



Metsä Board
Annual and Sustainability Report 2022



A stack of paperboards is shown in a light blue, monochromatic setting. A large sheet of paperboard is being pulled out from the stack, creating a curved, fan-like shape. The background is a soft, light blue gradient. The text is positioned on the left side of the image.

The world needs
solutions that support
the circular economy,
and fresh fibre
paperboards
meet this need.

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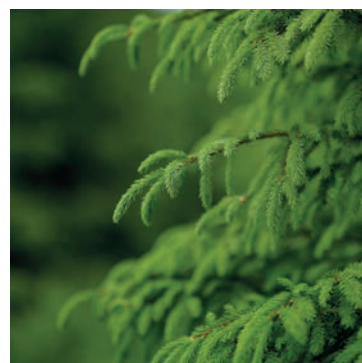


9

In line with our strategy, we invest in sustainable growth.

16

We help our customers achieve their sustainability targets.



20

The mitigation of climate change, promotion of the bioeconomy and the circular economy, and resource efficiency are strong drivers of our operations.

34 and 41

To achieve our climate and water targets by the end of 2030, we have mill-specific plans for investments and measures.



This is Metsä Board

We focus on premium fresh fibre paperboards and are a forerunner in sustainability. Our strategy is to grow in fibre-based packaging materials and renew our industrial operations.

Focus on sustainable fresh fibre paperboards

We focus on premium and recyclable fresh fibre paperboards, that help our customers reduce their plastic use. Our paperboards are mainly used in consumer packaging and in retail packaging solutions where demand is rather stable, regardless of the economic situation.

Strong position in a growing market

We are a leading producer of folding boxboard and white kraftliners in Europe, and globally the biggest producer of coated white kraftliners. In the USA, we are the largest supplier of folding boxboard. We expect the global demand for paperboards to grow faster, at an annual rate of around 5%, compared to other packaging materials.

A forerunner in sustainability

Our products support the circular economy and they have a smaller carbon footprint compared to many other packaging materials. Our future growth is based on more efficient use of resources and raw materials. Our target is fossil free production and products by the end of 2030.

Investing in sustainable growth

Our ongoing and planned investments respond to the growing demand for sustainable packaging materials. We are continuously modernising our industrial operations to further strengthen our competitiveness. We have a clear road map to implement our ambitious sustainability targets. This includes investments and explorations of alternative raw materials in cooperation with our partners.

We are part of the profitable Metsä Group and benefit from the good availability of our main raw material, northern wood. Our self-sufficiency in pulp guarantees the consistent and high quality of the fibre and enables the growth of our paperboard business.

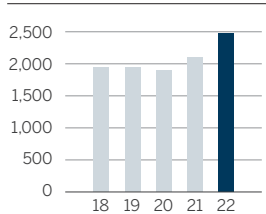
METSÄ GROUP The parent company Metsäliitto Cooperative is composed of over 90,000 Finnish forest owners.		Sales EUR 7.0 billion		
WOOD SUPPLY AND FOREST SERVICES (Metsä Forest)	METSÄ WOOD Wood Products	METSÄ FIBRE Pulp and sawn timber	METSÄ BOARD Paperboard	METSÄ TISSUE Tissue and greaseproof papers
OWNERSHIP Metsäliitto Cooperative 100%	Metsäliitto Cooperative 100%	Metsäliitto Cooperative 50.1% Metsä Board 24.9% Itochu Corporation 25.0%	Metsäliitto Cooperative 50.2*% (68.2% of votes) The company is listed on Nasdaq Helsinki.	Metsäliitto Cooperative 100%
METSÄ SPRING Innovation company				

* Information based on flagging release on 30 December 2022

A record year 2022

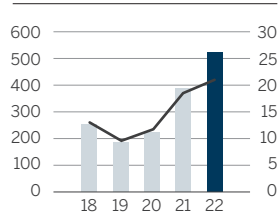
SALES

EUR million



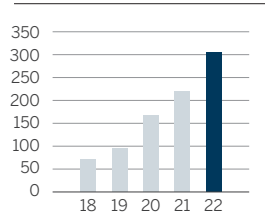
COMPARABLE OPERATING RESULT

EUR million
% of sales



TOTAL INVESTMENTS

EUR million

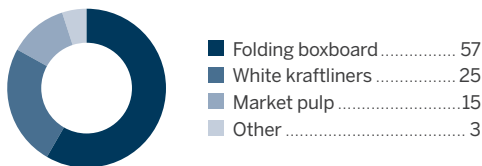


Our strong financial position lays the foundation for our future growth. Interest-bearing net debt/comparable EBITDA

0.2
Target < 2.5

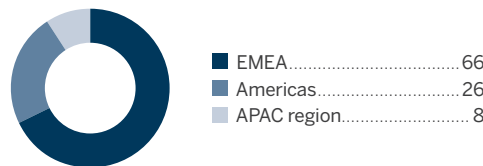
SALES SPLIT BY PRODUCT

% of sales



SALES SPLIT BY REGION

% of sales



Source: Metsä Board's estimates

In 2022, we produced **1.9** million tonnes of paperboard and **1.4** million tonnes of pulp and BCTMP

