 254%. All Katrin tissue products are manufactured in our mills in the Nordic countries and in continental Europe and they all are labelled with the Nordic Ecolabel (Nordic Swan) or/and the EU Ecolabel.

1) Source: University of Westminster: Changes in the number of different types of bacteria on the hands before and after drying using paper towel, continuous cloth roller towel, warm air dryer and jet air dryer (2010).

CUSTOMER'S VIEW

SOL AND METSÄ TISSUE – HOLISTIC APPROACH FOR CUSTOMER SATISFACTION AND SUSTAINABILITY

"**SOL** is a Finnish family-owned service industry business and for us it is important to work with reliable Finnish partners such as Metsä Tissue," says **Camilla Ottosson**, Director at SOL Palvelut. "Metsä Tissue's Katrin products, such as papers and dispensers, are of excellent quality and therefore highly appreciated by our customers."

"They also fit our desire to offer services that reduce environmental impacts: the dispensers optimize paper consumption according to the varying needs of different locations and are designed to have a long life span. Using the papers, which have been awarded environmental labels, has significant hygiene benefits."

But it is more than just the products that matter. As a multiservice company with cleaning, facility and property services, SOL offers a service concept that aims to make the customers' lives easier. SOL's and Metsä Tissue's long standing partnership builds on this holistic, customer-focused approach. "Together, we work closely with our customers, visiting their premises and providing them with expert advice on which products and services best suit the end-users according to their requirements, such as an office with many different users," explains Ottosson. "For both of us, our priority is a satisfied and loyal customer."

CASE

METSÄ FIBRE PERSONNEL BUILDING THE MILLS OF THE FUTURE

Metsä Fibre's "Mills of the Future" is a new operating model that has been designed by the personnel and is based on a flat organisation, self-steering teams and shared leadership. Team members take joint responsibility for their work and share tasks among the team. They can make independent decisions and have the opportunity to increase their responsibilities and make the most of their skills.

The new operating model was outlined last year during interviews with Metsä Fibre employees and workshops with over 200 attendees. A pilot project started in the beginning of 2016. "Mills of the Future" is one of Metsä Group's ways of remaining competitive and staying one step ahead: as the most preferred partner, supplier and employer.

Metsä Group follows a common principle for remuneration based on the position evaluation, employee's competence and performance, and their development. Remuneration for all positions complies with the legislation and collective agreements of the country in question. In Metsä Group's operating countries, there is a moderate distribution in both salary increases and median salaries at different organisational levels, and all employees within a position evaluation level receive equal compensation. Common criteria is used in salary reviews to ensure a fair and competitive level of compensation.

METSÄ GROUP'S KEY PERSONNEL DATA	2015	2014	2013	2012	2011
Number of employees [1]	9,599	10,410	10,741	11,447	12,525
Share of permanent employees, % [2]	93.5	94.1	94.3	94.0	94.2
Average age, years [2]	44.6	44.5	44.4	44.1	43.8
Average years served, years [2]	16.7	16.8	16.7	16.3	15.6
Employee turnover, % [2] [3]	7.9	7.4	9.5	12.0	7.8
Ratio between men/women, % [2]	78/22	79/21	78/22	78/22	79/21
Share of women in management, % [4]	15.8	15.0	14.3	13.3	12.9

1) Full-time equivalent (FTE) on 31 December.
2) The figures covered 99% of Metsä Group employees in 2011–2015.
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.

REMUNERATION DATA Compensation per production country*)	Finland	Germany	Slovakia	UK	Poland	Russia	Sweden
Ratio of the annual total compensation for the organisation's highest paid individuals (highest one per cent) to the median annual total compensation	5.1	3.4	5.2	4.0	8.9	8.2	3.2
Ratio of the percentage increase of highest individual salaries (highest one per cent) to the average percentage increase	0.9	0.2	1.0	0.2	0.2	2.1	1.2
Ratio of basic salary and remuneration of women to men, based on comparable average job grades indexes	1.0	0.9	1.0	0.9	1.0	0.9	0.9

* Including 93% of white-collar personnel

DIVERSE EMPLOYER

Metsä Group offers a diverse range of opportunities for professionals in different fields. We increasingly offer individual development paths.

METSÄ GROUP HAS

9,599

EMPLOYEES IN

26 COUNTRIES

PERSONNEL BY COUNTRY
% AS FTE, ON 31 DEC 2015

Finland	53
Germany	12
Sweden	14
United Kingdom	5
Russia	4
Poland	5
Slovakia	3
Belgium	1
Rest of Europe	1
Baltic countries	1
Other countries	1

THE GROUP'S PERSONNEL BY BUSINESS AREA
% AS FTE, ON 31 DEC 2015

Metsä Tissue	29
Metsä Board	27
Metsä Fibre	9
Metsä Wood	21
Metsä Forest	9
Group functions	5

In 2015, Metsä Group's human resources management focused on supporting business areas and Group Services with a wide range of practical development activities, strengthening the company's employer image and boosting internal job rotation. Fair treatment, equality and responsible leadership are key elements in our organisational culture. Each Metsä Group employee has a job description and clear targets, possibilities for continuous development through training and learning, constructive feedback, and a safe working environment. We consider our employees' work-life balance at every stage of their career.

FOCUSED HUMAN RESOURCES DEVELOPMENT

Renewal is one of the Group's values and therefore a key aspect of our operations – we encourage everyone to develop their skills. Renewal is also essential because a significant number of our employees will be retiring over the coming years. We offer a variety of development and leadership programmes, as well as training tailored to specific team and individual needs.

One of our leadership programmes, Learn-Grow-Lead (LGL), plays an important role in training our supervisors. In total 275 supervisors took LGL training in 2015. In Finland, Qualification in Management and Leaderhip training is offered to key management. In 2015, nearly 24,000 training days were held (2014: 10,107), with 3,001 employees in Finland and 2,335 abroad participating in training offered by the Group.

An Employee's booklet was developed together with employees from all business areas and locations to accompany the Manager's Notebook, which was published last year. The Employee project aims at supporting a good working community based on our values and shows that organisational development is a joint effort.

TRAINING PROFESSIONALS TO KNOW AND SHOW THEIR STRENGTHS

Our specialist training focuses on effectiveness and well-being through, for example, improving prioritising skills. Other key themes have included self-management and employees recognising their own personal strengths and skills. This year, we also offered special courses on financial administration and purchasing. On-the-job learning is supported at Metsä Board and Metsä Tissue with mentoring programs where expertise and experiences are shared in order to develop personal competences.

All Metsä Group employees are entitled to a Personal Development Appraisal (PDA) discussion to discuss their work situation, performance and to plan their personal development activities. We follow the same PDA practices for all employees in Finland, and have been continuing the harmonisation of our development discussion practices in, for example, Poland, Germany and Slovakia. Some 92% of our employees were involved in a PDA in 2015.

THE RIGHT TO PARTICIPATE AND UNIONIZE

In Metsä Group's Sustainability Principles, we secure our personnel's freedom to form unions and the right to negotiate representative collective agreements. In total 77% of all of our employees fall within the scope of collective agreements, and a shop steward system is in place in many of our operating countries. We apply each country's local legislation and regulations on collective agreements and working conditions.

In 2014–2015, our total number of personnel fell by 7.8% largely due to structural changes at Metsä Wood and the sale of Metsä Board's Gohrsmühle mill in Germany. In total, 1,923 people were affected by the restructuing of business, of whom 279 were made redundant and 423 were temporarily laid off. We support the redundant employees in finding new positions. We recruited 421 new employees during the year.

INVESTING IN PREVENTIVE SAFETY

Everyone has the right to work in a safe and healthy working environment. We are proud to say that we are on the right track in improving safety at work: lost-time accident frequency has declined by 45% in Metsä Group since 2010.

Our two Group-wide sustainability targets related to safety and well-being at work are to reduce annual lost-time accidents (LTA1) by 10% and the sickness absence rate to below 3%. The long-term goal is zero accidents.

Safety at work, as lost-time accident frequency, has improved Group-wide by 15% since 2014. In 2015, the rate of lost time accidents was 9.5 (2014: 11.2) per one million working hours. Positive results have been achieved especially in Metsä Wood, where considerable investments in improving safety over the past few years have been made. This resulted in an LTA1 improvement of 47% since 2014. In addition to the lost-time accident frequency rate, the figure representing accidents at work that cause one or several days absence from work per a million worked hours, all occurred accidents and near misses are also carefully monitored.

Our target is to reduce sickness absenteeism below 3%. This has proved to be a challenging target, but slight improvements have been made and Metsä Group figures are well below the industry average. The rate of absenteeism due to sickness was 3.9%.

SAFETY OBSERVATIONS AND MANAGEMENT

The ambitious zero accident target covers both our own personnel and sub-contractors working in our mills. Both of them receive induction in safe working practices when working at any of our mills. We have been able to achieve good results with the help of a comprehensive safety management system based on preventive measures and an effective system for registering safety observations. However, there was one fatal incident at our mill premises in Stotzheim, Germany, where one external employee was fatally injured.

The personnel's safety observations play a significant role in our preventive safety efforts. During our regular safety talks, we consider any potential safety risks and how to avoid them before work even begins. Experiences of safety talks held in all our business areas have been extremely positive. In all safety training,

we remind people that safety depends on attitude – something that everyone is responsible for.

Our safety efforts cover many different aspects of safety. For example, mills must have a sufficient number of competent people who are familiar with the rules and regulations on the safe handling of chemicals. Our fire and rescue teams actively cooperate with local fire and rescue authorities as well as insurance companies.

HEALTHY AND SATISFIED AT WORK

Well-being at work is the foundation for success, both for individual employees and the company as a whole. It is always a personal experience consisting of many things: a meaningful job, a well-functioning organisation, and a positive feeling about coming to work. At a personal level, well-being is affected by whether you are motivated and have sufficient expertise to perform your tasks. It is also affected by health, work-life balance, and the stage of your life.

Good management and supervisory work creates the foundation for well-being at work and a healthy working community. Our supervisors have access to tools and training to help them identify any potential threats to their employees' well-being at work. Shared practices and systems support management and job satisfaction. People are able to succeed when things are in order and the common guidelines are clear.

Metsä Group promotes and maintains well-being and working capacity with a system based on preventive measures. We aim to identify threats to work capacity at an early stage and to take the right measures early enough. To achieve this we use a shared, Group-wide model. This model consists of early support, evaluating working capacity in relation to the job requirements, and drawing up a personal working capacity plan that considers ways to support the employee's future career. We seek to create a caring and trusting working atmosphere, and ensure that all employees can be treated equally.

Organisation functionality and job satisfaction are monitored on an annual basis with an Organisation Functionality Survey and a variety of other personnel surveys. In 2015, the organisation functionality stood at a good level, with an overall Group average of 8.2 (2014: 8.1) on a scale of 4–10.

CASE

1,000 DAYS WITHOUT ACCIDENTS AT METSÄ TISSUE'S DÜREN MILL IN GERMANY

Metsä Tissue's Düren mill reached a magical 1,000 days without accidents in October 2015. This is the best ever achievement in terms of accident-free days in Metsä Tissue. According to Mill Manager **Michael Barth**, operating a mill for 1,000 days without any accidents is achieved by emphasizing safety every day. Morning meetings start with safety issues and all potential safety risks are dealt with quickly or immediate preventive measures are taken. "Everyday safety is all about everyone taking care of themselves and each other," Barth says.

What is the key lesson that you could share with others to help other mills to reach similar figures?" The mill management believes that being aware of potential risks is the key point. People have to be trained in that, and everyone should be able to communicate risks. Making the working environment as safe as possible opens the road to a long period without accidents."

CASE

GREAT IMPROVEMENT IN SAFETY AT METSÄ WOOD'S PLYWOOD AND KERTO® LVL MILLS

Metsä Wood's plywood and Kerto® LVL mills employ about 1,000 people in Finland. The mills have shown great progress in improving employees' safety at work, with 54% lower LTA1 fr. than in 2014. Safety has been the key focus area of 2015, and is highlighted in many ways. The overall aim, creating more transparency and changing attitudes, has been backed with very concrete measures: for example, every meeting at the mills starts with safety issues, and all employees must now wear safety glasses. Another aspect under development has been the tidiness of the mill. A clean working environment has a positive effect on job satisfaction as well as everyday safety.

SAFETY AND WELL-BEING DATA	2015	2014	2013	2012	2011
Sickness absenteeism, % [1]	3.9	3.7	3.8	3.9	4.2
Work accident absenteeism, % [1]	0.20	0.22	0.25	0.22	0.22
Accident rate [2]	9.5	11.2	13.2	15.7	18.2
Registered occupational diseases, no. of cases [3]	6	7	3	3	5
Work related fatalities, no. of cases	1 [4]	0	1	1	1

1) Per cent of theoretical working time. Change in calculation 2015. Years 2011–2014 restated according to the new calculation rule.
2) Lost time accident 1 frequency rate. Accidents at work resulting to at least one day sickleave per million worked hours.
3) Change in calculation 2015. Years 2011–2014 restated according to the new calculation rule.
4) External employee.

WELL-BEING INDICATORS BY BUSINESS AREA 2015	Metsä Tissue	Metsä Board	Metsä Fibre	Metsä Wood	Metsä Forest	Metsä Group
Organisational functionality research index	8.3	8.2	8.2	8.0	8.3	8.2
Organisational functionality research response rate, % [1]	79.8	80.7	84.5	76.7	90.1	81.2
Sickness absenteeism, % [2]	4.7	4.2	4.1	3.6	1.7	3.9
Work accident absenteeism, % [2]	0.2	0.2	0.2	0.2	0.0	0.2
Accident rate [3]	10.7	11.1	7.9	9.7	5.2	9.5
Registered occupational diseases, no. of cases [4]	0	3	1	2	0	6
Work related fatalities, no. of cases	1 [5]	0	0	0	0	1

1) Organisational functionality research covered 92% of Metsä Group's employees in 2015 and 100% in 2014.
2) Per cent of theoretical working time. Change in calculation 2015. 2011–2014 restated according to the new calculation rule.
3) Lost time accident 1 frequency rate. Accidents at work resulting to at least one day sickleave per million worked hours.
4) Change in calculation 2015.
5) External employee.

FRESH FOREST FIBRE IS SAFE, STRONG AND LIGHTWEIGHT

PRODUCTS AND SERVICES

Products made from renewable raw materials are in high demand, as competition for natural resources is tight. Our business operations cover the entire value chain for wood. We focus on tissue and cooking papers, paperboard, pulp, wood products, and wood supply and forest services. Our strong wood and fibre expertise is concentrated in fields where we have a clear competitive advantage and a bright future.

QUALITY FROM A RENEWABLE RAW MATERIAL

page 34

NO COMPROMISE ON PRODUCT SAFETY

page 36

NEW SOLUTIONS FOR THE BIOECONOMY

page 38

QUALITY FROM A RENEWABLE RAW MATERIAL

The main raw material of our products is renewable wood, originating from sustainably managed northern forests. We are leading the way in its use: producing wood products, pulp, fresh fibre paperboard as well as tissue and cooking papers. We use every part of the tree as efficiently as possible, which represents sustainability at its best.

OUR PRODUCTS AND SERVICES	BENEFITS TO OUR CUSTOMERS
We are a pioneer in the sustainable management of forest assets as well as providing services to forest owners.	The origin of our certified or controlled wood is always known. The wood we use comes from sustainably managed forests. This guarantees the end product's sustainability.
Wood products are manufactured efficiently by using less energy and producing less waste.	Wood products are strong, light and consistent in appearance, and store carbon during their entire life time.
Fresh fibre softwood pulp of the highest quality is made using the best and latest available technology, with a strong environmental performance.	Fresh fibre pulp is naturally pure and therefore a safe raw material for products such as paperboards, tissue and cooking papers. In addition to pulp which is a biomaterial, we provide bioenergy, biochemicals and fertilisers generated as by-products at our pulp mills.
Lightweight paperboards reduce environmental impacts as their manufacturing consumes less energy, water and raw material compared to competing grades.	Using Metsä Board's sustainable paperboards reduces the end product's environmental impact throughout their life cycle as the boards are more material efficient and produce less waste.
Tissue and cooking papers are designed to improve health, hygiene and wellbeing. They are produced close to the markets, which mean short transport distances.	Tissue papers bring comfort and improve hygiene. Using biodegradable cooking papers can reduce food waste in professional kitchens by up to 50%. They also save energy, water and detergents by making dishwashing easier.

RECYCLING, RE-USE AND RECOVERY

All products produced by Metsä Group are recyclable.[1]

Paper and board is the most recycled packaging material in Europe with a rate of 81%.[2] Not all paper and paperboard can be collected, due to for example non-recoverable products such as tissue and interior decoration materials.

Fresh fibre is strong, lightweight and safe, and plays a key role in keeping the fibre loop circulating. Without it, all fibre would run out in about half a year. Each recycle lap deteriorates the quality of the fibre, which is currently used 3.5 times on average.

1) Food Service boards can be recycled, if the right facilities exist in a local area. Barrier coated paperboards can also be used for energy recovery by incineration.
2) Source: Confederation of Paper Industries (CEPI) 2011 data.