We are **2,248** Metsä Board employees in **17** countries

We have **8** production units in Finland and Sweden and deliver products to approximately **100** countries

Our customers include international brand owners, packaging converters, manufacturers of corrugated products and merchants

We procure wood from forests where renewal and biodiversity are safeguarded. Of all the wood fibre we procure, certified wood fibre accounts for **83%**
Target > 90% by the end of 2030

Our sustainable investments are moving us closer to fossil free operations. The share of fossil free energy of our total energy consumption is **87%**
Target: 100% by the end of 2030

Our ambitious targets strengthen our position as a forerunner in sustainability



[Read more on page 22](#)

Record result in a challenging business environment

We achieved an excellent result in 2022, and our financial position at the end of the year was strong. We continued our sustainability efforts to mitigate climate change and helped our customers lower their use of plastic and reduce the carbon footprint of their packages. All this builds a strong foundation for future growth, which we seek through our sustainable and profitable investments.

For Metsä Board, 2022 was an exceptional year in many ways. As a paperboard company, we achieved a record result in a challenging business environment that proved difficult to predict. Our sales were nearly EUR 2.5 billion, and our comparable operating result was EUR 521 million. At 20.9%, our return on capital employed exceeded our long-term target by a wide margin. Our result improved especially thanks to the higher prices of fresh fibre paperboards supported by a favourable currency effect. Successful price increases exceeded the rapid cost inflation. In addition, the profitability of Metsä Fibre, our associated company, was boosted by the higher market pulp prices.

The past year was overshadowed by Russia's war against Ukraine, which is continuing in 2023. In addition to human suffering, Russia's military operations triggered the most severe energy crisis in Europe's recent history, making energy self-sufficiency a significant competitive factor for many companies. Metsä Board's energy self-sufficiency is at a high level, which offers stability to our operations. The new recovery boiler and turbine that started up at the Husum pulp mill in December, will increase the production of bioenergy and take us closer to our goal of entirely fossil free production by the end of 2030.

Valuable recognition of our sustainability efforts

During the year, we continued our long-term work to promote sustainability. For the second year in a row, we secured a place on the 'A' List in all of CDP's three environmental focus areas: climate change mitigation, water security and forest protection. Only 12 out of 15,000 companies achieved the same excellent result. In EcoVadis's evaluation, we were in the top 1% among paper, paperboard and packaging manufacturers, receiving full points in the environment section. These acknowledgements reflect our role as a forerunner in sustainability and the systematic work that

everyone at Metsä Board carries out to achieve our goals. Since 2022, the personal performance goals of all Metsä Board employees have included at least one sustainability objective, which in my case concerns safety at work.

Our strategy has proven its success

Our strategy has proved its sustainability and success in a challenging market situation, and we will continue its systematic implementation – growing sustainably in fibre-based packaging materials. In recent years, we have strengthened our market position in premium fresh fibre paperboards and have met the quickly increasing demand for recyclable packaging materials that can replace plastic in our main markets – Europe and North America. In 2023, our paperboard capacity will increase following the completion of our investments in folding boxboard in Husum and kraftliner in Kemi. To continue our sustainable growth, we have launched pre-engineering for a new folding boxboard mill with an annual capacity of 800,000 tonnes in Kaskinen. A potential investment decision could be made in 2024 at the earliest.

Resource efficiency helps us reduce the environmental impact of packaging

Our resource-efficient paperboards made of renewable raw material have a smaller carbon footprint than many other packaging materials, and they are an excellent match to circular economy needs. Packaging design carried out in cooperation with our customers helps us continuously reduce the amount of packaging material and waste.

Resource and production efficiency play a key role in the pre-engineering for the new folding boxboard mill in Kaskinen. We aim for the world's most resource-efficient paperboard mill, with



“ Our resource-efficient paperboards made of renewable raw material have a smaller carbon footprint than many other packaging materials, and they are an excellent match for circular economy needs.

world-class competitiveness and a product concept that enables carbon footprint reduction. By utilizing the best available technology, the consumption of raw materials, energy and water per tonne of folding boxboard produced can be significantly reduced compared to our current production units.

Strong financial position supports growth

Our strong financial position creates a firm foundation for future and planned growth investments in fibre-based packaging materials. In addition to our financial and sustainability targets, our decision making is guided by our long-term goal of increasing

shareholder value. Metsä Board's Board of Directors proposes that a dividend of EUR 0.58 per share be distributed for 2022. The proposal is in line with our dividend policy and reflects confidence in our future success.

Our excellent performance in a volatile operating environment is proof not only of a well-functioning strategy but also of a competent and motivated personnel. I wish to thank all our employees for their great work and all our customers and other partners for their good cooperation.

Mika Joukio
CEO

Highlights in 2022

In 2022, Metsä Board delivered a strong financial result. We continued the systematic implementation of our strategy and cooperation with our customers to create packaging solutions that support the circular economy.



Pre-engineering for the world's most resource-efficient paperboard mill started

Metsä Board started pre-engineering work for a new folding boxboard mill, with an annual capacity of approximately 800,000 tonnes, at the Kaskinen mill site in Finland. Read more on p. 9

Innovating for circularity

Golf ball packaging takes on a second life as an insect hotel. The innovative packaging was a result of a co-creation workshop at Metsä Board's Excellence Centre. In total 45 co-creation workshops were organised with customers and partners during the year. Read more on p. 16.