CASE

SUSTAINABILITY AWARD TO THE FAZER ALKU CEREAL BOX

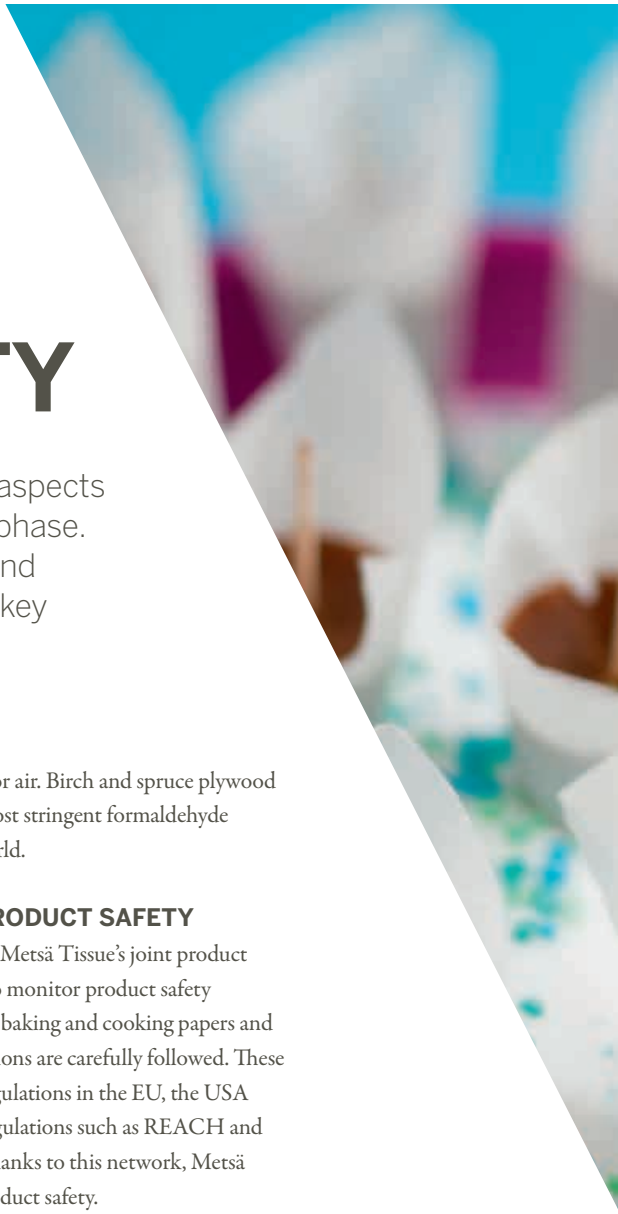
Fazer Alku New Mill's cereal box won the Sustainability Award in the international 2015 Pro Carton ECMA Awards. The box was recognised for its design and convenience as well as the high cartonboard ratio that makes the pack ideal for recycling. The award takes on extra significance, as this time the focus was on the unique sustainability of cartonboard. The Alku cereal box is made of Metsä Board's Simcote folding boxboard.

CASE

SERLA LAUNCHES "FUTURE PAPER" IN SWEDEN AND NORWAY

The availability of recycled newspaper and magazine paper is decreasing as the digitalization of media advances. At the same time, e-commerce is flourishing, leading to an increased use of paperboard as packaging material. Metsä Tissue's brand Serla surfs on these trends and has come up with a smart solution to add fibre from recycled paperboard to tissue paper. The result is a product of the same high quality as before - the only difference is that the paper now has a slightly browner hue.

Metsä Tissue is thus a trend-setter as the only Nordic tissue manufacturer that uses paperboard fibre in its products. "Framtidens Papper/Papir", or "future paper", has been in Swedish and Norwegian stores since October 2015.



NO COMPROMISE ON PRODUCT SAFETY

When converting a renewable raw material into products, safety aspects are taken into account already in the research and development phase. This ensures that both their use and recycling is safe for people and the environment. Traceability and approvals of raw materials are key elements in securing product safety.

Metsä Group's products are produced from fresh fibres according to good manufacturing practice (GMP) and an in-house control plan. The certified ISO 22000 food safety management system ensures that products, such as packaging boards, greaseproof cooking and baking papers and their main raw material, pulp, meet the strictest safety requirements. Moreover, numerous end use tests of finished products are conducted in both internal and external laboratories.

Raw materials play a key role in the production chain for safe products. Metsä Group is committed to only using wood from sustainably managed forests. We always know the origin of the wood used in our products. Most of the wood we use comes from Finland and always from certified or controlled forests. Our production sites are located close to abundant clean waters and typically in the middle of forests, close to our main raw material.

MANAGING PRODUCT SAFETY RISKS

Clean waters and fresh fibres, pure by nature, provide a good basis for managing product safety risks. For example, traces of printing inks are not present in fresh fibres.

Before intentionally adding any chemicals to our products, the risks are assessed and safety ensured for their users, our employees and the environment. Paperboards, greaseproof baking and cooking papers are manufactured without fluorochemicals. We do not use any genetically modified raw materials nor approve of nanotechnology-based new substances until more information on their safety becomes available.

The wooden building materials produced by Metsä Wood, such as plywoods, laminated veneer lumber Kerto® LVL and Finnjoist I-joists fall far below the Class E1 requirement for formaldehyde emissions to indoor air. Birch and spruce plywood and Kerto LVL even fulfil the most stringent formaldehyde emission requirements in the world.

JOINT APPROACH TO PRODUCT SAFETY

Metsä Board's, Metsä Fibre's and Metsä Tissue's joint product safety network meets regularly to monitor product safety compliance of pulp, paperboard, baking and cooking papers and tissue products. Relevant regulations are carefully followed. These include food contact material regulations in the EU, the USA and the APAC area, chemical regulations such as REACH and biocidal products regulations. Thanks to this network, Metsä Group has a unified vision of product safety.

Members of the network ensure that new requirements are implemented at the production units. In addition, product safety audits are conducted both internally and with suppliers and sub-contractors.

HARMONIZED REGULATION AT THE EU LEVEL

Paper's and board's use in direct food contact is not harmonized at the EU level in the same way as plastic food contact materials. The EU sets out general safety requirements for all food contact materials and general obligations of good manufacturing practice. In 2016, the Commission will complete a study establishing a baseline of the current situation concerning food contact materials which currently lack the harmonized measures.

Harmonized regulation at the EU level, supported by industry and GMP guidelines, would simplify the fragmented European regulatory framework and reduce both compliance costs and costs to consumers.

ENVIRONMENTAL PRODUCT INFORMATION FOR CUSTOMERS' USE

Metsä Group and its companies have third-party environmental certification and our products have environmental labels. This makes it easier for consumers to make sustainable choices. We also prepare the following environmental product calculations:

LIFE CYCLE ASSESSMENT (LCA)

Life cycle assessments provide us with information on the environmental impact of products, from procuring raw materials to delivering products to customers. We use LCA information in environmental product declarations.

ENVIRONMENTAL PRODUCT DECLARATION (EPD)

An Environmental Product Declaration (EPD) is verified by a third party and based on a life cycle assessment and other information in accordance with the international ISO 14025 standard. Metsä Board published its first EPD in 2012 for Simcote folding boxboard. Metsä Wood has prepared EPDs for both its Kerto® wood and plywood products.

CARBON FOOTPRINT

Our carbon footprint calculations are based on product-specific life cycle calculations. We consider the effect on climate warming of the carbon dioxide and other greenhouse gas emissions generated during production. The carbon footprint is presented as a CO_2 equivalent.

PAPER PROFILE ENVIRONMENTAL PRODUCT DECLARATIONS

Paper Profile is a standardised environmental product declaration developed by leading European paper manufacturers. It makes comparing the environmental performance of paper and paperboard products easier for customers. In addition to product composition, it provides information on emissions to the air and water generated during production. Metsä Board also publishes more detailed information on the wood raw materials used in its products. It has published Paper Profile descriptions for all of its paperboard products since 2001. These descriptions can be downloaded from Metsä Board's website.

ENVIRONMENTAL LABELS

Environmental labels provide consumers with information on the environmental impact of products. We participate in developing criteria for issuing environmental labels. The EU Ecolabel, the Nordic Ecolabel and other environmental labels prove that Metsä Tissue's tissue papers are sustainably produced.

SAGA cooking papers have as well been issued the Nordic Ecolabel, also known as the Swan label. It helps consumers choose an environmentally friendly way to prepare their food. Common criteria for environmental labels have not yet been developed for packaging products.

NEW SOLUTIONS FOR THE BIOECONOMY

In R&D, Metsä Group combines its deep, long-term know-how on upgrading wood to creating solutions for a sustainable future and the bioeconomy. Our main raw material, wood from sustainably managed forests, is the most versatile raw-material in the world, and with persistent research, more valuable utilization possibilities are constantly opening up. Metsä Group is a member in various research clusters that aim to turn science and technology into sustainable biobased solutions.

At Metsä Group, research and development efforts focus on advancing efficiency and the utilization of resources in our operations as well as innovating new ways to utilize fibre and other components of wood. Our aim is to produce goods that will replace fossil-based products, and thus enhance the development of the bioeconomy.

Metsä Group's major investment and most concrete example of product and process innovations in the field of resource efficiency and the bioeconomy is the bioproduct mill that is under construction in Äänekoski, Finland. When starting in Q3/2017, this first-of-its-kind industry unit will introduce totally new sub-concepts that will take leaps towards closed loops and, for instance, take the performance measures of the unit to an another level with regard to water consumption, energy efficiency as well as emissions to air and water. The unit will also introduce new bioproducts over time. They are being developed in close cooperation with various partners. The ultimate aim is to widen the use the upcoming mill's sub-concepts to all of our mills.

TOGETHER WITH PARTNERS TOWARDS NEW BIOPRODUCTS

To fully exploit the opportunities arising from a changing business environment, Metsä Group is actively looking for partners with whom to co-create the innovations of tomorrow. Such partners are found in Finland, but also abroad and include companies, research organizations and universities.

Operating in complex networks is partly handled by use of various instruments. For example, Metsä Group has had an important role in establishing the Finnish Bioeconomy Cluster FIBIC Ltd. After a merger with CLEEN Ltd in 2015, a new network CLIC Innovation Ltd was established to enhance Finnish research, know-how and business opportunities internationally in

the fields of the bioeconomy and clean technology. Metsä Group was also one of the founders of the Biobased Industries Consortium which, together with the European Commission, established the Biobased Industries Private-Public Partnership in 2014.

In networks we create new knowledge with partners focusing the research e.g. on cellulose or lignin-based biomaterials and on utilizing waste water sludge as bioenergy.

EMPLOYEES' IDEAS VALUED AS PART OF INTERNAL R&D

In 2015, Metsä increased its investments in research and development, totaling EUR 18.1 million (2014: 17.7), which accounts for 0.4% (0.4) of total operating expenses. Nurturing a culture for creating innovations is demonstrated, for example, in the annual CEO's Productivity and Innovation Competition for personnel. In 2015, a total of 43 entries were received from the employees. The first prize and the Golden Cone Trophy 2015 were awarded to Metsä Board's team for improving folding boxboard strength qualities.

NEW, INNOVATIVE SUB-CONCEPTS MAKE THE BIOPRODUCT MILL THE MOST MODERN IN THE WORLD

Advanced use of resources and smaller emissions. With pulp production as a core of the bioproduct mill, the new unit will raise the utilization of our valuable resources – wood, other raw materials, energy and water – to a significantly higher level compared to sites of previous generations. The need of fresh water per produced tonne of pulp will be in approximately halved. The amount of wastewater generated, relative to the production of pulp, will also decrease significantly. The emissions to water will also decrease due to a new three-stage (mechanical, biological and chemical) purification process. For example, the bioproduct mill's chemical oxygen demand (COD) emissions per ton will be 70% lower than at the current site. The new mill, with an annual capacity of 1.3 million tonnes of pulp, will operate within the environmental limits of the current mill, which has an annual capacity of 0.5 million tonnes.

New sub-concepts for energy management. Energy efficiency and maximizing production of renewable electricity were key design drivers when developing the bioproduct mill concept. In practice, this meant going through each department of the mill and identifying targets for energy saving. As a consequence of this thorough design work and with the help of a EUR 32.1 million investment grant from the Finnish Ministry of Employment and the Economy to share the risk of the new technologies, the mill's self-sufficiency in terms of electricity will be 240%. This means that the mill will produce 2.4 times the amount of electricity it consumes.

The first mill ever planned to be fully free of fossil energy. All of the energy needed to operate the mill will be extracted from the wood raw material. Whereas typical pulp mills still require fossil energy, either in the form of fuel oil or natural gas especially for running the lime kiln, the bioproduct mill has been planned to run the lime kiln with gaseous fuel derived from bark using thermal gasification. As secondary fuels, important especially in ramp-ups and shut-downs, biobased tall oil pitch and methanol, both generated as side streams of the mill's processes, will also be used. Using the new concept makes Metsä Group's bioproduct mill the first to operate fully without fossil fuels and one that will advance the circular economy with state-of-art technology.

Returning converted malodorous gases back to the process. One of the bioproduct mill's new process concepts is to capture and convert the malodorous gases (rich in sulfur compounds) generated in production into sulfuric acid and then re-use the sulfuric acid as a process chemical in the main process. This sub-concept improves the chemical circulation of the mill, cuts back the sulfate emissions into the nearby waterway, and impacts the need of other external chemicals at the mill.

Increasing the use of renewable energy on national level. The excess 140% of electricity produced - a little more than 1 TWh annually - will be distributed to the national grid as renewable electricity. As a whole, the impact of the bioproduct mill on a national level is significant. When fully operational, the mill will increase the use of renewable energy in Finland by over two percentage units, taking Finland closer to its national target of 38% renewable energy that has to be achieved by 2020.

BIOPRODUCT MILL

RAW MATERIALS AND SUPPLY CHAIN

Wood, Metsä Group's main raw material, comes from northern forest where forest growth exceeds their use. We always know the origin of the wood we procure, and ensure sustainable use of forests through third-party certification.

Enhancing sustainability in the value chain applies to all materials and services used. We work in close partnership with our raw material and service suppliers and logistics providers to keep careful track of all steps along the entire value chain.

100%

TRACEABLE WOOD

84%

OF USED WOOD CERTIFIED

NORTHERN FORESTS KEEP ON GROWING

What is a sustainably managed forest? It is a forest that grows where it used to grow. A forest that provides material benefits like wood and berries together with non-material benefits like the air we breathe and the carbon that the trees store. A forest containing numerous valued habitats. A forest that is regenerated as the wood raw material is utilized. A forest that provides income and well-being to the region where it grows. Just like our northern forests.

Metsä Group purchases wood from sustainably managed forests in Finland and its neighbouring countries. See map and shares on pages 44–45. A cooperative made up of 116,000 Finnish forest owners, Metsä Group supplies the majority of wood it uses from Finland.

In addition to Finland, wood is procured from Sweden, the Baltic countries and Russia and the same requirements apply to the purchased wood in the whole wood supply area: it must be 100% traceable and originate from sustainable sources. Following these principles guarantees both continuity and diversity. We use forest certification both as a tool to ensure the best possible implementation of this and as a credible way to convey this message forward.

COMMON AIMS IN ENVIRONMENTAL ISSUES

Metsä Group focuses on five environmental goals in wood supply: maintaining biodiversity, decreasing impacts to water and soil, reducing operations' emissions and the use of energy, ensuring legality, and increasing the knowledge of its personnel and contractors. To achieve these goals, numerous targets and actions are defined on an annual basis and the results followed by the management.

This Environmental Programme is a part of the Environmental Management System, audited by a third, independent party. A new, common Environmental Programme for wood supply was approved in December 2015. It covers all the countries in the wood supply area, replacing the country-specific programmes and thus systemizing environmental management from the beginning of 2016.

The targets, in many cases measurable values, are set in a way that encourages striving for the best possible results in everyday work. Common targets have been set, for instance, for the maintenance of key biotopes, retention trees and buffer zones on logging sites.

PLAN, DO, CHECK, ANALYSE AND CORRECT

Metsä Group makes regular and extensive field audits to ensure that nature management in forest operations complies with the legislation and forest certification criteria. Performance is under constant evaluation by both internal and external auditors. The results of these evaluations are compared with the targets and when assessing possible development needs and actions. An inability to meet our principles can lead to the termination of the partnership. In 2015, one wood purchase contract was terminated due to this reason.

There are development needs in saving decayed wood and leaving retention trees in Finland because of the new PEFC Forest Certification criteria, which require leaving more deadwood and/or retention trees on the logging sites from the beginning of 2016. In Russia, safety at work issues of Metsä Group's wood suppliers were under development actions in 2015 and special attention was paid to safety issues during the wood supplier audits.

As one of the targets is related to knowledge and know-how, environmental training has been organized in the whole wood supply area. While Metsä Group's online training platform was further developed with new content, on-site training is still carried out. In Finland, training was held on nature management and the renewed PEFC forest certification requirements.

DEVELOPING SUSTAINABLE FORESTRY ACROSS BORDERS

An inverting method developed and widely used by Metsä Group for soil preparation has been a success story in Finland. In 2014, the method was introduced in the company's leased forests in Podporozhye, Russia. The first results of this new soil preparation method were seen in Podporozhye in 2015 and were found to be very encouraging, especially due to the rapid growth of seedlings.

The advantages of using inverting are obvious: not only is planting easier, but the saplings grow rapidly and with less brushwood than usual, and the costs of tending young stands are reduced. In addition, nutrient runoff into waterways is reduced, the roots of forest plants remain better intact and moving about the stand is easy. Inverting is expected to help in controlling the vigorous spread of aspen, known to be a problematic issue in Russian forestry.

CASE

BIODIVERSITY ENHANCED IN COOPERATION WITH WWF FINLAND

Two thirds of the threatened forest species in Finland use herb-rich forests or sunlit slopes as their primary habitat. Some of the species benefit from loggings aimed at nature management of the habitat, imitating the natural dynamics of the site, according to the habitat type.

Metsä Group and WWF Finland joined their forces in a project that resulted in guidelines and training on the management of herb-rich forests and sunlit habitats in ordinary commercial forests. As a part of the project and for training events, Metsä Group conducted loggings aimed at nature management in accordance with the guidelines.

"By cooperating with Metsä Group, we get to influence the forestry practices, which play a key role in safeguarding the biodiversity values of sunlit habitats and herb-rich forests," says **Liisa Rohweder**, Secretary General WWF Finland.

BIOPRODUCTS AND BIODIVERSITY

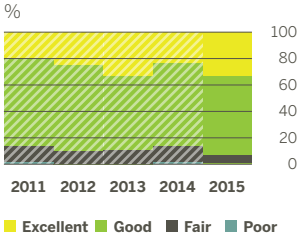
When operational in 2017, Metsä Group's bioproduct mill will significantly increase the use of wood in Finland. The annual consumption softwood pulpwood by Metsä Group will rise by some four million cubic meters.

According to the experts, the total annual felling of softwood pulpwood can be increased sustainably by 7 million cubic meters. After Metsä Group's investment decision, also other investment plans have been published. When the bioproduct mill and other ongoing projects are realised, pulpwood in Finland will be in full commercial use. Use of other fractions such as logs, small diameter trees and branches can still be increased.

Growing use of forests has also raised concerns by the stakeholders regarding the sustainable level of logging amounts. In our operations, harvesting will always be done according to high sustainability criteria and certification.

Read more on the use of different parts of the wood on page 52.

EVALUATION OF NATURE MANAGEMENT IN HARVESTED STANDS (DONE BY METSÄ GROUP IN FINLAND)



LOGGING SITE CLASSIFICATION IN RUSSIA AND THE BALTICS IN 2015

FROM FOREST TO MARKETS WITH CERTIFICATES

Metsä Group's commitment to advance third-party forest certification is evident in its daily operations and active participation in the development of forest certification. Knowing the origin and ensuring sustainability are key elements in Metsä Group's wood supply and subject to comprehensive external and internal evaluations.

No tool communicates sustainable origin of a raw material and ensures its traceability like forest certification. The comprehensiveness of forest certification makes it an excellent sustainability target. Metsä Group targets to sustain the share of certified wood in operations above 80%. In 2015, 84% (2014: 84%) of the wood supplied by Metsä Group was PEFC™ (Programme for the Endorsement of Forest Certification) and/or FSC® (Forest Stewardship Council®; Licence Code FSC-C014476) certified. This is the highest figure among its peers in semi-natural forests [1].

In 2015, Metsä Group continued the FSC Forest Management group certification in Finland, Russia and Latvia. The project is still underway in Russia and Latvia, while in Finland the area covered by the group certificate grew from 35,000 to 150,000 hectares. The increment was largest in Northern Finland and thus slightly increases the availability of FSC certified raw material, mainly at Metsä Fibre's Kemi mill. FSC certification has grown gradually in Finland since 2011 when the national FSC standard was approved and now covers some 5% of Finnish forests.

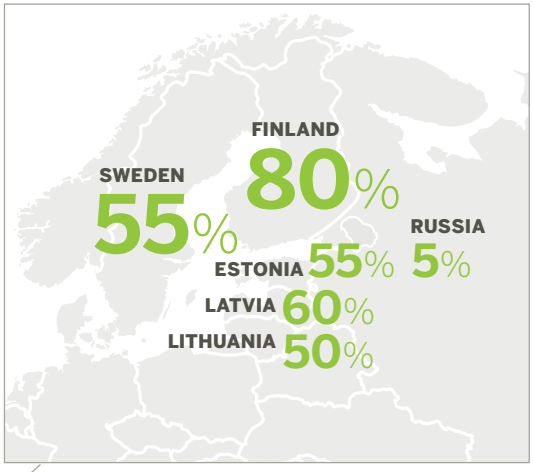
Although the forest areas in Metsä Group's possession are relatively small, they have been certified, mostly by both PEFC and FSC. To pass on the certification, all the wood supply and production units hold Chain of Custody certificates.

15 YEARS PEFC IN FINLAND

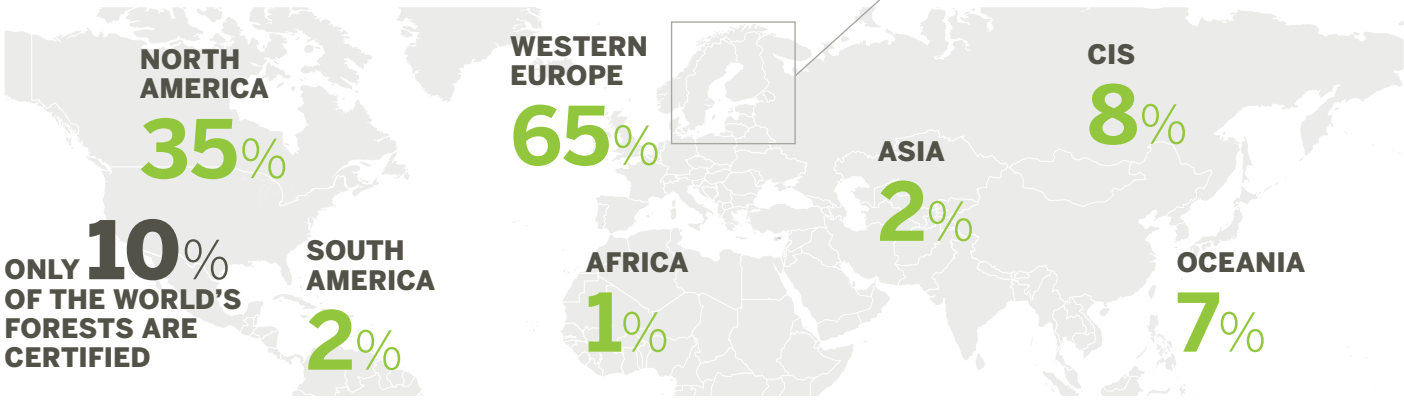
A study in 2015 from Gaia Consulting highlighted the impacts of PEFC certification, which in 2015 had had a wide coverage in Finnish forests for 15 years. The study concluded that PEFC has systematized and improved practices and procedures both in forestry and the whole value chain. Regarding biodiversity, the study emphasized the effect of leaving retention trees, which is seen as the

1) Managed forests of native tree species modified by man through silviculture and assisted regeneration.

FOREST CERTIFICATION IN METSÄ GROUP'S WOOD SUPPLY AREA



FOREST CERTIFICATION SHARE VARIES GLOBALLY



biggest single reason behind the current improvements in the status of endangered species.

As a consequence to changes in the Forest Management Association Act, there was a remarkable structural renewal in Finland's PEFC Forest Management certification in 2015. Participation of forest owners in PEFC certification is mainly dealt with via memberships in Forest Management Associations. At the beginning of 2015, membership became voluntary; consequently, the numbers of forest owners in PEFC fell, taking with them some three million hectares by December 2015. However, 17.6 million hectares, the vast majority of Finnish forests, remained PEFC certified.

The number is forecast to increase when forest owners re-join the certification group, now managed by the Association of Sustainable Forestry. Metsä Group offers its owner-members the possibility to join the PEFC certification for free.

ENDORSEMENT ENSURES A HIGH LEVEL OF CERTIFICATION

PEFC requires a revision of national forest management systems every five years. The revised systems, including standards, can be endorsed only after a comprehensive, third-party assessment of compliance with PEFC's Sustainability Benchmarks. Being one of the first countries to attain endorsement in 2000, PEFC Finland achieved the record fourth endorsement for the certification system in 2015.

PEFC Russia was not able to finalize their re-endorsement within the required five-year limit, which led to the expiration of the scheme in August 2015. For Metsä Group and other holders of PEFC Forest Management certificates, this meant that the certificates issued in Russia were no longer valid. Before submitting for re-endorsement, PEFC Russia needs to demonstrate its compliance with PEFC's Sustainability Benchmarks.

In November 2015, PEFC Latvia's re-endorsement continued with the opening of the public consultation period. In PEFC, all stakeholders are invited to the global public consultation, the results of which provide valuable information for the third-party assessors in determining whether the respective national system is in compliance with international requirements.

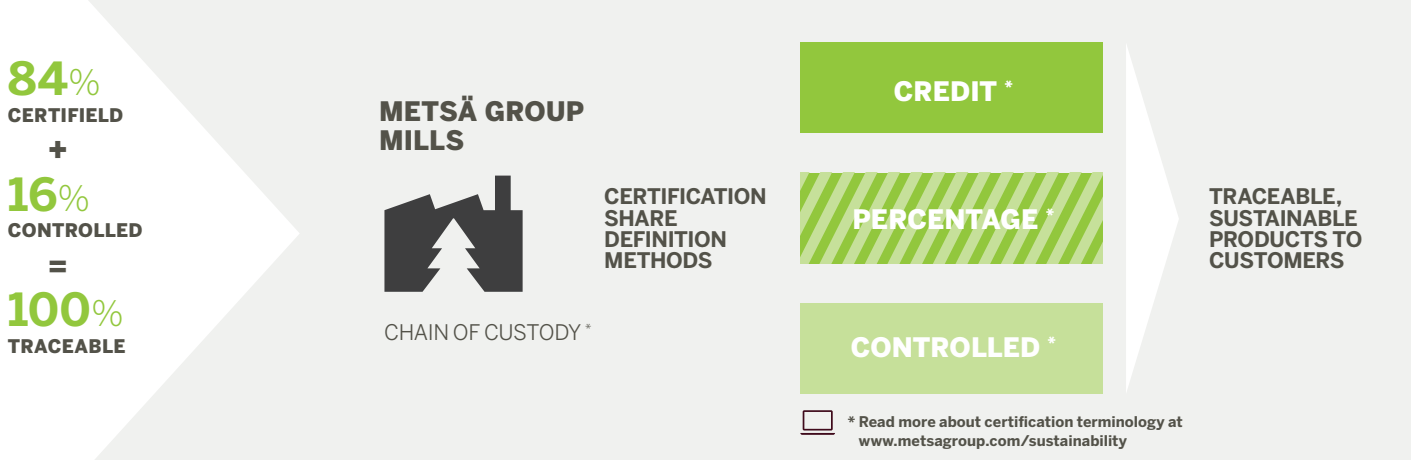
DISCUSSING AND DEVELOPING TOGETHER

In late 2014, the PEFC General Assembly elected **Riikka Joukio**, SVP, Sustainability and Corporate Affairs at Metsä Group, to the PEFC Board of Directors for a three-year term.

Traditionally meeting in interesting and topical countries three times a year, the FSC International Board of Directors held its meeting in Finland in November 2015. As one of the organizers of the field trips, Metsä Group presented the specifics of smallholder forestry, emphasizing its challenges within a uniform, globally set framework.

In 2015, FSC Finland started the revision of its Forest Management standard to meet FSC's updated International Generic Indicators (IGI), the implementation of which may become difficult in smallholder forestry. Metsä Group is a member of FSC Finland and we participate in the IGI working group as well as working groups creating the National Risk Assessment for Finland. Simultaneously, a Centralized National Risk Assessment has been ordered by FSC International.

METSÄ GROUP WOOD SUPPLY



THE GROUP'S WOOD SUPPLIES BY COUNTRY IN 2015

%,

Finland	76
Baltic countries	9
Russia	8
Sweden	7

WOOD CERTIFIED BY FOREST CERTIFICATION SYSTEMS

- Forest owner is committed to the requirements of forest certification, including legality, biodiversity and social issues
- Forest area has passed a forest managament audit conducted by external auditor

WOOD CONTROLLED BY FOREST CERTIFICATION SYSTEMS

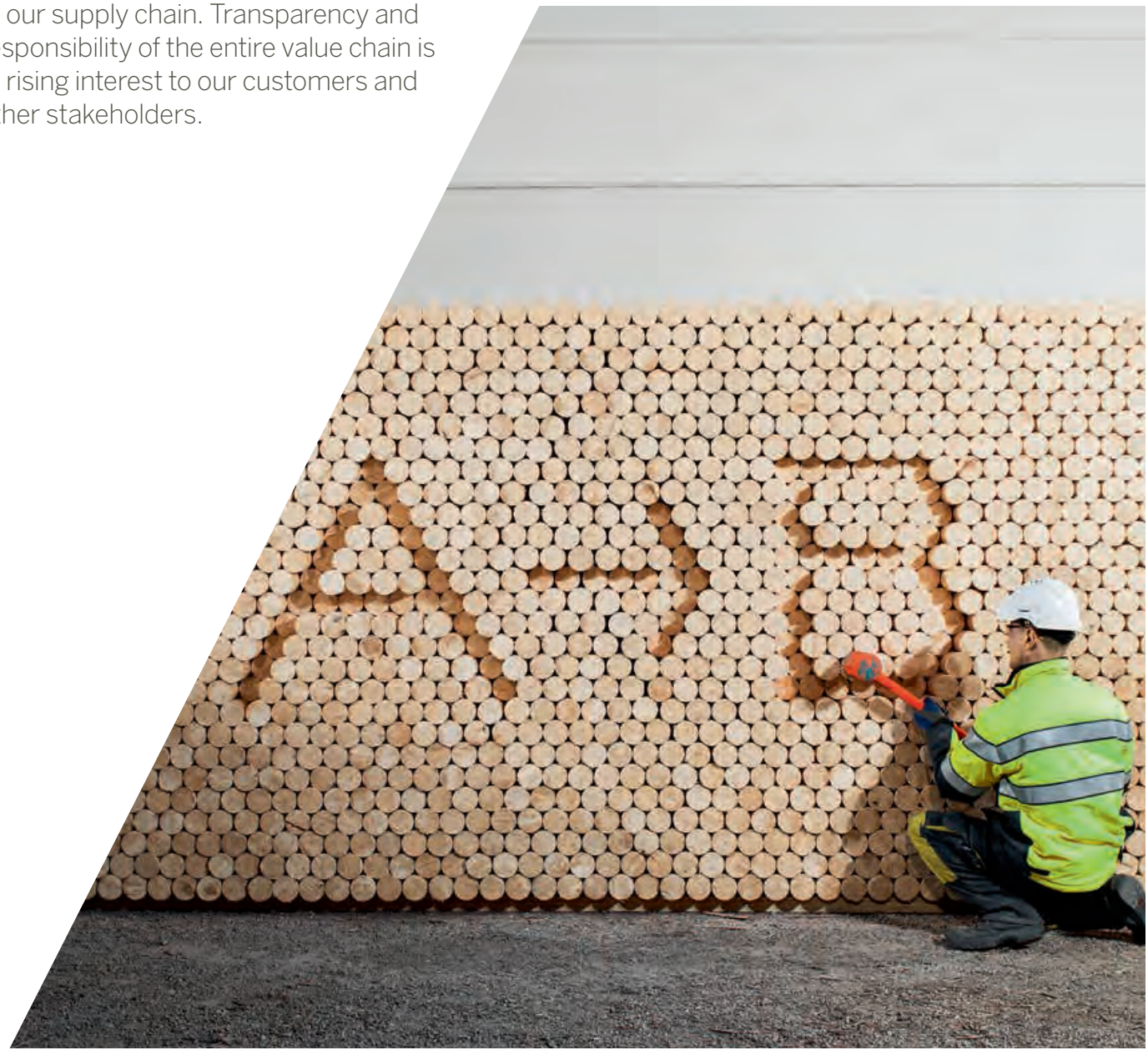
- Wood supply company ensures that forest area meets the criteria of controlled origin, including legality, biodiversity and social issues
- Wood supply practices and areas are controlled by the wood supply company's external chain of custody auditor

TOGETHER IN A SUSTAINABLE VALUE CHAIN

In addition to our own obligation to be a responsible company, we are expected to assure the sustainability of our supply chain. Transparency and responsibility of the entire value chain is of rising interest to our customers and other stakeholders.

Purchasing materials and services to Metsä Group is the responsibility of two main actors: Metsä Forest, responsible for wood procurement, and Metsä Group Purchasing for procuring everything else. Metsä Forest has been a forerunner in developing sustainability criteria and evaluating the performance of suppliers and partners in harvesting operations through systematic auditing and training practices. See the previous pages for more information on Metsä Forest's wood procurement and the origin of wood.