Solutions for plastic reduction and recyclability

Metsä Board's dispersion coated barrier paperboard helped several brands, including the U.S.'s fastest growing cookie company, Crumbl Cookies, to reduce plastic and lightweight their packaging. Sales of dispersion coated barrier board have grown rapidly, and the aim is to increase its share up to half of the Kyrö mill's production capacity in 2023. Read more on p. 16.

Recognitions for systematic work for sustainability

Metsä Board was recognised again with an outstanding triple CDP 'A' score for its environmental leadership in climate change, water security and forests. Only 12 companies achieved a triple 'A' out of nearly 15,000 companies scored.

Metsä Board was again awarded Platinum rating by EcoVadis for the company's sustainability and corporate social responsibility, scoring the full 100/100 in the Environment section for the first time.

Metsä Board won for the second time both the Finnish Circular Economy Award and the Finnish Quality award in the Excellence Finland assessment using the international EFQM model. Read more on p. 21.



Renewal of the Husum pulp mill is an important step towards our goal of 100% fossil free production

The new recovery boiler and turbine, started up in December, will increase the bioenergy production of Husum pulp mill and improve the integrate's electricity self-sufficiency. Read more on p. 9.



Our strategy highlights solutions that promote the circular economy

We are a leading European producer of premium fresh fibre paperboards and a forerunner in sustainability. Our decision making is guided by our profitability and sustainability targets and the ambition to increase shareholder value. Our goal is to maintain a strong financial position and distribute a competitive dividend to our owners.

Purpose

Advancing the bioeconomy and circular economy by efficiently processing northern wood into first-class products.

Vision

Preferred supplier of innovative and sustainable fibre-based packaging solutions, creating value for customers globally.

Strategy

We grow in fibre-based packaging materials and renew our industrial operations.

Values

- Reliability
- Cooperation
- Responsible profitability
- Renewal

Megatrends

Urbanisation

Biodiversity loss

Population growth

Climate change

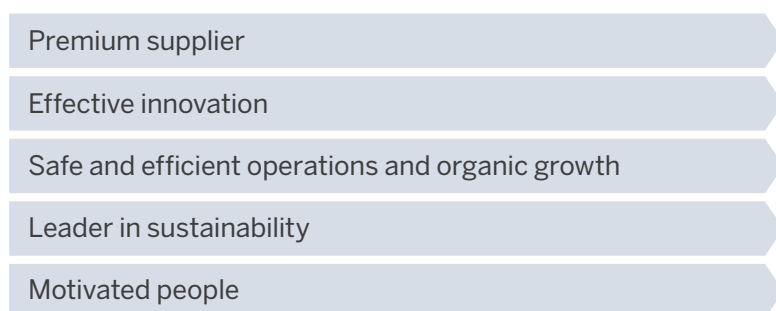
Digitalisation

Operating environment supports growing demand for fresh fibre paperboards

- Population growth, urbanisation and rising living standards drive packaging
- Global e-commerce continues to grow
- Availability and quality of recycled fibre is declining
- Regulation and consumer preferences favour fossil free packaging materials
- The requirements of the circular economy become more specific and drive the development of the industry

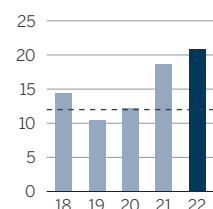
Our strategic programmes

We implement our strategy through five strategic programmes that drive sustainable growth in fibre-based packaging materials and industrial efficiency.



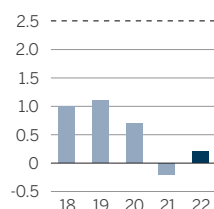
Our financial targets

COMPARABLE RETURN ON CAPITAL EMPLOYED
%



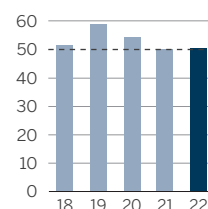
---- Target > 12%

INTEREST-BEARING NET DEBT / COMPARABLE EBITDA



---- Target < 2.5

DIVIDEND / NET RESULT



---- Target > 50%

We invest in sustainable and profitable growth

Metsä Board has significant investments underway and in the pipeline to achieve sustainable growth in fibre-based packaging materials. In line with our strategy, we are also renewing our industrial operations to further strengthen our competitiveness. By using the best available technology, we improve our production and resource efficiency and reduce the carbon footprint of our products.

We will increase the annual production capacity of folding boxboard at the Husum integrated mill by some 200,000 tonnes and of white kraftliners at the Kemi paperboard mill by some 40,000 tonnes. We expect both investments to be completed in the second half of 2023.

The new recovery boiler and turbine of the Husum pulp mill started up at the end of 2022. This increased the mill's bioenergy production and considerably improved the integrate's energy self-sufficiency. In the renewal's second phase, during the 2020s, an investment decision will be made concerning the renewal of the mill's fibre line. The renewal will strengthen the Husum integrate's role as an efficient and sustainable platform for the long-term development of paperboard production and is an important step towards our target of entirely fossil free mills.