Excluding wood, all other raw materials and services are purchased centrally by Metsä Group Purchasing, organized into 17 main categories: seven are direct material categories (raw materials and packaging) and ten are indirect materials and services such as energy, logistics, ICT and mill-



COMPOSITION OF THE GROUP'S PURCHASES IN 2015
% OF MATERIAL AND SERVICE PURCHASES

Wood	25
Pulp and recovered fibre	18
Indirect materials and services	21
Logistics	15
Chemicals, pigments and fillers	8
Other (e.g. packaging materials)	8
Energy	5

THE GROUP'S PURCHASES FROM RAW MATERIAL KEY VENDORS [1] BY COUNTRY IN 2015
%

Finland	69
Sweden	16
Germany	4
Other EU countries	10
Outside Europe	1

Key vendors account for 44% of total spend in external purchases.

THE GROUP'S EXTERNAL PURCHASES [1] BY COUNTRY IN 2015
%

Finland	60
Sweden	15
Germany	8
Other EU countries	14
Other European countries	1
Outside Europe	3

1) Wood procurement excluded. (See page 45 for origin of wood information)

related support services. See the table below on more details.

Metsä Group spends over EUR 2 billion annually on external purchases, of which raw material purchases make up 25%. The majority of our purchases are from Europe 97% (2014: 97%) with 86% (87%) from countries where we have production sites. Our target is to use local suppliers whenever possible.

SUPPLIER CODE OF CONDUCT – JOINT COMMITMENT TO SUSTAINABILITY

We expect all of our suppliers to commit to the Metsä Group Code of Conduct for Suppliers, a common ethical guidance, which was launched in 2011 and to meet the requirements of our Sustainability Principles. These principles are founded on internationally recognized guidelines such as the principles of the United Nations Global Compact and the International Labor Organization (ILO) conventions.

Our aim is to ensure that we work with suppliers that are committed to sustainability, follow safe working practices and have a high standard of business ethics. Our Code of Conduct for Suppliers prohibits the use of forced or child labour, emphasises the respect for human rights as well as actions against corruption and bribery.

The Supplier Code of Conduct was included in 519 contracts during 2014, which accounts for 83% of all new and renewed supplier contracts made during 2015.

FOCUS ON THE SUSTAINABILITY OF OUR KEY SUPPLIERS

In 2013, we set a new target for our supply chain management – to audit all of our risk-rated raw material key vendors against sustainability criteria by the end of 2015. We have over 20,000 active supplier relationships, of which some 200 are defined as key vendors – suppliers who bring significant value to our business. Key vendors are selected based on strategic importance, a wide variety or unique products or services, strategic criticality, significant spend or a long-term partnership. Our key vendors make up 44% of our total spend in external purchases. As we purchase most of our raw materials and services from Europe, we do not operate in areas clarified as high risk for labour or human rights abuses.

THE 2015 SUSTAINABILITY EVALUATION SHOWS GOOD COMMITMENT FROM KEY SUPPLIERS

During 2015, we finalized the tool that helped us determine the sustainability performance of our key suppliers. The aim was to ensure that the Supplier Code of Conduct is followed in practice. Sustainability was examined from different perspectives such as commitment to general sustainability principles, environmental responsibility and ethical working conditions. We also evaluated the risks associated with the location of the supplier's production facilities and the countries of origin of their raw materials.

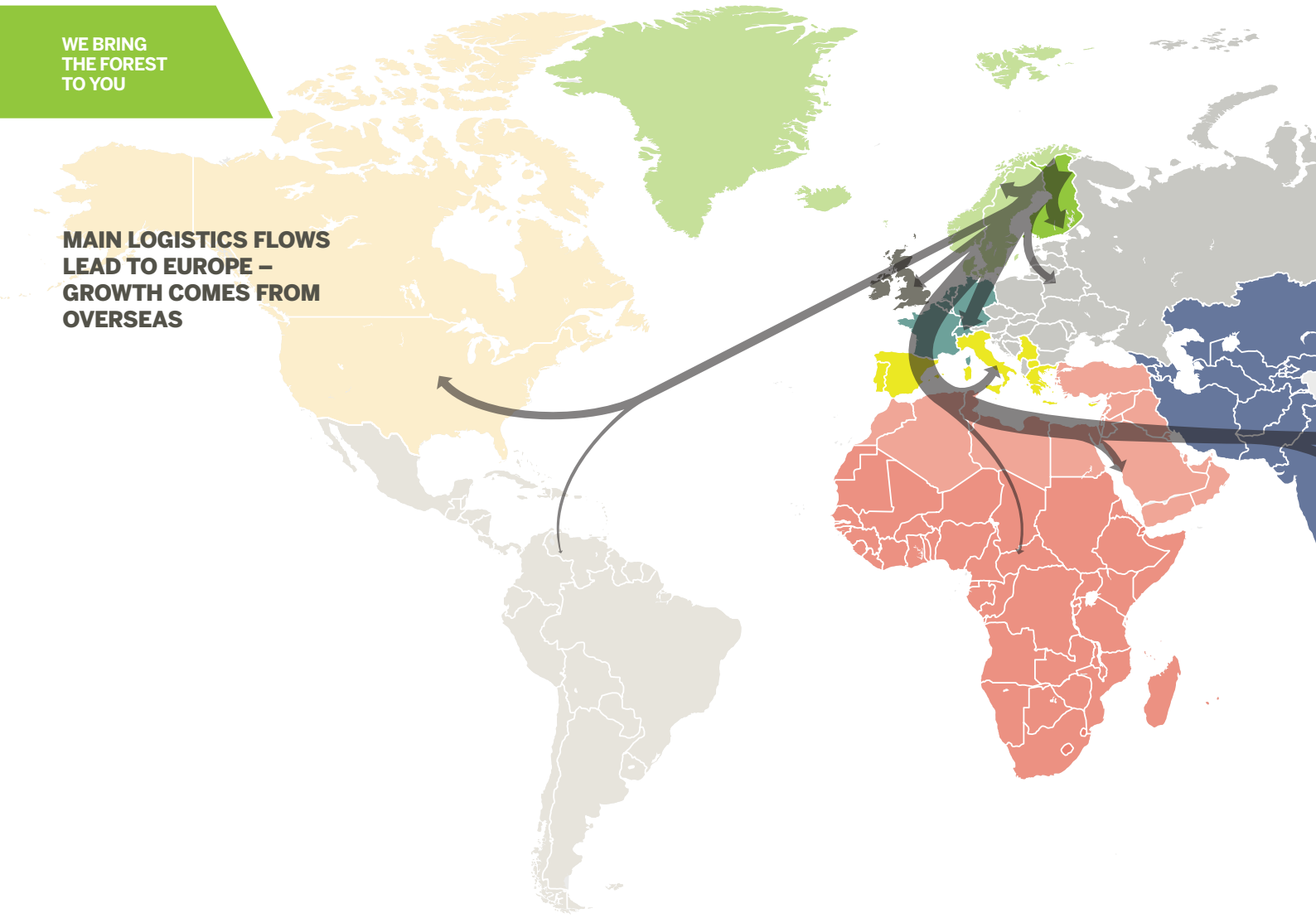
Based on the evaluation, our finding was that our key suppliers are committed to the requirements set in our Code of Conduct for Suppliers; there were no high-risk uppliers that would have required a specific audit against sustainability criteria.

In addition, we continued performing audits based on the plans made per category; sustainability criteria were also included in these 54 supplier audits (2014: 59). Our new sustainability target for 2016–2017 focuses on logistics flows. Read more about it on the next page.

The United Kingdom has enacted the Modern Slavery Act 2015, the first law in Europe aimed at eliminating modern slavery and human trafficking from supply chains. The Act takes effect in October 2015 and applies to companies that have global sales of over GBP 36 million. We are revising our processes against the UK Modern Slavery Act and preparing a statement disclosing our efforts to ensure that our supply chains are free from slavery and human trafficking.

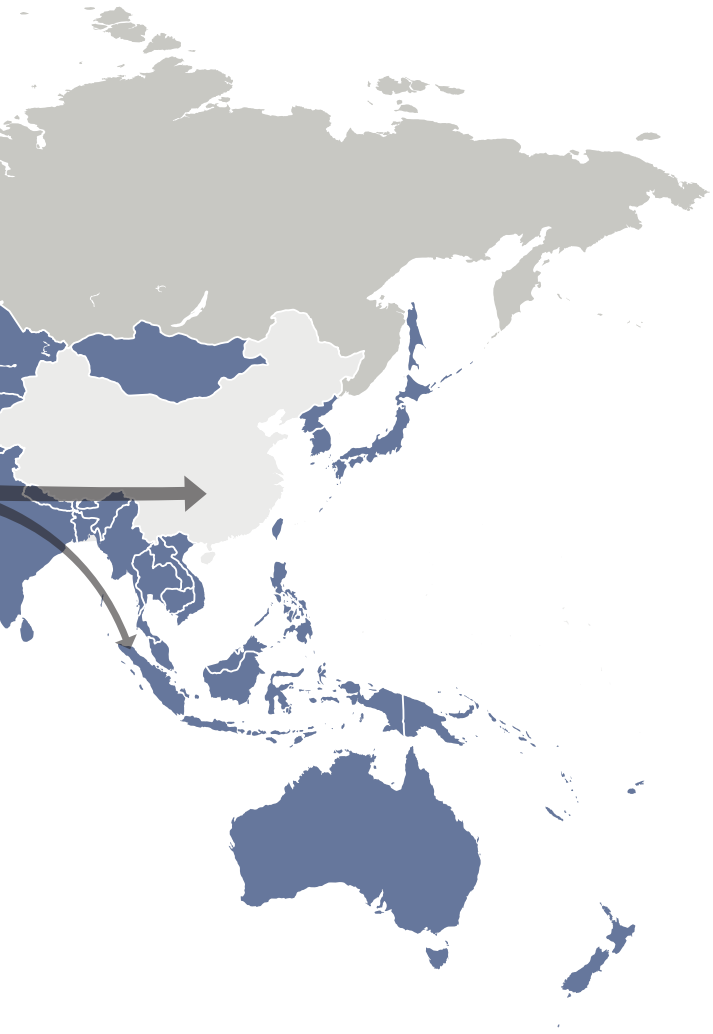
METSÄ GROUP PURCHASING CATEGORIES

Direct materials (Raw materials and packaging)	
Pulp	Hardwood, softwood, BCTMP (bleached chemi-thermomechanical pulp). Used in the production of tissue products, cooking papers and paperboards.
Recovered paper	Mixed office waste and other higher grades, recycled newsprint or corrugated containerboard. Used in some tissue products.
Basic chemicals	Chemicals used in pulp manufacturing.
Process chemicals	Chemicals used in board and paper manufacturing processes.
Pigments	Pigments are used as fillers and coating pigments in board and paper manufacturing.
Binders and coatings	Binders are used for the retention of pigments, mainly in coating recipes. Binders can be divided into starches and latexes.
Packaging materials	PE film and hoods, shrink and stretch film, corrugated boxes, roll packaging, cardboard boxes, core board, cores, pallets, labels and bale wire.
Indirect material and services	Energy, Logistics, ICT, Communications, Human Resources, Production Consumables, Maintenance, Repair and Operation (MRO), Administrative Services, Mill related support services, and Investments



RELIABLE LOGISTICS WITH A WIDE PARTNER NETWORK

Metsä Group's logistics network guarantees the wood supply to our mills and ensures that our customers receive their goods in an efficient, reliable and sustainable manner. Our logistics sourcing and service provider management was enhanced in autumn 2015 for improved focus – to ensure that the logistics network meets all expectations.



Logistics in Metsä Group needs to meet a wide set of requirements. First, in Finland for example, the wood is sourced from virtually everywhere in the country. Then, our wood products, pulps and paperboards find their way from our mills to customers and consumers all over the world. Logistics of tissue products, on the other hand, is different: they are distributed in the vicinity of the tissue mills. All these deliveries require an extensive fleet of trucks, trailers, trains, barges and ships operated by over 1,000 logistics service providers. Efficiency, reliability and sustainability are important factors in guaranteeing that this network of transport companies works to ensure the long-term success of our businesses.

The logistics management model in Metsä Group was renewed to increase focus on the management and development of the logistics service provider network. Sourcing and service provider management is now organized into three logistics categories: Land Logistics, Ports and Terminals, and Maritime Logistics. This logistics category management focuses on ensuring that service providers meet the service, efficiency and sustainability requirements in their respective areas. Furthermore, logistics development gained more resources so that adequate attention can be placed on improving the logistics network.

THE NEW TARGET ADDRESSES THE SUSTAINABILITY OF LOGISTICS FLOWS

A new sustainability target was set for the years 2016–2017 to support the further development of the environmental and social aspects of logistics. Within the two-year timeframe, the target is to ensure that the main logistics flows of the Group are fully sustainable. This will be accomplished by service provider cooperation and audits. The acceptance of Metsä Group's Supplier Code of Conduct is one example of the criteria that will determine the sustainability of companies in each logistics flow.

REDUCED ENVIRONMENTAL IMPACTS DUE TO EFFICIENCY AND SULPHUR REDUCTIONS

As logistics is a major cost element, one of the key remedies to mitigate the cost effect is to increase logistics efficiencies. Efforts to accomplish this often go hand-in-hand with decreasing the environmental impact of transports. Maximizing payloads, as an example, decreases the amount of CO_2 generated per unit delivered and at the same time decreases the unit cost. Likewise, optimizing ship sailing speeds can have a clear impact on the amount of fuel consumed – effectively impacting the amount of emissions as well as fuel costs.

The Baltic Sea, the North Sea and the English Channel formed a sulphur emission control area (SECA) at the beginning of 2015. The maximum sulphur content in marine fuels was 1.0% until the end of 2014. Since the beginning of the year, this limit has been 0.1% sulphur unless the vessel is equipped with an exhaust gas purification system. This new legislation has decreased Metsä Group's sulphur emissions to the air by approximately 90% in 2015. However, the use of more expensive fuel and the effect of scrubber investments to marine freights has increased the fuel cost of sea transport compared to the cost levels of pre-SECA times. This has put Metsä Group in a less favorable logistics cost position compared to companies who operate outside the SECA area.

CASE

SCRUBBERS, PROPELLERS AND RUDDERS FOR ENVIRONMENTAL EFFICIENCY

Metsä Group's products are transported to about 120 countries by road, rail and sea. Efficient and reliable logistics would not be possible without an extensive logistics network.

Finnish shipping operator **Finnlines**, which transports Metsä Group's products in the Baltic and the North Sea, is one example of our logistics providers with a strong focus on environmental efficiency. Despite years of economic recession, the company is in the process of completing an extensive environmental technology investment program, which amounts to EUR 100 million.

As a key part of the project, exhaust gas scrubbers have been installed on many of its ships. The remainder of the fleet will be fitted with scrubbers in 2016. The installation of a new design of propellers and rudders has improved energy efficiency. Other measures to reduce air emissions have consisted of optimizing schedules and slow steaming.

The results of the project have already been impressive. "In the first six months of the year, we managed not only to comply with the new emissions regulations but to save significant amounts of fuel," says **Staffan Herlin**, Head of Group Marketing, Sales and Customer Service at Finnlines. "Scrubbers are already up and running on 16 vessels and will soon be installed on the remainder of the Finnlines fleet. This means that Finnlines will be the first and the only fully owned, scrubber-equipped fleet in the Baltic and North Sea."

RESOURCE EFFICIENCY AND EMISSIONS

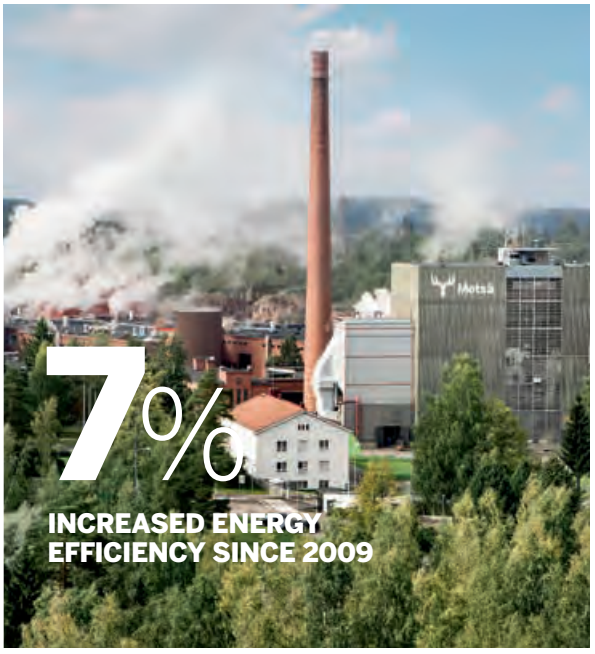
Metsä Group has production facilities in seven countries in Europe. We use raw materials, energy and water as efficiently as possible and make use of every part of the tree. Of the energy used in production, 86% is wood-based bioenergy and our pulp mills are major producers of energy. We seek to maximise our use of bioenergy and have significantly reduced our emissions into the water and air.

-34%

FOSSIL CO_2 EMISSIONS PER PRODUCT TONNE SINCE 2009

86%

OF THE FUELS USED WOOD-BASED BIOFUELS



7%

INCREASED ENERGY EFFICIENCY SINCE 2009

RESOURCE EFFICIENCY AT THE CORE OF OUR OPERATIONS

page 52

EFFICIENT ENERGY SOLUTIONS ADVANCING THE BIOECONOMY

page 54

SIDE STREAMS USED IN VALUABLE WAYS

page 56

CUTTING OUR EMISSIONS TO WATER AND AIR

page 58

RESOURCE EFFICIENCY AT THE CORE OF OUR OPERATIONS

Metsä Group's main means in using global resources responsibly include Group-wide targets for energy efficiency improvement, fossil CO_2 emissions and process water reductions as well as finding even more value-added uses for production side streams. Our bioproducts, from renewable wood raw material, are resource-smart solutions for increasing consumption.

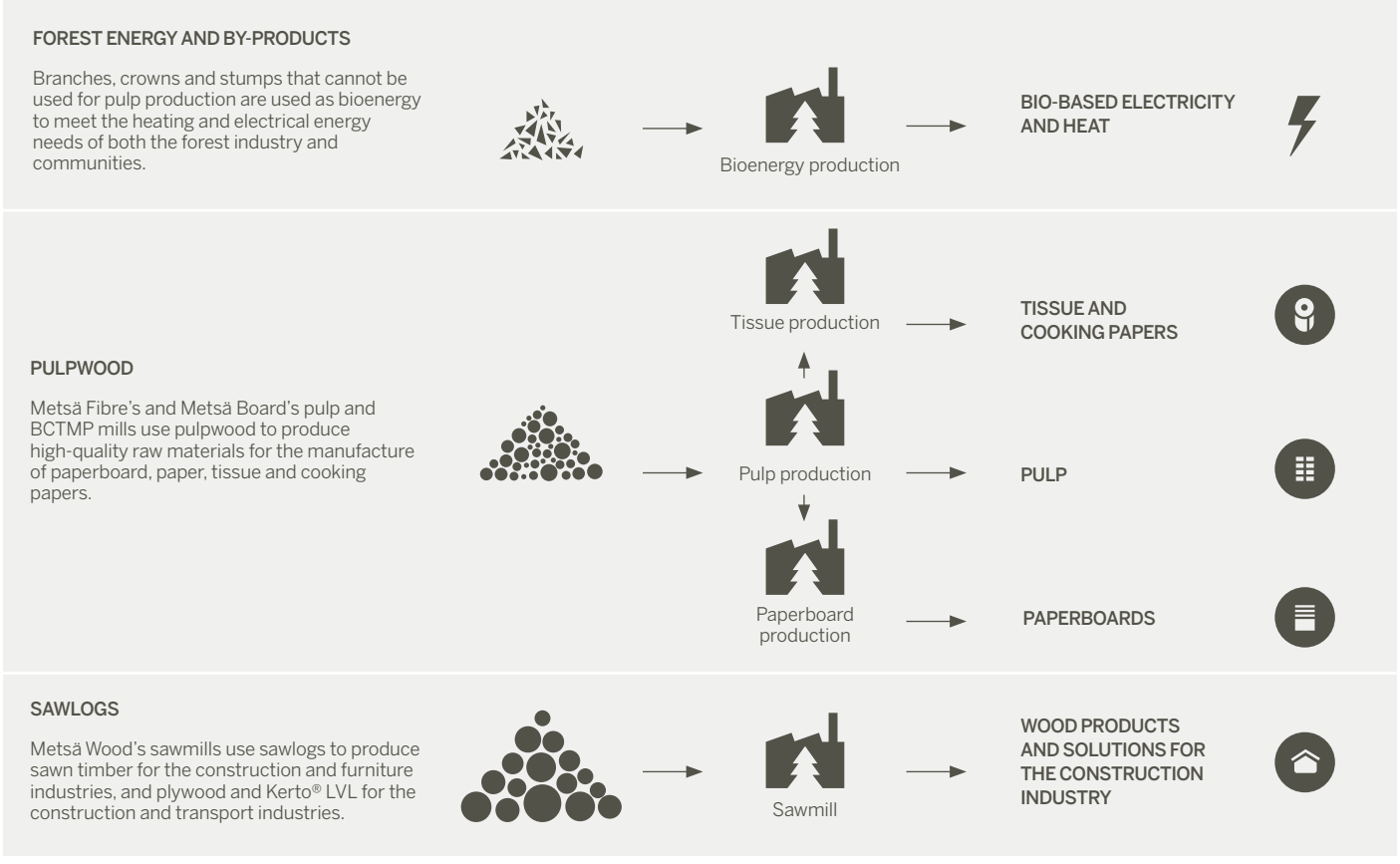
There will be one billion more people on our planet by 2025. Together with urbanization and growing consumption, this puts enormous pressure on the use of natural resources, placing resource efficiency at the core of sustainable and economical operations.

Metsä Group has production units in seven countries in Europe. We have set Group-level targets to increase our energy efficiency and reduce both fossil CO_2 emissions and process water use. Using all the part of a tree, our main raw material, where they create the most value constitutes the core of material efficiency.

MINIMIZING WATER USE

Fresh water is a scarce resource that is unevenly distributed throughout the world. As water is needed in practically all forest industry processes, Metsä Group's mills operate in areas rich in water.

Some 99% (2014: 99%) of the water that we use is surface water from lakes and rivers. Efficient water treatment systems enable the water to be recycled several times in our processes, after which it is carefully treated before being returned natural water bodies. The amount of process water we use per tonne produced has decreased by 15% (13%) since 2010. Our target is to reduce process water use by 17% by 2020 from the 2010 level.



In 2015, our total water intake of fresh water was 294 million m^3 (287 million m^3), of which 98% is from abundant water sources. Finland and Sweden, where most of our mills are located, are one of the most water rich areas in the world and water is available throughout the year.

CIRCULAR ECONOMY AND RESOURCE EFFICIENCY HIGH ON THE EU AGENDA

Resource efficiency, together with the circular economy and the bioeconomy play a pivotal role in EU policies. Greater significance of resource efficiency drives the circular economy and life-cycle thinking as it shapes the behaviour of both businesses and consumers. By refining and upgrading raw materials from the forest to their highest added value, we generate the greatest possible net gain to the environment and society at large. The regulatory framework, to be presented under the European Commission's Circular Economy Action Plan and the forthcoming Renewable Energy Package post 2020, is of upmost importance to bio-based companies in the forest industry value chain.

CASE

IMPROVED SCORING IN ALL CATEGORIES IN THE WWF'S ENVIRONMENTAL PAPER COMPANY INDEX

Metsä Group was in 2015 once again recognized for its transparency and high-level performance in the international Environmental Paper Company Index, arranged by the WWF (The World Wide Fund for Nature). This year, Metsä Group improved its scoring in all three categories attended: pulp, paperboard and tissue papers. We have participated in the index since it was first arranged in 2010.

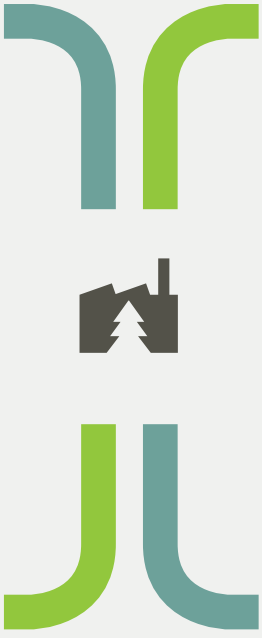
Metsä Group's investment in clean manufacturing resulted in improved scores in the paperboard (Metsä Board) and pulp (Metsä Fibre) categories. The criteria for clean manufacturing include energy use, energy sourcing, fossil CO_2 and other emissions to air and water.

In the tissue papers' category (Metsä Tissue), we improved our performance in the fields of reporting and Environmental Management Systems (EMS) as well as responsible sourcing, in which our scoring improved due to the increasing share of certified fibre. Globally, 31 forest industry companies participated in the index.

METSÄ GROUP'S MATERIAL BALANCE

EMISSIONS TO AIR (t)	2015	2014
Biogenic carbon dioxide (CO_2 bio)	7,039,847	7,035,433
Fossil carbon dioxide (CO_2)	802,529	803,210
Nitrogen oxides (as NO_2)	6,138	6,424
Sulphur (as SO_2)	2,060	2,047
Particles	1,356	1,293

	2015	2014
WOOD-BASED RAW MATERIALS		
Wood (1,000 m^3)	21,618	21,458
Pulp (1,000 t)	282	486
Recovered paper (1,000 t)	409	418
OTHER RAW MATERIALS (1,000 t)		
Pigments	343	414
Adhesives	75	71
PURCHASED ENERGY (GWh)		
Fuels	4,124	3,980
Fossil fuels	3,214	3,118
Biofuels	911	862
Electricity	2,315	2,483
Heat	376	463
WATER INTAKE (1,000 m^3)	294,376	286,837
Surface water	292,025	282,240
Ground water	2,351	4,597



PRODUCTION	2015	2014
Chemical and CTMP pulp (1,000 t)	3,559	3,551
Board (1,000 t)	1,498	1,416
Paper (1,000 t)	413	583
Tissue and cooking papers (1,000 t)	635	633
Sawn timber (1,000 m^3)	1,637	1,779
Plywood (1,000 m^3)	263	268
Kerto® (1,000 m^3)	185	207
Other upgrading products (1,000 m^3)	412	481
By-products sold for energy production (GWh)	2,345	2,250

	2015	2014
DISCHARGES TO WATER (t)		
Waste water flow (1,000 m^3)	140,357	147,476
Chemical oxygen demand (COD)	38,914	39,700
Total suspended solids	3,646	4,089
Biological oxygen demand (BOD)	1,287	1,205
Nitrogen (N)	532	609
AOX	324	323
Phosphorus (P)	41	51
WASTE (t) *)		
Recycled	596,921	662,627
Landfill	44,971	70,994
Hazardous	1,986	2,181

*) Revised waste data of 2014

EFFICIENT ENERGY SOLUTIONS ADVANCING THE BIOECONOMY

Energy development at Metsä Group is taking a step forward from the systematic decrease of fossil CO_2 emissions to further increasing bioenergy production, both for our own operations and society at large. The new bioproduct mill in Äänekoski, Finland, the biggest investment ever in the European forest industry, will increase bioenergy production in Finland significantly.

Investing increasingly in bioenergy, reducing fossil CO_2 emissions and improving energy efficiency have been in focus during recent years at Metsä Group. As we work in an energy intensive field of business, we must carry our responsibility in developing new, more efficient and sustainable solutions in energy and in all operational questions.

TOWARDS A BIOECONOMY

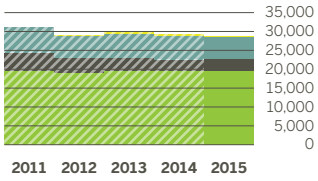
Metsä Group's new bioproduct mill in Äänekoski, Finland, planned to start up in the third quarter of 2017, will be the most modern and energy efficient site of its kind in the world. It will only use renewable energy, which means that fossil fuels are not used even in exceptional circumstances such as maintenance breaks, shutdowns or during winter peaks. The mill will produce renewable electricity 2.4 times the amount it consumes. The annual electricity generation will be approximately 1,800 GWh, of which 750 GWh will be used by its own operations and 1,050 GWh sold to the market.

The mill will also produce vast amounts of wood-based heat for its own uses well as to adjacent industry. Further, the mill will initially supply its surplus bark to external customers for energy production. In total, the mill will increase the bioenergy production in Finland by approximately two percentage-units and hold a 2.5% share of all the electricity production in Finland. To date, all of our current pulp mills produce bio-based electricity and heat to the community in addition to their own needs.

WITH ZERO FOSSIL CO_2 EMISSIONS, THE NEW BIOPRODUCT MILL'S SELF-SUFFICIENCY IN RENEWABLE ELECTRICITY PRODUCTION WILL BE

240%

THE GROUP'S PRIMARY ENERGY CONSUMPTION
GWh



- Wood-based fuels
- Fossil fuels
- Purchased electricity
- Purchased heat

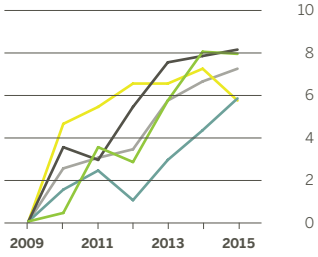
THE GROUP'S FUEL CONSUMPTION IN 2015
%

Wood-based fuels	86
Gas	8
Oil	4
Coal	1
Peat	1

THE GROUP'S PRIMARY ENERGY CONSUMPTION OF PURCHASED ELECTRICITY AND HEAT IN 2015
%

Nuclear power	47
Coal	15
Hydro power	14
Gas	8
Wood-based biofuels	8
Peat	5
Wind & Solar	2
Waste	1
Oil	1

ENERGY EFFICIENCY IMPROVEMENT BY BUSINESS AREA
%



- Metsä Tissue
- Metsä Board
- Metsä Fibre
- Metsä Wood
- Metsä Group total

INCREASING USE OF BIOENERGY AND DECREASING FOSSIL CO_2 EMISSIONS

Metsä Group also continuously invests in increasing the share of bioenergy at its existing mills. The new bioenergy boiler at Metsä Tissue mill in Mariestad, Sweden, started operating in the second quarter of 2015. The new boiler only uses biofuels such as recycled and sorted wood from the local construction industry and fibre clay, the residue from recycled paper's de-inking in tissue-making. Now that the Mariestad mill has two bioboilers, the need for fossil fuels is restricted only to maintenance and other temporary breaks, and during the coldest winter days.

The investment reduces the use of fossil oil by 90% at the mill. The annual reduction of fossil CO_2 emissions is some 6,000 tonnes. The new boiler, jointly owned by Metsä Tissue and a local municipal energy company VänerEnergi AB, will produce bioenergy in forms of heat and electricity for both the needs of the mill and the town of Mariestad.

Utilizing all side streams as part of the circular economy is extremely important and therefore fibre clay is used as a biofuel also at several other Metsä Group mills and new re-uses are also being sought for the ashes. For example, Metsä Tissue mills in Raubach and Kreuzau, Germany, deliver fibre clay to the external bioenergy partners and partly use it as a mixed-fuel at the site. In 2015, Metsä Tissue mill in Mänttä, Finland, submitted a permit application to begin using fibre clay as a fuel in energy production.

In addition to de-inking for tissue manufacturing, fibre clay is generated in paperboard production. In Metsä Board mill in Äänekoski, Finland, the current bioboiler is being supported with a minor investment to start utilizing fibre clay for energy production in 2016.

LESS CO_2 EMISSIONS BY INCREASING BIOENERGY

Due to our investments in bioenergy, we have since 2009 reduced our fossil CO_2 emissions by 34% (2014: 36) per produced tonne and have already exceeded the reduction target of 30% set for the year 2020. At the end of 2015, 86% (86) of Metsä Group's production was made with bioenergy. In total 21 production sites out of 29 have bioboilers and bioenergy production at the site.

In addition to increasing the share of bioenergy in our own operations, Metsä Group is one of the biggest suppliers of wood-based biomass for energy production in Finland. In 2015, our supply of biomass fuels, which consist of branches and top refuse of harvested trees as well as by-products such as bark and dust from our production, totalled 4.5 TWh (4.4). In using the biomass, our customers can replace the use of fossil fuels in producing heat and electricity, and thereby reduce their fossil CO_2 emission by over 1,300,000 tonnes (1,200,000). This is over 60% more than the Group's annual fossil CO_2 emissions.

ENERGY EFFICIENCY DECREASES EMISSIONS AND LOWERS COSTS

Metsä Group's energy efficiency development is strongly driven by the targets set by the European Commission, such as improving energy efficiency by 20% by 2020 from the 2009 level. It is also highly important for reducing fossil CO_2 emissions, lowering costs and improving the sustainability performance of our operations. An improvement of 10% by 2020 from the 2009 level is one of Metsä Group's eight official sustainability targets. During recent years, improvements have been mainly focused on investments in existing production facilities and in developing new working methods. The energy efficiency work is supported by the Energy Efficiency System and the ISO 50001 Energy Management System at our mills.

By 2015, we have improved our energy efficiency by 7% (by 2014: 6) per produced tonne compared to the 2009 level. In an energy intensive field of business, efficiency is strongly related to the fluency and continuity of production; performance is also linked to breaks and shutdowns. Despite exceptionally many breaks for implementing technical improvements at our sites as well a few planned shutdowns during production, progress in improving energy efficiency proceeded as expected in 2015.

SIDE STREAMS USED IN VALUABLE WAYS

Metsä Group is continuously seeking new ways to utilize its production side streams instead of sending them to landfill sites or storing them in mill areas for long periods of time. Side streams are used to replace primary raw materials in a broad range of applications. In the process, materials that were previously regarded as waste are converted into added-value by-products thus contributing to the circular economy.

Metsä Group utilizes nearly 100% of its wood-based production side streams, of which some 50% are used to produce electricity or steam for energy on-site. Around 40% are used as forest or field fertilisers, in landscaping, as industrial raw materials, in geotechnical construction and landfill construction.

Utilizing side streams can significantly reduce the environmental effects of the final disposal of waste and save natural resources. The prices of recycled materials made from side streams are competitive in comparison to natural materials.