In the autumn of 2022, we initiated a pre-engineering process for the new Kaskinen paperboard mill, with an annual capacity of 800,000 tonnes. A potential investment decision will be made in 2024 at the earliest. The planning of the new mill is based on fossil free production, world-class resource and production efficiency, and a product concept that reduces carbon footprint.



Read more on Metsä Board's investments at metsagroup.com/metsaboard/investors/metsa-board-as-an-investment/investments/

We create value and well-being, with respect for nature

We help our customers achieve their sustainability targets with our paperboards and our expert services that support the circular economy. We are continuously looking for opportunities to grow profitably and sustainably, and to generate value for our stakeholders with our operations.

Resources

People and partnerships

- 2,248 employees in 17 countries
- 25 apprentices
- Active cooperation with local communities and educational institutions

Production and supply chain

- More than 3,600 suppliers
- 8 production units in Finland and Sweden
- Deliveries to approximately 100 countries

Natural resources

- 8.3 million m³ of sourced wood of which 83% is certified
- Total energy consumption 12.0 TWh of which 87% is fossil free
- Water intake 110 million m³
- 355,000 dry tonnes of purchased pigments, adhesives and other raw materials

Intangible assets

- R&D expenditure EUR 6 million
- An Excellence Centre in Äänekoski, Finland, and a satellite centre in Norwalk, the United States
- Recognition for premium quality paperboards

Economic capital

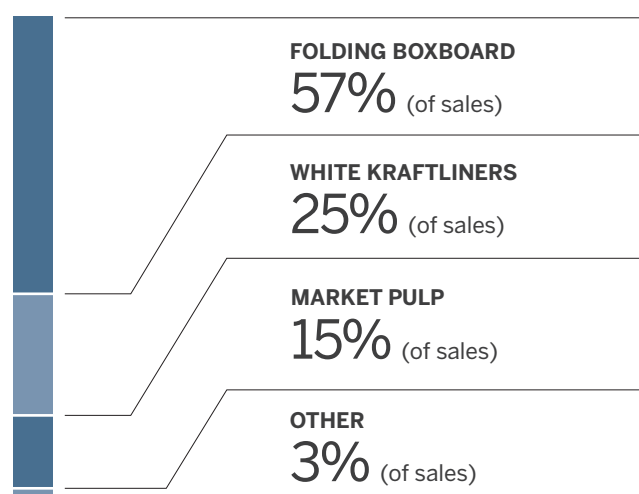
- Capital invested EUR 2.7 billion
- 57,000 shareholders in B series and 10,000 in A series

Business model

We produce resource-efficient fresh fibre paperboards from renewable raw materials, which support the principles of the circular economy and offer an alternative to fossil-based packaging materials. We are part of Metsä Group, and benefit from its unique value chain, from pure northern fibre to premium end products. We have high energy self-sufficiency, and our holding in our associated company Metsä Fibre ensures our over self-sufficiency in pulp. Our production is located in Finland and Sweden, and we have sales around the world. Our main markets are Europe and North America.

OUR SALES IN 2022

EUR **2,480** million



Outputs

Sustainable products and services

- 1.9 million tonnes of premium fresh fibre paperboards
- 1.4 million tonnes of pulp and BCTMP
- 5 service entities that generate benefits throughout the packaging value chain (360 Services)
- Common stock service improves availability and enables fast delivery to the customer

Emissions and side streams

- Fossil-based CO₂ emissions 383,000 tonnes (Scope 1 and 2, market-based)
- 96% of the used water is returned to the waterbodies after treatment
- More than 99% of production side streams are used as materials or energy

Impacts

Customers

- Recyclable and sustainably produced products with a smaller carbon footprint
- Innovative and material-efficient packaging solutions that help reduce the use of plastic
- Customer satisfaction NPS (Net Promoter Score) 34

Suppliers

- EUR 2.0 billion purchases from suppliers
- 99% of suppliers are committed to the Supplier Code of Conduct
- 15% of target group suppliers have set their own SBTi targets

Personnel

- EUR 217 million paid to employees as wages and benefits
- 100% of the personnel have completed the Code of Conduct training

Shareholders

- A sustainable investment; several recognitions from ESG evaluations conducted by third parties
- EUR 206 million distributed to shareholders of the parent company as dividends
- 20.9% comparable return on capital employed

Common value creation

- Taxes to be paid EUR 96 million
- Total investments EUR 304 million
- Aiming for a 100% fossil free future, with science-based targets



Further information on taxes on **p. 167**

Business environment

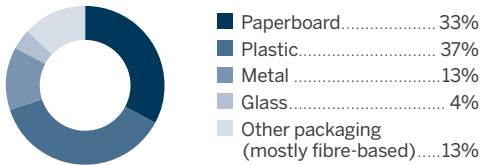
Paperboard is the fastest growing packaging material

Paperboard accounts for around a third of the global packaging market, and it is expected to experience faster growth than other packaging materials – an average annual rate of 5%. The main growth drivers include the consumers’ increasing environmental awareness, which favours recyclable packages, and the ease of packaged food in daily life.

The value of the global packaging market is around USD 1 billion

Annual growth is approximately 4% (2021–2026).