ASH AND LIME AS FERTILISERS

As a result of systematic work over the long term, ash from the combustion of wood-based side streams and lime from pulp production are today used as forest fertilisers and agricultural lime.

Metsä Group's power plants produce around 40,000 tonnes of fly ash annually. The amount of ash suitable for use as forest fertiliser will increase after the bioproduct mill in Äänekoski begins operation in 2017. Fly ash from energy production is particularly suitable for fertilising peat soils and forest soils where growth is hindered because of deficiencies in phosphorus and potassium. In this way, nutrients are returned to the natural cycle where they have a great effect on wood growth.

According to the Natural Resources Institute Finland, using ash as a fertiliser in forests can generate additional annual growth of 3–6 cubic metres per hectare. This growth-generating effect may last for more than 30 years. Ash is usually spread using a forest tractor, although a helicopter to spread granulated ash can also be used.

CASES

SURPLUS LIME FROM PULP PRODUCTION IMPROVES THE STRUCTURE AND FERTILITY OF FIELDS

The pulp production processes at Metsä Fibre's mills generate around 20,000 tonnes of surplus lime annually. Until now, this lime has been stored temporarily at the mills or sent to landfill sites.

However, lime has been proven to be a good liming material and our local partners sell and deliver the lime surplus generated by our mills to farmers. The use of lime as a field fertiliser has already produced good results.

SANDY BARK FOR VARIOUS USES

The storage and debarking of wood generate around 14,000 tonnes of sandy bark, which be used for various purposes. It is used as mulch or as a fuel when screened and has been used as a cover layer for extensive areas, such as ski slopes and motor-racing tracks, as well as for landscaping in landfill sites.

FIBRE CLAY USED ON SKI LOPES

Snowmaking imposes a significant cost and environmental impact on ski resorts. The Äänemäki ski slope in Äänekoski, Finland, was reshaped using fibre clay to reduce the need for artificial snow. This benefits both the resort owner through decreased snowmaking expenses and the environment through reduced water and electricity consumption.

BRICKS AND TILES FROM DE-INKING SLUDGE IN SLOVAKIA AND POLAND

De-inking sludge from the Metsä Tissue Zilina mill in Slovakia and Krapkowice mill in Poland have been used as a raw material in the production of bricks and tiles for several years. Around 90,000 wet tonnes of de-inking sludge is used annually in leading European tile and brick factories. This has enabled them to minimize its consumption of other, diminishing natural resources such as natural clay and sawdust.

ROADS FROM ASH

For a long time, ash has been used to build durable, load-bearing roads, mainly in industrial and storage areas. Although this has been a lasting and sustainable choice, improvements to make it more cost efficient are still needed. To this end, Metsä Group is participating in developing a new solution where the surfaces of forest roads are layered with a mixture of ash and crushed rock employing a traditional method. Once hardened, the ash serves as a binding component in the surface layer.

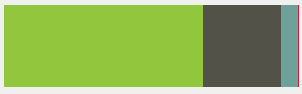
REDUCING WASTE IS A KEY GOAL

Metsä Group has succeeded in reducing waste and improving its waste utilization rate over the long term. The EU Waste Framework Directive and the reformed Finnish Waste Act have supported the development of waste management within the Group. The total waste volume has decreased from 736,000 tonnes to 644,000 tonnes. The reduction is mainly explained by productization of nearly 100,000 tonnes of side stream materials earlier defined as waste.

THE GROUP'S RESIDUES BY SOURCE IN 2015
%

Process waste	59
Packing, absorbent and filter waste	27
Energy production waste	7
Waste water treatment	2
Municipal waste	2
Other	2
Hazardous waste	0.3

THE GROUP'S RESIDUES BY DESTINATION 2015
%



Energy recovery	62
Material recovery	31
Landfill waste	6
Hazardous waste treatment	0.3

COSTLY SOIL MATERIALS CAN BE REPLACED WITH ASH AND MIXTURES CONTAINING ASH.

CUTTING EMISSIONS TO WATER AND AIR

The environmental impacts related to our operations are carefully controlled and mitigated. We have set targets for key emissions reductions and show clear improvements in cutting our main emissions to water and air. Environmental risks are managed by maintaining up-to-date environmental risk analyses at production units as well as by complying with the requirements set in the mills' environmental permits.

During 2009–2015, Metsä Group's fossil CO_2 emissions have been reduced by 34% per product tonne. With this achievement we again exceeded our target to reduce fossil CO_2 emissions by 30% by 2020. Our greenhouse gas emissions (Scope 1) remained at the same level as the year before, at 803,000 tonnes CO_2 (2014: 803,000 tonnes). At the same time that production decreased by 2.6%. CO_2 emissions from Scope 2 were 550,000 tonnes. Some 54% of the Scope 1 and 2 emissions came from Finland.

Acidification emissions decreased to 6,357 tonnes SO_2 eqv. (6,543 tonnes) due to lower sulphur emissions and production at the Gohrsmühle mill in Germany. Eutrophication emissions were 152 tonnes P eqv. (173 tonnes). Main reduction came from the Husum mill in Sweden.

ENVIRONMENTAL INCIDENTS AND LIABILITIES

There were only a few non-compliances at Metsä Group's production units reported in 2015. All environmental incidents that resulted in major permit violations, claims, compensations or significant media coverage are detailed in the table. Additionally, minor and short-term non-compliances with environmental permit requirements were reported at Rauma pulp mill. The authorities were informed immediately and corrective actions were taken in all cases. The Svir sawmill in Russia paid EUR 1,200 as fiscal levy related to water discharges and waste handling.

Metsä Group's environmental obligations at the end of 2015 totalled EUR 15 million (2014: 19). The liabilities have decreased significantly during the past years due to divesting some of its operations and the finalisation of remediation work for a number of contaminated sites and old landfills.

The environmental investments totalled EUR 108 million (2014: 96). The Group received EUR 32.1 million financial support for the bioproduct mill investment from the Finnish Ministry of Employment and the Economy for the mill's new energy-saving technology concepts.

Read more about the bioproduct mill on pages 38–39.

ENVIRONMENTAL INCIDENTS IN 2015

Business Area	Unit	Incidents	Corrective actions
Metsä Fibre	Kemi mill, Finland	Particle emissions to air from the recovery boiler exceeded the permit limit in May and June.	The emission treatment systems were cleaned and maintained and emissions have returned to normal level.
Metsä Board	Kaskinen mill, Finland	The permit limit for biological oxygen demand (BOD) emissions to water was exceeded in March and for nitrogen emissions in October. The incidents were caused by temporary overloading of waste water treatment plant due to operational issues at the process water evaporation plant.	The evaporation plant was cleaned and maintained. Operation instructions were updated concerning unloading of effluents to waste water treatment after nitric acid washing. All emissions have returned to normal level.
Metsä Tissue	Mänttä mill, Finland	The permit limits for chemical oxygen demand (COD), BOD and nitrogen emissions to water were exceeded during three months due to operational problems in the wastewater treatment plant.	The operation of the plant has been stabilized with several actions and emissions have returned to normal.
	Katrinefors mill, Sweden	The permit limit for nitrogen emissions to water was exceeded in July and August due to operational problems at the wastewater treatment plant.	Operation of the plant was stabilized and excess sludge removed. An investment will be made to replace the old aeration tank in 2016.

ENVIRONMENTAL PERMITS' REVISION ONGOING ACCORDING TO BEST AVAILABLE TECHNIQUES

The operations of Metsä Group's production units require environmental permits in accordance with the European Union Industrial Emissions Directive. The environmental permits of several Metsä Group units are currently being reviewed. The Reference Document for Best Available Techniques (BREF) and the BAT conclusions, which are binding on the EU member states, play a significant role in environmental permit decisions for the pulp and paper industry. Currently, most Group mills comply with the new BAT requirements; however, investments are expected at some mills to improve air emissions control or to upgrade the effluent treatment facilities.

IMPROVED RISK MANAGEMENT

Metsä Group has renewed and improved the environmental risk analyses process at its production units. With the revised methodology, we want to ensure that the risk analyses are constantly up-to date, instead of the earlier practice of updating them periodically every 3–5 years. Also, the follow-up of preventive actions has been enhanced. The changes will improve the management of environmental risk at the mill level and integrate risk-based thinking into everyday work at the mills. The new methodology will be implemented at most pulp, board and paper mills during 2016.

CASE

IMPROVED AIR QUALITY IN RAUMA

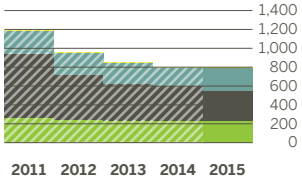
A new back-up boiler for the treatment of malodorous gases from the pulping process was installed at Metsä Fibre's Rauma pulp mill. Due to the increased pulp production in recent years and the more effective collection of malodorous gases, the existing boiler lacked the capacity to treat all the gases in emergency situations. The increased capacity of the new boiler now ensures the efficient treatment of malodorous gases in changing process situations. This also has a positive effect on local air quality.

CASE

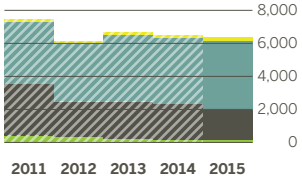
IMPROVED EMISSION TREATMENT IN KASKINEN AND TAMPERE

Metsä Wood has updated the flue-gas emission treatment system for the power plant at its Thermowood production unit in Kaskinen. The new electrostatic precipitator removes particles from the flue gases very effectively, reducing the emissions by over 90%. Also, Metsä Board's Tako mill in Tampere has achieved major improvements in controlling emissions with a new Super Low-NOx combustion system in the gas-fired power plant. The new system enables the plant to run with over 20% lower NO_x emissions.

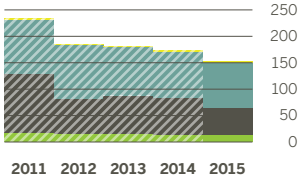
GREENHOUSE GAS EFFECT CO_2 BY BUSINESS AREA
1,000 TONNES



ACIDIFICATION AS SO_2 EQUIVALENT BY BUSINESS AREA
TONNES

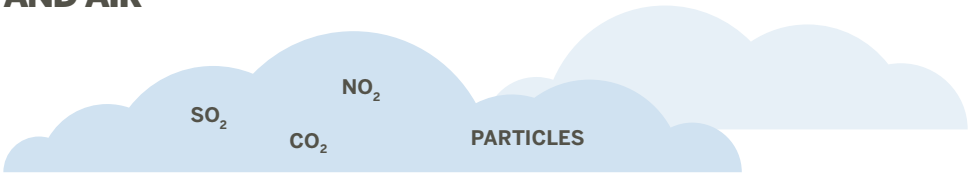


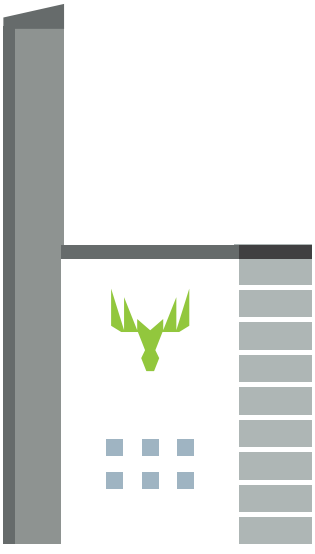
EUTROPHICATION AS P EQUIVALENT BY BUSINESS AREA
TONNES



Metsä Tissue
Metsä Board
Metsä Fibre
Metsä Wood

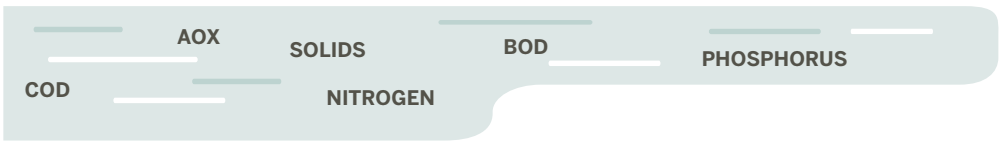
EMISSIONS TO WATER AND AIR





Efficient control and the reduction of emissions to air and water is the cornerstone for Metsä Group's sustainability work. The main emissions to air are carbon dioxide (CO_2), sulphur dioxide (SO_2), nitrogen oxides (NO_x) and particles from pulp production and power plants.

The emissions to water from the production of pulp, board, paper and tissue constitute organic matter such as chemical and biological oxygen demand (COD, BOD), nutrients (P, N) and low amounts of solid matter. Organic matter and nutrients mainly originate from the wood that is used in the production of pulp. The bleaching of chemical pulp also generates some emissions of adsorbable organic halogens (AOX).



SUSTAINABILITY DATA BY UNIT

METSÄ TISSUE

Mill	Country	Personnel				Production (1,000 t)	Management systems					Chain of Custody		
		Number of employees [1]	Accident rate [2]	Sickness absenteeism % [3]	Organisational functionality index [4]	Tissue and cooking papers	ISO 9001	ISO 14001	ISO 50001	OHSAS 18001	ISO 22000/ BRC	PEFC™	FSC®	CO_2 bio
Mänttä [6]	Finland	419	20.8	3.9	7.9	108	x	x	x		x	x	x	0
Düren	Germany	109	0.0	4.8	8.0	24	x	x	x	x	x	x	x	0
Kreuzau	Germany	401	6.3	7.3	8.4	144	x	x	x	x	x	x	x	8,935
Raubach	Germany	276	4.3	4.5	9.1	50	x	x	x	x	x	x	x	0
Stotzheim	Germany	291	6.6	6.5	7.8	23	x	x	x	x	x	x	x	0
Krapkowice	Poland	340	12.0	3.8	7.9	75	x	x [5]		x		x	x	0
Žilina	Slovakia	312	5.7	3.0	8.3	80	x	x [5]		x	x	x	x	0
Katrinefors	Sweden	350	17.4	5.0	7.4	76	x	x	x			x	x	0
Nyboholm	Sweden	179	20.4	4.0	8.2	27	x	x	x			x	x	7,155
Paulistrom [7]	Sweden					26	x	x	x			x	x	10,652
Others [8]		77												
Total		**2,754**	**10.7**	**4.7**	**8.3**	**635**								**26,742**

1) Full-time equivalent on 31 December 2015 2) Lost-time accident 1 frequency rate. Accidents at work per million worked hours. 3) % of theoretical working time
4) Organisational functionality indexes of Metsä Tissue mills are calculated based on responses of production personnel. 5) ISO 14001 standard includes the Energy Efficiency System (EES).
6) Includes Tissue and Baking and Cooking businesses. 7) Paulistrom mill's personnel figures are included in Nyboholm mill's figures.
8) Includes personnel of Vorsino and others than mill locations. Personnel figures of Others are included in Metsä Tissue's total figures.

METSÄ BOARD

Mill	Country	Personnel				Production (1,000 t)		Management systems					Chain of Custody		
		Number of employees [1]	Accident rate [2]	Sickness absenteeism % [3]	Organisational functionality index [4]	Chemical pulp and CTMP	Board and paper	ISO 9001	ISO 14001	ISO 50001	OHSAS 18001	ISO 22000	PEFC™	FSC®	CO_2 bio
Joutseno	Finland	51	0.0	4.5	8.7	318		x	x	x	x	x	x	x	0
Kaskinen	Finland	79	7.3	3.1	8.0	282		x	x		x	x	x	x	113,703
Kemi	Finland	91	12.1	5.4	8.3		402	x	x	x	x	x	x	x	0
Kyro	Finland	251	16.8	6.0	7.9		239	x	x	x	x	x	x	x	0
Simpele	Finland	307	13.8	4.0	8.0		261	x	x	x	x	x	x	x	109,390
Tako	Finland	209	17.3	6.0	8.5		207	x	x	x	x	x	x	x	0
Äänekoski Board	Finland	188	3.1	4.0	8.3		229	x	x	x	x	x	x	x	93,445
Husum	Sweden	780	8.9	3.7		606	557	x	x	x		x	x	x	1,514,758
Others [5]		645					17								26,501
Total		**2,601**	**11.1**	**4.2**	**8.2**	**1,206**	**1,911**								**1,857,797**

1) Full-time equivalent on 31 December 2015 2) Lost-time accident 1 frequency rate. Accidents at work per million worked hours. 3) % of theoretical working time
4) Organisational functionality indexes of Metsä Board mills are calculated based on responses of production personnel. Husum mill not measured in 2015.
5) Includes personnel from sales and logistics operations, management and subsidiaries. Production, emissions and waste originate from divested Gohrsmühle mill and Äänevoima's production of energy sold for ex
Personnel figures of Others are included in Metsä Board's total figures. 6) Husum mill's BOD not measured.

METSÄ FIBRE

Mill	Country	Personnel				Production		Management systems					Chain of Custody		
		Number of employees [1]	Accident rate [2]	Sickness absenteeism % [3]	Organisational functionality index [4]	Chemical pulp (1,000 t)	Sawn timber (1,000 m^3)	ISO 9001	ISO 14001	ISO 50001	OHSAS 18001	ISO 22000	PEFC™	FSC®	CO_2 bio
Joutseno	Finland	135	13.5	4.7	7.5	658		x	x	x	x	x	x	x	1,354,496
Kemi	Finland	164	10.7	6.2	8.1	585		x	x	x	x	x	x	x	1,393,053
Rauma	Finland	121	4.9	4.4	7.9	602		x	x	x	x	x	x	x	1,196,336
Äänekoski	Finland	172	14.3	4.9	8.4	507		x	x	x	x	x	x	x	919,171
Svir	Russia	119	0.0	2.1	8.6		252	x	x [5]		x		x	x	20,271
Others [6]		146													
Total		**857**	**7.9**	**4.1**	**8.2**	**2,353**	**252**								**4,883,326**

1) Full-time equivalent on 31 December 2015 2) Lost-time accident 1 frequency rate. Accidents at work per million worked hours. 3) % of theoretical working time
4) Organisational functionality indexes of Metsä Fibre mills are calculated based on responses of production personnel. 5) Svir Timber's ISO 14001 standard includes the Energy Efficiency System (EES). 6) Includes personnel from sales operations, a subsidiary and management. Personnel figures of Others are included in Metsä Fibre's total figures.

FSC Licence Code FSC-C014476

Emissions to air (t)				Discharges to water (t)					Water use (1,000 m³)		Waste (t)			Mill
CO_2 fossil	Sulphur as SO_2	Nitrogen oxides as NO_2	Particles	COD	BOD	Total phosphorus	Total nitrogen	Total suspended solids	Water sourcing	Waste water flow	Recycling	Landfill	Hazardous	
12,598	0	0	0	392	64	1.4	21	68	3,207	4,906	23,657	89	31	Mänttä [6]
28,646	0	16	0	57	3.8	0.19	0	3.8	677	383	381	0	123	Düren
88,098	0.33	89	0.29	446	20	1.0	0	20	2,865	2,001	111,904	7,059	22	Kreuzau
22,669	0.0086	13	0	178	5.2	0.26	0	5.2	492	525	36,968	0	160	Raubach
10,028	0.017	6.3	0	12	2.9	0.15	0	2.9	277	293	2,858	78	184	Stotzheim
29,582	0.84	4.4	33	53	4.0	0.57	5.6	4.4	852	644	41,109	3,229	0	Krapkowice
12,220	0.057	10.5	0.48	145	9.4	0.47	0	9.4	554	936	917	2,182	67	Žilina
11,495	0	4.9	0	191	24	0.40	15	11	1,878	1,893	35,272	0	13	Katrinefors
11,497	2.2	19	6.2	9.3	1.4	0.029	0.35	1.8	439	439	1,518	0	5.2	Nyboholm
6,820	0.39	23	7.3	36	15	0.043	0.53	4.7	354	354	1,554	0	17	Paulistrom [7]
														Others [8]
233,654	**3.9**	**185**	**47**	**1,519**	**150**	**4.5**	**43**	**131**	**11,595**	**12,373**	**256,138**	**12,638**	**623**	**Total**

Emissions to air (t)				Discharges to water (t)						Water use (1,000 m³)		Waste (t)			Mill
CO_2 fossil	Sulphur as SO_2	Nitrogen oxides as NO_2	Particles	AOX	COD	BOD	Total phosphorus	Total nitrogen	Total suspended solids	Water sourcing	Waste water flow	Recycling	Landfill	Hazardous	
27,426	0	11	12	0	538	4.0	0.12	2.8	12	6,602	565	8,721	10	26	Joutseno
5,751	78	222	3.1	0	1,582	115	2.0	20	165	12,384	4,529	25,466	1,538	14	Kaskinen
6,434	0	2.8	0	0	291	37	1.0	19	91	10,021	7,919	8,042	545	11	Kemi
6,588	0	3.4	0	0	302	34	0.68	15	101	5,819	4,121	23,610	36	15	Kyro
83,542	110	163	1.5	0	375	24	1.6	12	48	24,759	5,296	24,930	118	37	Simpele
75,062	0.038	75	0	0	175	64	1.1	0.97	31	3,374	2,579	6,409	50	36	Tako
375	0.90	63	0.70	0	914	284	1.17	13	202	3,433	4,375	1,479	40	10	Äänekoski Board
54,297	373	1,015	91	43	6,464	-[6]	9.1	90	1,432	37,753	38,338	59,456	356	587	Husum
57,966	109	93	1.5	0	34	6.8	0.4	1.3	0	980	980	1,840	25	0	Others [5]
317,441	**671**	**1,649**	**110**	**43**	**10,673**	**568**	**17**	**173**	**2,082**	**105,124**	**68,702**	**159,953**	**2,718**	**736**	**Total**

xternal use.

Emissions to air (t)				Discharges to water (t)						Water use (1,000 m³)		Waste (t)			Mill
CO_2 fossil	Sulphur as SO_2	Nitrogen oxides as NO_2	Particles	AOX	COD	BOD	Total phosphorus	Total nitrogen	Total suspended solids	Water sourcing	Waste water flow	Recycling	Landfill	Hazardous	
39,166	342	870	177	104	6,132	135	3.7	100	362	81,134	16,783	41,595	7,009	39	Joutseno
60,373	224	1,327	194	63	7,229	124	5.7	92	353	37,868	15,009	77,308	3,700	69	Kemi
77,905	115	868	134	64	8,429	100	4.5	57	269	18,922	14,724	9,365	7,303	50	Rauma
66,776	686	940	370	51	4,812	115	4.9	66	410	37,898	12,136	35,029	10,864	39	Äänekoski
156	0.085	21	20	0	33	5.1	0.026	0.33	16	258	360	8,215	130	0.43	Svir
															Others [6]
244,376	**1,368**	**4,026**	**895**	**281**	**26,635**	**480**	**19**	**315**	**1,410**	**176,079**	**59,012**	**171,510**	**29,006**	**198**	**Total**

METSÄ WOOD

Mill	Country	Personnel				Production (1,000 m³)		Management systems			Chain of Custody			
		Number of employees [1]	Accident rate [2]	Sickness absenteeism % [3]	Organisational functionality index [4]	Wood products		ISO 9001	ISO 14001 [5]	OHSAS 18001	PEFC™	FSC®	CO_2 bio	CO_2 fossil
Eskola	Finland	12	0.0	5.4	8.6	sawn timber	53	x	x	x	x	x	0	0
Hartola	Finland	37	15.1	1.9	7.5	further processing	21	x	x		x		93	0
Kaskinen	Finland	15	0.0	1.5	8.9	further processing	22	x	x	x	x	x	11,883	0
Kyrö	Finland	67	8.4	2.6	8.1	sawn timber	200	x	x	x	x	x	20,541	391
Lappeenranta	Finland	72	23.6	3.6	8.3	sawn timber	216	x	x	x	x	x	23,432	0
Lohja	Finland	115	4.8	4.0	8.0	Kerto® LVL	80	x	x		x	x	0	0
Merikarvia	Finland	79	7.9	5.6	8.2	sawn timber	205	x	x	x	x	x	24,176	585
Punkaharju	Finland	449	13.9	5.3	7.8	Kerto® LVL and plywood	162	x	x	x[6]	x	x	0	0
Renko	Finland	72	0.0	2.0	8.2	sawn timber	259	x	x	x	x	x	24,340	282
Suolahti [7]	Finland	446	3.9	4.5	7.8	plywood	206	x	x	x	x	x	93,691	265
Vilppula	Finland	101	15.7	3.0	8.2	sawn timber	452	x	x	x	x	x	73,825	5,252
Boston	Great Britain	257	11.6	1.8	7.6	further processing	207	x	x	x	x	x	0	56
King's Lynn	Great Britain	38	25.3	1.4	7.7	further processing	121	x	x	x	x	x	0	0
Widnes	Great Britain	83	11.9	1.9	7.3	further processing	41	x	x	x	x	x	0	229
Others [8]		175												
Total		**2,018**	**9.7**	**3.5**	**8.0**		**2,245**						**271,981**	**7,059**

1)Full-time equivalent on 31 December 2015
2) Lost-time accident 1 frequency rate. Accidents at work per million worked hours.
3) % of theoretical working time
4) Organisational functionality indexes of Metsä Wood mills are calculated based on responses of production personnel.
5) ISO 14001 standard includes the Energy Efficiency System (EES).
6) OHSAS concerns only plywood production.
7) Emissions and water use from Kumpuniemen Voima's production are included in Suolahti mill's figures.
8) Includes personnel from sales operations and management.
Personnel figures of Others are included in Metsä Wood's total figures.

Metsä Wood's discharges to the water occur only in plywood production processes.

METSÄ FOREST

Country	Personnel				Wood procurement	Management systems		Chain of Custody	
	Number of employees [1]	Accident rate [2]	Sickness absenteeism % [3]	Organisational functionality index	1,000 m³	ISO 9001	ISO 14001	PEFC	FSC®
Estonia	29	0.0	0.3	8.8	1,424	x	x	x	x
Finland	569	5.1	1.5	8.2	22,837	x	x	x	x
Latvia	46	0.0	1.3	8.4	1,195	x	x	x	x
Russia, St. Petersburg	18	0.0	0.1	8.8		x[4]	x[5]	x	x
Russia, Podporozhye	208	7.9	2.7	8.3	2,400[6]	x[4]	x	x	x
Sweden	2	-	-	-	2,060	x	x	x	x
Others	5				65[7]				
Total	**877**	**5.2**	**1.7**	**8.3**	**29,981**				

- Not reported
1) Full-time equivalent on 31 December 2015
2) Lost-time accident 1 frequency rate. Accidents at work per million worked hours.
3) % of theoretical working time
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 from Lithuania.

FSC Licence Code FSC-C014476

			Discharges to water (t)					Water use (1,000 m³)		Waste (t)			Mill
Sulphur as SO_2	Nitrogen oxides as NO_2	Particles	COD	BOD	Total phosphorus	Total nitrogen	Total suspended solids	Water sourcing	Waste water flow	Recycling	Landfill	Hazardous	
0	0	0	0	0	0	0	0	0.31	0.043	2.8	0.50	0.050	Eskola
0	0.055	0.10	0	0	0	0	0	1.3	0.22	24	4.2	11.2	Hartola
0	12	12	0	0	0	0	0	17	1.7	25	192	0	Kaskinen
0.029	21	20	0	0	0	0	0	7.8	7.3	1,732	0	44	Kyrö
0	23	23	0	0	0	0	0	155	0.082	813	23	4.3	Lappeenranta
0	0	2.3	1.4	0.21	0.004	0.034	0.26	91	155	107	9.0	88	Lohja
0.043	25	24	0	0	0	0	0	12	7.6	2,406	39	3.8	Merikarvia
0	0	0	51	31	0.020	0.090	1.39	45	45	514	0	121	Punkaharju
0.021	24	24	0	0	0	0	0	11	5.1	175	11	6.1	Renko
0.019	93	121	35	59	0.77	0.87	22	1,218	50	291	96	69	Suolahti [7]
17	80	76	0	0	0	0	0	18	0	2,056	32	18	Vilppula
0	0.10	0	0	0	0	0	0	0	0	863	159	58	Boston
0	0	0	0	0	0	0	0	4.2	0	75	0	4.8	King's Lynn
0	0.41	0	0	0	0	0	0	0	0	237	44	0	Widnes
													Others [8]
17	**279**	**303**	**88**	**90**	**0.79**	**0.99**	**23**	**1,578**	**271**	**9,320**	**609**	**429**	**Total**

GRI INDEX

The Sustainability Report 2015 has been prepared according to the Global Reporting Initiative (GRI) G4 guidelines. Material indicators have been selected based on a materiality analysis. This table specifies where you will find more information on the GRI disclosures. Mitopro Oy has externally assured all indicators presented in the report. They have confirmed the report to comply with the GRI G4 "in accordance - Comprehensive" criteria.

AB Metsä Group Annual Brochure 2015
FS Metsä Group Financial Statements 2015
SR Metsä Group Sustainability Report 2015

Indicator		More information	UN Global Compact
	GENERAL STANDARD DISCLOSURES		
	STRATEGY AND ANALYSIS		
G4-1	Statement from the CEO	FS p. 2–3, SR p. 4–5	
G4-2	Description of key impacts, risks and opportunities	SR p. 10–13	
	ORGANISATIONAL PROFILE		
G4-3	Name of the organisation	SR and AB coverpages	
G4-4	Primary brands, products, and services	SR p. 4–5, 22–27, 32–39	
G4-5	Location of the headquarters	Metsä Group's headquarters is located in Espoo, Finland	
G4-6	Countries where the organisation operates	AB p. 21	
G4-7	Nature of ownership and legal form	SR p. 4–5	
G4-8	Markets served	SR p. 4–5	
G4-9	Scale of the reporting organisation	SR p. 4–5	
G4-10	Breakdown of workforce	SR p. 28–29	UNGC P6
G4-11	Collective bargaining agreements	SR p. 29	UNGC P3
G4-12	Description of supply chain	SR p. 40–49	
G4-13	Significant changes during the reporting period	FS p. 4–10, Report of the Board of directors, business development; SR p. 68	
G4-14	Addressing a precautionary approach	SR p. 12–13	
G4-15	Externally developed sustainability charters, principles, or other initiatives	SR p. 16–18	
G4-16	Memberships in associations	SR p. 16–18, www.metsagroup.com/sustainability	
	IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES		
G4-17	Entities included in the organization's consolidated financial statements or equivalent documents	FS p. 40–43, Note 14 Group structure	
G4-18	Process for defining the report content and the Aspect Boundaries	SR p. 14, 68	
G4-19	Material aspects identified	SR p. 14, 68. In total 38 GRI aspects were identified as material in our materiality analysis. All indicators for identified material aspects are reported.	
G4-20	Aspect Boundary within the organization	SR p. 68	
G4-21	Aspect Boundary outside the organization	SR p. 68	
G4-22	Explanation of the effect of any re-statements of information	Possible restatements in previous years figures are explained as notes in the data tables	
G4-23	Significant changes from previous reporting periods in the scope and aspect boundaries	No significant changes	
	STAKEHOLDER ENGAGEMENT		
G4-24	List of stakeholder groups engaged by the organization	SR p. 14–20	
G4-25	Basis for identification and selection of stakeholders	SR p. 14–18	
G4-26	Approaches to stakeholder engagement	SR p. 14–18	
G4-27	Responding to key topics and concerns resulting from stakeholder engagements	SR p. 14–18	
	REPORT PROFILE		
G4-28	Reporting period	1 Jan–31 Dec 2015	
G4-29	Date of the previous report	February 2015	
G4-30	Reporting cycle	Annual	
G4-31	Contact point for questions	sustainability@metsagroup.com, Twitter: @MetsaGroup	
G4-33	External assurance for the report	SR p. 69	
	GOVERNANCE		
G4-34	Governance structure	FS p. 86–92 Corporate Governance Statement	
G4-35	The process for delegating authority for sustainability topics	SR p. 19	
G4-36	Executive-level position or positions with responsibility for sustainability topics	SR p. 19	
G4-37	Report processes for consultation between stakeholders and the highest governance body	Stakeholder consultation is incorporated in the governance structure. There are also four personnel representatives in the Metsäliitto Cooperative's Supervisory Board	
G4-38	Composition of the highest governance body and its committees	FS p. 86–92 Corporate Governance Statement	
G4-39	Position of the Chair of the highest governance body	FS p. 86–92 Corporate Governance Statement	
G4-40	Nomination and selection processes for the highest governance body and its committees	FS p. 86–92 Corporate Governance Statement	
G4-41	Avoiding conflicts of interest	FS p. 86–92 Corporate Governance Statement	
G4-42	Role of the the highest governance body and senior executives in setting the purpose, values and strategy	SR p. 19	