THE GLOBAL PAPERBOARD PACKAGING MARKET VALUE BY MATERIAL



Source: Smithers Information

Paperboard demand is influenced by long-term trends

REGULATION

Regulation seeks to reduce the negative impacts of climate change, the increasing amount of waste and loss of biodiversity.

EASE

To make everyday life easier, consumers shop online and buy ready meals.

PLASTIC REDUCTION

Brand owners and retailers are setting ambitious goals for making packages reusable, recyclable and compostable by 2025.

APPROPRIATENESS

Packages help protect products and thereby prevent waste generation while avoiding over-packaging.

BRAND PROMOTION IN E-COMMERCE

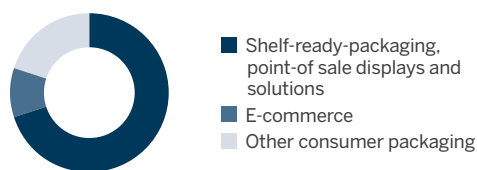
Positive unboxing experiences are becoming increasingly important, leading to more branding inside boxes.

Metsä Board's paperboards are especially used in food packaging, which is more defensive in nature

END USES OF FOLDING BOXBOARD



END USES OF WHITE KRAFTLINERS



Source: Metsä Board's estimates

Consumers prefer recyclable packaging, policymakers drive reusability

According to Euromonitor, 66% of consumers try to have a positive impact on the environment through their everyday actions. Reducing plastic is the top measure taken, followed by reducing food waste, recycling items, and using sustainable packaging. Recyclability is seen as the key sustainability feature for a sustainable packaging. (source: Euromonitor International Global Lifestyles Survey 2022)

With a recycling rate of 82%, paper packaging is the most recycled packaging material in the EU, while the plastic recycling rate is 38%. (Source: Eurostat)

Reusability is favored in EU's waste hierarchy, although many third-party certified LCA studies show that reuse or refill is not always the best option for the climate and environment.

The main purpose of packaging is to protect products, thereby preventing waste. Packaging accounts for only 5% of the total global food system greenhouse gas emissions. (Source: the UN and the EC)

Consumers responded to the inflationary environment of 2022

Rapid inflation has reduced consumers' purchasing power and forced them to reconsider their consumption habits.

The demand for packaged food has remained stable. Consumers have moved to less expensive products and private label products and are opting for discounters. Purchases of durables and luxury products are being postponed.

Despite the pressure to save, the majority of consumers are eager to catch up on experiences they missed out during the pandemic.

Strong position in a growing market

Paperboard market

Metsä Board has an established position in its main markets – Europe and North America. It is a leading producer of folding boxboard and white kraftliners in Europe and the largest supplier of folding boxboard in the US. In 2022, demand for folding boxboard and white kraftliners was strong, especially in the first half of the year, and the average paperboard prices improved. Among other

things, demand was boosted by the pandemic-induced consumption shift from services to packaged goods and concerns about the availability of packaging materials. Demand began to normalise towards the end of the year. In the long term, the increasing demand for sustainably produced fresh fibre paperboards used to replace plastic is expected to continue.

Metsä Board's paperboards have several growth drivers in its main market areas in Europe and North America



AMERICAS



EMEA



APAC

Regional emphasis

Continued growth in North America

Maintaining strong market position in Europe

Focus on high quality packaging in selected end use segments

Paperboard deliveries in 2022

• share of all deliveries by region

28%

68%

4%

• delivery volumes

503,000 tonnes

1,239,000 tonnes

75,000 tonnes

Demand outlook for folding boxboard and white kraftliners

- Limited local availability of lightweight high-quality folding boxboards and coated white kraftliners
- Demand growth for recyclable and/or compostable food and food service packaging made from renewable raw materials
- Demand growth for retail-ready packaging in stores
- Promotion and differentiation of brands in growing e-commerce

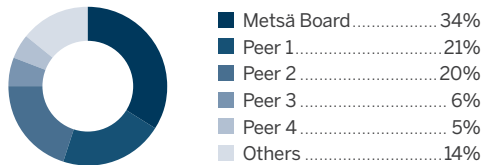
- Environmental awareness and regulation support the demand for recyclable packaging materials
- Food safety requirements favour pure fresh fibre paperboards
- Demand growth for retail-ready packaging in stores
- Growth of e-commerce
- Weakened availability and higher price of recycled fibre

- Growth of the middle class increases consumers' purchasing power and demand for packaged products
- China's import ban on recycled fibres increases demand for pulp and fresh fibre paperboards

Metsä Board is Europe's largest producer of folding boxboard and white kraftliners

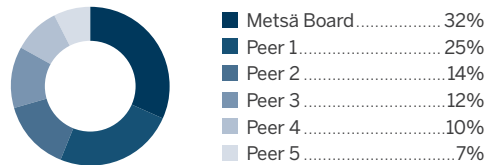
PRODUCERS OF FOLDING BOXBOARD IN EUROPE

Total capacity 4.0 million tonnes



PRODUCERS OF WHITE KRAFTLINERS IN EUROPE

Total capacity 2.1 million tonnes (excl. Russia)



Metsä Board is the biggest producer of coated white kraftliners globally.