Indicator		More information	UN Global Compact
G4-43	Measures taken to develop and enhance the highest governance body's knowledge of sustainability topics	SR p.19. Sustainability is at the Board agenda annually	
G4-44	Evaluating the highest governance body's performance with respects to sustainability topics	The Board of Directors prepare a self-assessment annually	
G4-45	Role of the highest governance body in the identification and management of economic, environmental and social impacts, risks, and opportunities	FS p. 86–92 Corporate Governance Statement	
G4-46	The highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics	FS p. 86–92 Corporate Governance Statement	
G4-47	Frequency of the highest governance body's review of sustainability topics	FS p. 86–92 Corporate Governance Statement	
G4-48	Highest committee or position to formally approve this report report and coverage of all material aspects	SR p. 19	
G4-49	Process for communicating critical concerns to the highest governance body	FS p. 86–92 Corporate Governance Statement	
G4-50	Nature and total number of critical concerns that were communicated to the highest governance body	SR p. 12–13, 19	
G4-51	Remuneration policies for the highest governance body and senior executives	FS p. 86–92 Corporate Governance Statement	
G4-52	The process for determining remuneration	FS p. 86–92 Corporate Governance Statement	
G4-53	Inclusiveness of stakeholders' views regarding remuneration	FS p. 86–92 Corporate Governance Statement.Stakeholder views are taken into account as part of the governance structure	
G4-54	Ratio of the annual total compensation for the organization's highest-paid individual to the median annual total compensation for all employees	SR p. 28	
G4-55	Ratio of percentage increase in annual total compensation for the organization's highest-paid individual to the median percentage increase in total compensation for all employees	SR p. 28	
	ETHICS AND INTEGRITY		
G4-56	Values, principles, standards and norms of behavior such as codes of conduct and codes of ethics	SR p. 16–17, 19	
G4-57	Internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity	SR p. 19–20	
G4-58	Internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity	SR p. 19–20	
	SPECIFIC STANDARD DISCLOSURES		
G4-DMA	General disclosures of management approach	SR p. 6–7, 10–21	
	ECONOMIC		
G4-EC1	Direct economic value generated and distributed	SR p. 10–11. Figures not presented in GRI table format	
G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	FS p. 69 Note 33 Environmental affairs	
G4-EC3	Coverage of the organization's defined benefit plan obligations	FS p. 49–52 Note 22 Retirement benefit obligations	
G4-EC4	Financial assistance received from government	SR p. 58	
	INDIRECT ECONOMIC IMPACTS		
G4-EC7	Development and impact of infrastructure investments and services supported	Due to developed infrastructure in our operating countries, no major in-kind or pro bono investments have been made in 2015	
G4-EC8	Significant indirect economic impacts, including the extent of impacts	SR p. 10–11	
	PROCUREMENT PRACTICES		
G4-EC9	Proportion of spending on local suppliers at significant locations of operation	SR p. 47	
	ENVIRONMENTAL		**UNGC P7-9**
	MATERIALS		
G4-EN1	Materials used by weight or volume	SR p. 53	
G4-EN2	Percentage of materials used that are recycled input materials	SR p. 53	
	ENERGY		
G4-EN3	Energy consumption within the organization	SR p. 54–55	
G4-EN4	Energy consumption outside of the organization	No figures available. Most important sources: raw material and product transport, purchased pigment and chemical production	
G4-EN5	Energy intensity	SR p. 54–55	
G4-EN6	Reduction of energy consumption	SR p. 54–55	
G4-EN7	Reductions in energy requirements of products and services	SR p. 54–55	
	WATER		
G4-EN8	Total water withdrawal by source	SR p. 52–53	
G4-EN9	Water sources significantly affected by withdrawal of water	SR p. 13, 52–53	
G4-EN10	Percentage and total volume of water recycled and reused	No figures available. Water is continuously recycled in the process and used several times. At some mills cooling water is used as process water and water from board/paper mill process is used in pulp production	
	BIODIVERSITY		
G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	www.metsagroup.com/sustainability	
G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	SR p. 42–45, www.metsagroup.com/sustainability	
G4-EN13	Habitats protected or restored	SR p. 42–25, www.metsagroup.com/sustainability	
G4-EN14	Iucn red list species and national conservation list species with habitats in areas affected by operations	Not material to Metsä Group	

Indicator		More information	UN Global Compact
	EMISSIONS		
G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	SR p. 54–55, 58	
G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	SR p. 54–55, 58	
G4-EN17	Other indirect greenhouse gas (GHG) emissions (Scope 3)	No figures available. Most important sources: raw material and product transport, purchased pigment and chemical production	
G4-EN18	Greenhouse gas (GHG) emissions intensity	SR p. 54–55	
G4-EN19	Reduction of greenhouse gas (GHG) emissions	SR p. 2, 54–55	
G4-EN20	Emissions of ozone-depleting substances (ODS)	Not material to Metsä Group	
G4-EN21	NO_x, SO_x, and other significant air emissions	SR p. 53–55, 58–59	
	EFFLUENTS AND WASTE		
G4-EN22	Total water discharge by quality and destination	SR p. 53	
G4-EN23	Total weight of waste by type and disposal method	SR p. 57	
G4-EN24	Total number and volume of significant spills	SR p. 58–59	
G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel convention2 Annex I, II, III, VIII,	Not material to Metsä Group	
G4-EN26	Water bodies and related habitats significantly affected by the organization's discharges of water and runoff	SR p. 58–59	
	PRODUCTS AND SERVICES		
G4-EN27	Mitigation of environmental impacts of products and services	SR p. 34–37	
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category	SR p. 32–37	
	COMPLIANCE		
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	SR p. 59	
	TRANSPORT		
G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations	SR p. 48–49	
	OVERALL		
G4-EN31	Total environmental protection expenditures and investments by type	SR p. 54–55, FS p. 69, Note 33 Environmental affairs	
	SUPPLIER ENVIRONMENTAL ASSESSMENT		
G4-EN32	Percentage of new suppliers screened using environmental criteria	All new suppliers must approve our Supplier Code of Conduct, which includes environmental criteria	
G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	SR p. 47. No significant negative impacts have been identified	
	ENVIRONMENTAL GRIEVANCE MECHANISMS		
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	SR p. 19–20, 58–59	
	SOCIAL		
	SUB-CATEGORY: LABOR PRACTICES AND DECENT WORK		UNGC P6
	EMPLOYMENT		
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region	SR p. 28–29. Regional breakdown by gender is not considered material	
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part time employees, by significant locations of operation	Not material as 93.5% of all employees are on permanent contracts	
G4-LA3	Return to work and retention rates after parental leave by gender	Not material as the work contracts continue unchanged after the parental leave	
	LABOR/MANAGEMENT RELATIONS		
G4-LA4	Minimum notice periods regarding operational changes	We comply with local agreements and legislation in redundancy situations	
	OCCUPATIONAL HEALTH AND SAFETY		
G4-LA5	Workforce represented in formal joint management–worker health and safety committees that help monitor and advise on occupational health and safety programs	Local occupational health and safety committees cover 100% of our employees in all main operating countries	
G4-LA6	Type and rates of injury, occupational diseases, lost days, and absenteeism and total number of work-related fatalities, by region and by gender	SR p. 30–31. Business area breakdown provided. Geographical breakdown not considered material	
G4-LA7	Workers with high incidence or high risk of diseases related to their occupation	Not material in Metsä Group's operations	
G4-LA8	Health and safety topics covered in formal agreements with trade unions	SR p. 28–31	
	TRAINING AND EDUCATION		
G4-LA9	Average hours of training per year per employee by gender, and by employee category	SR p. 29. The training is reported in days per year	
G4-LA10	Programs for skills management and lifelong learning that support the continued employ-ability of employees and assist them in managing career endings	SR p. 29, 31	
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	SR p. 29. Breakdown and gender not considered material as all employees are entitled to a Personal Development Appraisal (PDA)	
	DIVERSITY AND EQUAL OPPORTUNITY		
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership	SR p. 28	
	EQUAL REMUNERATION FOR WOMEN AND MEN		
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, and signifi-cant locations of operation	SR p. 28	
	SUPPLIER ASSESSMENT FOR LABOR PRACTICES		
G4-LA14	Percentage of new suppliers that were screened using labor practices criteria	All new suppliers must approve our Supplier Code of Conduct, which includes criteria on labour practices	
G4-LA15	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken	SR p. 42–47. No significant negative impacts have been identified	
	LABOR PRACTICES GRIEVANCE MECHANISMS		
G4-LA16	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms	SR p. 20, 29–31. No numeral value reported	

Indicator		More information	UN Global Compact
	SUB-CATEGORY: HUMAN RIGHTS		UNGC P1, P2
	INVESTMENT		
G4-HR1	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	SR p. 46–47. There were no such investments in 2015 which required a specific human rights impacts assessment	
G4-HR2	Employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	SR p. 19–20. Coverage of the Code of Conduct training reported	
	NON-DISCRIMINATION		UNGC P6
G4-HR3	Total number of incidents of discrimination and corrective actions taken	SR p. 20. There were no official charges on discrimination in 2015	
	SUPPLIER HUMAN RIGHTS ASSESSMENT		
G4-HR10	Percentage of new suppliers that were screened using human rights criteria	All new suppliers must approve our Supplier Code of Conduct, which includes criteria on human rights	
G4-HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	SR p. 44–47. No negative impacts have been identified	
	HUMAN RIGHTS GRIEVANCE MECHANISMS		
G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms	No reported grievances	
	SUB-CATEGORY: SOCIETY		
	LOCAL COMMUNITIES		UNGC P1
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	SR p. 10–11	
G4-SO2	Operations with significant actual and potential negative impacts on local communities	SR p. 10–13	
	ANTI-CORRUPTION		UNGC P10
G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	SR p. 20, FS p. 86–92. Corporate Governance Statement. Anti-corruption included in the Internal Audit's risk assessment procedures	
G4-SO4	Communication and training on anti-corruption policies and procedures	SR p. 19–20	
G4-SO5	Confirmed incidents of corruption and actions taken	SR p. 20	
	PUBLIC POLICY		UNGC P10
G4-SO6	Total value of political contributions by country and recipient/beneficiary	SR p. 18	
	ANTI-COMPETITIVE BEHAVIOR		
G4-SO7	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	SR p. 20	
	COMPLIANCE		
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	SR p. 20	
	SUPPLIER ASSESSMENT FOR IMPACTS ON SOCIETY		
G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society	All new suppliers must approve our Supplier Code of Conduct, which includes criteria on impacts on society.	
G4-SO10	Significant actual and potential negative impacts on society in the supply chain and actions taken	SR p. 44–47. No significant negative impacts have been identified	
	GRIEVANCE MECHANISMS FOR IMPACTS ON SOCIETY		
G4-SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms	No reported grievances	
	SUB-CATEGORY: PRODUCT RESPONSIBILITY		
	CUSTOMER HEALTH AND SAFETY		
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	SR p. 36–37	
G4-PR2	Incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	No incidents reported in 2015	
	PRODUCT AND SERVICE LABELING		
G4-PR3	Product information	SR p. 22–27, 32–39	
G4-PR4	Non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	No incidents reported in 2015	
G4-PR5	Results of surveys measuring customer satisfaction	Not reported on Group level	
	MARKETING COMMUNICATIONS		
G4-PR6	Sale of banned or disputed products	Metsä Group does not sell banned or disputed products	
G4-PR7	Non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes	No incidents reported in 2015	
	COMPLIANCE		
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	No incidents reported in 2015	

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.

The Sustainability Report 2015 has been prepared according to the Global Reporting Initiative (GRI) G4 guidelines. We have selected the indicators that are the most relevant to our operations, products and stakeholders based on an assessment of the most significant sustainability issues for the company and its stakeholders. The report also covers major permit violations, claims, compensations and topics related to the Group that have gained public attention or may have caused a reputation risk in environmental, HR management, or ethical business practices.

The Sustainability Report 2015 presents Metsä Group's approach to sustainability management and detailed performance indicators. The separate Annual Brochure 2015 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 the data have been externally assured by an independent third party, Mitopro Oy. Read more about the assurance process on page 69.

TECHNIQUES IN MEASURING ENVIRONMENTAL DATA

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

- Only material flows to and from industrial sites are included.
- Discharges to water through external wastewater 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 wastewaters and the reduction of our BOD binds nitrogen to biomass thus reducing the plant's total nitrogen emission.
- The emissions of external wastewaters treated at our wastewater 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.

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_X 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_X 0.0041. The greenhouse effect only consists of carbon dioxide emissions and has a coefficient of 1. The biogenic CO_2 emission coefficient for wood based fuels of 101 kg CO_2/MWh has been used.

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 use of 1 MWh of electricity is double the value compared to the use of 1 MWh of heat. Scope 2 CO_2-emissions include emissions from purchased heat and electricity. Purchased heat emissions are calculated using actual fuel consumption and CO_2 emission data of the energy plants at the site. Allocation method used is the same as explained above. Emissions from purchased electricity are calculated using coefficients for national average electricity. In Finland the emission coefficient is calculated according to Metsä Group's specific electricity procurement consisting of several different electricity sources.

The figures for BOD emissions do not include those from Husum mill. The measurement is not required by the authorities and is thus not taken anymore. Waste volumes are reported including the moisture. The use of temporary waste storage before final disposal at some mills gives some variations to the waste figures depending on how much waste is channelled to temporary storage and how much is taken from there on each year. Waste figures include volumes to final disposal (including material/ energy recovery, landfill, and hazardous waste disposal). Part of this volume comes straight from the mill process and a part is from the temporary storage. Waste volumes from mill process to temporary storage are not included.

TECHNIQUES IN MEASURING HR DATA

The data gathering and calculation coverage follows that of the financial accounting with the following amendments:

- The coverage of the employee data was 99% of employees. Employee data excludes statistics from Hangö Stevedoring.
- However the number of employees, sickness absenteeism, work accident absenteeism and lost time accident frequency rate (LTA1 fr) cover 100% of the employees. The number of employees is reported as full-time equivalent (FTE). The sickness absenteeism % and work accident absenteeism % are calculated per theoretical working hours. The lost time accident frequency rate (LTA1 fr) includes all accidents at work that have resulted in at least one disability day. The LTA1 fr is calculated as: accidents at work per million worked hours. Only accidents involving Metsä Group's personnel are included in the LTA1 fr indicator.
- The organisation functionality index is based on the results of the organisation functionality studies. The studies reflect the 26 defined Group-level topics that affect the functionality of the organisation, from which the overall level of organisation functionality is calculated for each company on a scale of four to ten. The organisational functionality research is conducted for 92% (2014: 100%) of the employees.
- The registered occupational disease data covers 100% of employees. The calculation has been changed in 2015 according to the decision date.
- The share of women in management includes women in the Board of Directors, the Executive Management Team and the business area's management teams at the end of the year.
- New entries only include new permanent employees. Leavers only include permanent employees who left Metsä Group. Employee turnover includes all permanent leavers and redundancies as a result of the restructuring of the businesses, and is calculated against the average permanent head count.

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 2015 ("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 an independent external assurance, 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 the Global Reporting Initiative Guidelines (G4); and
- the compliance with the Global Reporting Initiative G4 in accordance criteria at the Comprehensive level

RESPONSIBILITIES

Metsä Group's Management is responsible for the preparation of the Report and the performance data and statements presented therein, which the Board of Directors of Metsäliitto Co-operative 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 4.0 and Metsä Group's own internal reporting guidelines.

ASSURANCE PROVIDER'S INDEPENDENCE AND COMPETENCE

We have conducted our assessment as independent and impartial from the reporting organisation. 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 team consists of competent and experienced sustainability reporting experts, who have the necessary skills to perform an assurance process.

BASIS OF OUR OPINION

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.

Our opinion is based on the following procedures performed:

- Interviews with twelve senior management representatives from Metsä Group and Business Areas to gain an understanding of the major impacts, risks and opportunities related to Metsä Group's sustainability agenda.
- Assessment of the procedures Metsä Group has in place to ensure the inclusivity of stakeholder engagement processes, the identification of material stakeholder expectations and the responsiveness to stakeholder concerns.
- 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.
- Review of data sources, data generation and reporting procedures at Metsä Board Kaskinen mill in Finland, Metsä Tissue Düren in Germany and Metsä Wood Boston in the United Kingdom.

CONCLUSIONS

ADHERENCE TO AA1000 ACCOUNTABILITY PRINCIPLES

Metsä Group has made a commitment to active stakeholder dialogue. Metsä Group has stakeholder engagement processes in place in order to understand stakeholder expectations and to response stakeholder concerns. The material topics presented in the Report correspond to stakeholder interests and major economic, environmental and social impacts in Metsä Group's value chain. It is our opinion that the Report gives a fair and balanced view on the material topics and stakeholder interests; and that Metsä Group adheres in its sustainability practices to the AA1000 Accountability Principles of inclusivity, materiality and responsiveness.

SUSTAINABILITY PERFORMANCE DATA

We have reviewed the basis of the sustainability information provided in the Report. It is our opinion that the Report provides adequate information of Metsä Group's sustainability performance and the information is presented in accordance with the reporting criteria.

GRI IN ACCORDANCE CRITERIA

The Report complies with the GRI G4 "in accordance – Comprehensive" criteria.

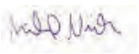
OBSERVATIONS AND RECOMMENDATIONS

Based on our review, we present the following observations and recommendations, which do not affect the conclusions presented above.

- In Metsä Group, there is a solid foundation for sustainability with competent people and integration to day-to-day management. Operational sustainability through tangible actions and targets is a strength of Metsä Group. Metsä Group is well positioned to enhance sustainability in the whole value chain. We encourage Metsä Group to continue utilizing this opportunity in the business development and investments on sustainable technologies, new concepts and solutions for the bioeconomy.
- Metsä Group has developed its processes on stakeholder engagement and opened new dialogues during the year. This is supporting the future sustainability agenda and preparedness to changes in external environment. We recommend Metsä Group to further intensify the dialogue and cooperation with stakeholder especially in local value creation.
- Metsä Group has made good progress towards the Group-level sustainability targets. Positive development continued in several areas. During 2015 Metsä Group has set a new target to sustainability of the main logistics flows and a revised target for process water use. We encourage Metsä Group to continue this kind of target-setting.

Helsinki, Finland, 19th February 2016

Mitopro Oy



Mikael Niskala
Independent Sustainability Expert

Tomi Pajunen
Independent Sustainability Expert

AA1000
Licensed Assurance Provider
000-182

Make the most of Metsä

METSÄ GROUP
P.O. Box 10
FI-02020 METSÄ, FINLAND
Tel. +358 10 4601
www.metsagroup.com/sustainability

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