Sources: the companies' websites, RISI, Metsä Board's own estimates

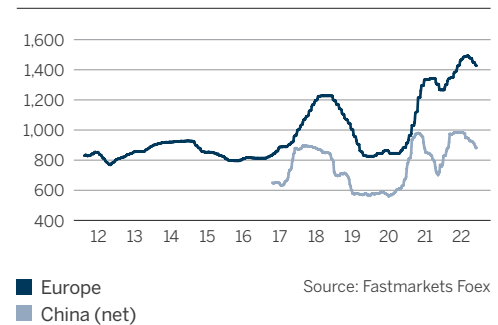
Pulp market

Megatrends drive long-term demand for sustainably produced pulp

Globally, about 181 million tonnes of pulp made from fresh fibre is used each year, of which 112 million tonnes is pre-integrated into e.g. paper or board production. The remainder, 69 million tonnes, is sold to the market, and consists mainly of bleached softwood and hardwood pulp. Demand and prices for pulp can vary from year to year and are influenced, among others, by the general economic situation. In the long term, megatrends such as urbanisation and emerging economies will support demand for sustainably produced pulp. Demand growth will be sustained by the development of tissue and packaging board products. Also new products, such as pulp-based textile fibres will play an increasingly important role in the future. Market pulp supply has been limited in recent years by logistical bottlenecks and a number of planned and unplanned production stoppages.

SOFTWOOD PULP PRICE DEVELOPMENT IN EUROPE AND CHINA

USD/tonnes



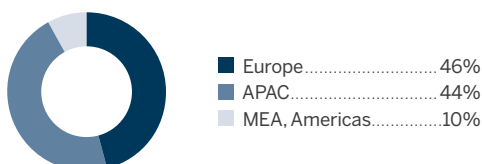
Metsä Board's associated company Metsä Fibre is a leading producer of market softwood pulp (NBSK)

Metsä Board aims to be self-sufficient in pulp, which ensures consistently high quality in paperboard production. Metsä Board produces chemical pulp and bleached high-yield pulp (BCTMP), which are used in our own paperboard production and sold as market pulp. In addition, Metsä Board has 24.9% holding in its associated company Metsä Fibre, which is a leading producer of wood-based bioproducts such as pulp, sawn timber, biochemicals and bioenergy. Metsä Fibre's annual capacity is approximately

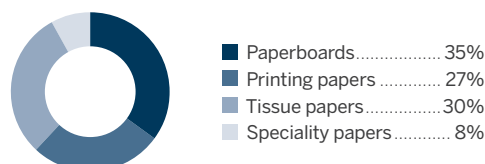
3.3 million tonnes of pulp and 1.8 million cubic metres of sawn timber. The pulp produced by Metsä Board and Metsä Fibre is primarily softwood pulp.

Metsä Fibre is constructing a new bioproduct mill in Kemi. Its annual capacity is approximately 1.5 million tonnes of softwood and hardwood pulp. The mill is expected to be completed in 2023, and it will replace the current pulp mill in Kemi, which has an annual capacity of around 610,000 tonnes.

METSÄ FIBRE'S PULP SALES BY MARKET AREA, %



METSÄ FIBRE'S PULP DELIVERIES BY END USE, %



Our R&D aims for recyclability and resource efficiency

Promoting the goals of the circular economy drives the development of packaging materials throughout the packaging sector's value chain. The requirements for packages are increasing, and cooperation among all the value chain operators is important.

Metsä Board has been an active participant in the 4evergreen alliance, covering the entire packaging value chain, since its establishment. The goal of 4evergreen is to make all fibre-based packaging recyclable by 2025 and raise the recycling rate in the EU from the current 82% to 90% by 2030. In 2022, 4evergreen published packaging design guidelines, as well as instructions for collecting and sorting fibre-based packaging and for assessing the recyclability of packaging. They support the recycling of fibre-based packaging and promote the competitiveness of fibre-based packaging against other packaging materials.

Aiming for world-class resource efficiency and a reduced carbon footprint

Ensuring and developing the recyclability and compostability of paperboards is one of the key goals of our product development process. In the fibre-based packaging material circular economy, our task is to provide the market with premium fresh fibre paperboards as resource-efficiently as possible, help replace fossil-based materials and reduce the carbon footprint of packaging.

We continue to focus on lightweighting of paperboard and developing recyclable protective barrier coatings for use in food packaging. Our competence in lightweighting of paperboards plays a key role in the pre-engineering of the Kaskinen folding boxboard mill, launched in 2022, which builds on fossil free production and significantly lower consumption of wood, energy and water per tonne of folding boxboard produced, compared to current production units. We aim for world-class resource efficiency and a product that enables the reduction of the carbon footprint.

We are developing the resource efficiency of all our mills and make use of artificial intelligence. For example, at the Äänekoski paperboard mill, we can now locate the reason for process disruptions much faster thanks to new AI technology. The technology analyses the underlying causes of visual defects detected by AI based machine vision and looks for deviations among the 10,000 variables measured at the mill, also accounting for process delays. This helps target the right corrective measures more quickly, reducing the time lost due to disruptions.

In the biobarrier programme launched in 2021, we continued to study new alternative products for reducing plastic. Several

Large-scale material savings

While delicious gourmet cookies have made Crumbl Cookies the fastest-growing cookie company in the United States, its signature pink boxes have helped establish the firm as a social media sensation. Founded five years ago, Crumbl Cookies now has more than 600 U.S. locations, using hundreds of thousands of cookie boxes per week. By switching to Metsä Board's lightweight dispersion barrier board, Crumbl was able to reduce the weight of the package by 32% and reduce its carbon footprint by more than 50%.





The 3D Muoto® innovation replaces plastic

Metsä Group's 3D fibre product has been produced at Metsä Group's and Valmet's demo plant in Äänekoski since May 2022. Using brand new technology, the products are pressed from wood fibre into their final form and their properties can be tailored during the production process according to the intended purpose. Ready-to-use three-dimensional Muoto products are suitable for such applications as food packaging. If the market interest and product viability can be proved on a large scale, Metsä Group will consider building a larger production unit.

potential products are being tested in the laboratory, and some proceeded to production testing last year. In accordance with our product development process, the prerequisites for sales and production will first be determined before making decisions about commercialisation.

In 2022, we established a systematic development programme for reducing the use of all fossil-based raw materials. As part of this, we work with suppliers to find ways to reduce the carbon footprint of the raw materials we purchase. We have set as our goal that by the end of 2030, all the solutions and polymers developed for paperboards will be based on fossil free raw materials.

Deeper customer cooperation

We used our 360 Services to further strengthen our customer relationships. The services cover five areas: Sustainability Service; Packaging Design Service; Technical Service; R&D Service; and the Supply Chain and Digital Service.

We helped our customers, for example, with life-cycle assessments of packaging, data-based comparisons of the environmental

impacts of different materials, and with concrete packaging solutions for improving recyclability and material efficiency. In 2022, we organised 45 packaging development workshops at our Excellence Centre in Äänekoski.

Metsä Group and Fortum's ExpandFibre programme promoting the circular bioeconomy continued in 2022. Among other things, the programme focused on organising cooperation with packaging design companies and packaging technology companies and developing solutions to packaging challenges identified in development workshops. One example of these efforts was the modernisation of the pastry packaging used by bakeries, with Viipurilainen Kotileipomo as the pilot company. The packaging was developed with usability, ecology and layout in mind. The result was a pastry package that is easy to assemble, and that reduces the need for material by 25% and carbon dioxide emissions by roughly 34%.



Mitigating climate change,
promoting biodiversity,
using resources efficiently,
and developing a
responsible corporate
culture and supply chain
are at the core of our
sustainability efforts.



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ESG Sustainability management



At Metsä Board, sustainability is based on compliance with good corporate governance, bearing social and environmental responsibility, respecting business ethics and human rights, as well as the continuous improvement of operations with respect to all of the above. In addition to our own operations, we also expect sustainability from our suppliers, customers and other partners.

Sustainability governance model

At Metsä Board, the realisation of sustainability is monitored and supported by the company's Board of Directors, CEO and Corporate Management Team. Sustainability is incorporated in the company's strategy, long-term business and investment plans, risk assessments and annual action plans approved by the Board of Directors.

The CEO is responsible for the implementation of the sustainability measures per instructions provided by the Board. In accordance with the annual plan, the CEO presents to the Board a review of environmental matters and a sustainability review focusing on the progress towards sustainability targets twice a year, as well as the reviews of work safety and R&D once a year. The company's Corporate Management Team prepares sustainability-related matters before the CEO presents them to the Board. The Board discusses and approves the sustainability matters presented by the CEO, including the sustainability targets and related investment plans, and monitors their implementation annually.

Of the members of the Corporate Management Team, the Senior Vice President, Development, is responsible for research, product and business development, and sustainability. The SVP, Development, participates in Metsä Group's Sustainability Process Management Team and reports on the realised results of the sustainability measures to the Sustainability Process Management Team quarterly.

The CFO chairs Metsä Board's Risk Committee, which deals with sustainability-related risks as part of the company's general risk assessment. The results of the company's risk assessment, including risks related to sustainability, are presented to the Board and the Audit Committee twice a year. In addition, the Audit Committee handles biannually an information security review and annually a compliance report. Other sustainability issues, such as investment plans, are also presented to the Board and the committees as appropriate.

Metsä Board's Product Safety and Sustainability Director reports on the realisation of sustainability and development needs

Sustainability reporting is developing

When it enters into force, the new EU directive concerning sustainability reporting will have a major impact on corporate sustainability reporting. At Metsä Board, we have initiated preparations by adopting the ESG structure in our current sustainability report and by acquainting ourselves with the new reporting standards and verifying our key sustainability information. We have also adopted a reporting tool that enables the digital and machine-readable reporting of both financial and sustainability information.

"There will be a stronger link between sustainability reporting and financial reporting. For example, Metsä Board reports on its climate impact, but it must also consider climate-related risks from a business perspective," says **Henri Sederholm**, CFO.



to the company's SVP, Development, and presents topical sustainability matters to the entire Corporate Management Team on a regular basis. The Product Safety and Sustainability Director leads a team of experts, which works in close cooperation with production, wood supply, procurement and logistics, HR, marketing and sales, communications, investor relations and legal affairs. Wood supply, as well as sourcing and legal affairs, is centralised in Metsä Group. Sustainability is part of the entire personnel's daily work. We also expect sustainability from our suppliers, customers and other partners. Further information on sustainability governance can be found on pages 52–57.

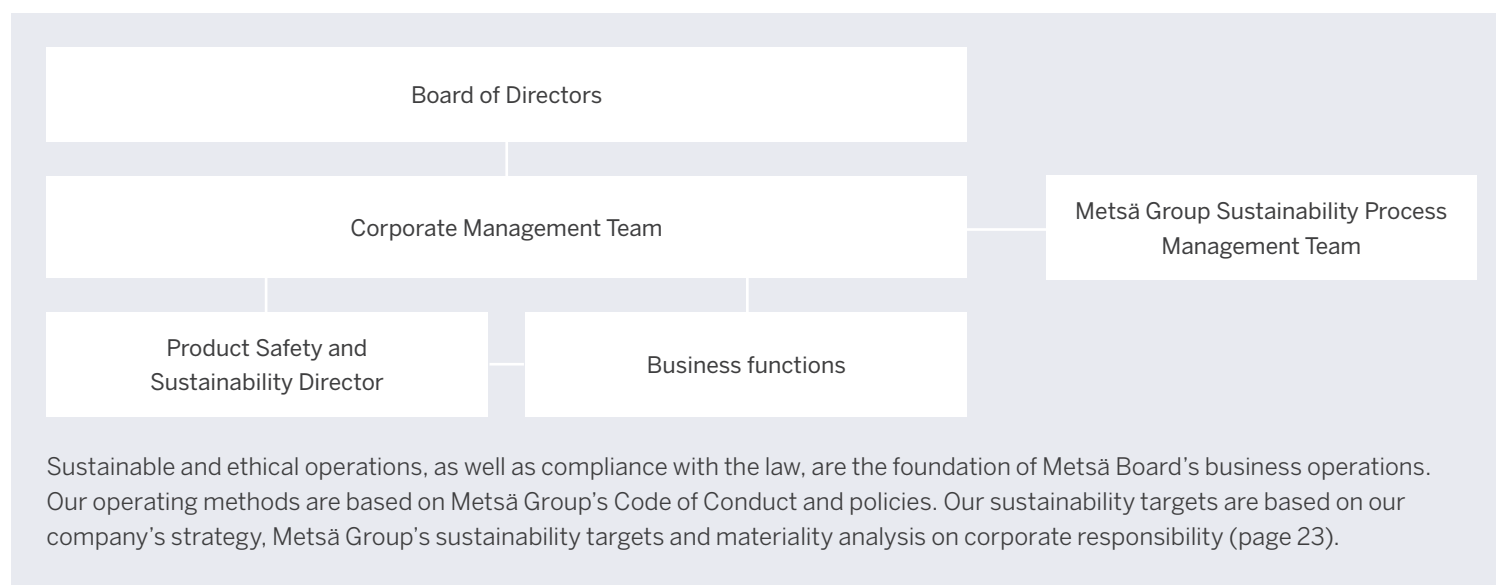
The link between sustainability and remuneration

The personal performance bonus target of each Metsä Board employee includes an ESG target. The CEO's remuneration is

based on Metsä Board's operating result (weighting 50%) and the strategic targets defined by the Board of Directors (weighting 50%), including the sustainability targets, as well as the realisation of Metsä Group's EBIT multiplier. In 2022, the CEO's sustainability target was related to safety at work.

The remuneration of the other members of the Corporate Management Team is based on Metsä Board's operating result (weighting 30% or 50%), the targets of their respective areas of responsibility (weighting 50% or 70%), including the sustainability targets, as well as Metsä Group's EBIT multiplier. In 2022, the sustainability targets of the other Corporate Management Team members related to the reduction of energy and water use, sustainability cooperation with customers, and the development of sustainable products, for example.

SUSTAINABILITY MANAGEMENT AT METSÄ BOARD



ESG assessments

Metsä Board actively participates in the following ESG and sustainability assessments:

ESG ASSESSMENT	RATING	COMMENT	UPDATED
CDP	Climate Change: A Water Security: A Forests: A	Metsä Board is at the highest level in combating climate change and in the sustainable use of water and forests. The scale ranges from D to A.	Q4/2022
EcoVadis	87	Metsä Board is at the highest level, Platinum, which puts it among the top 1% in the paper, paperboard and packaging manufacturers category. The highest possible score in the assessment is 100.	Q2/2022
MSCI	AAA	Metsä Board is at the highest level. The scale ranges from CCC to AAA.	Q4/2021
Sustainalytics	14.6	Metsä Board has a low risk of experiencing significant financial impacts caused by ESG factors. A score of 0 indicates the lowest risk and 100 the highest risk.	Q3/2022
ISS ESG Corporate Rating	B-	Metsä Board is at Prime level. The scale ranges from D- to A+.	Q4/2022
ISS QualityScore	Environment: 2 Social: 6 Governance: 3	A score of 1 indicates the lowest governance risk and high-level sustainability reporting, while 10 is the weakest score.	Q4/2022
VigeoEiris, Moody's ESG Solutions	68	Metsä Board is on the Advanced level. The highest possible score in the assessment is 100.	Q3/2021
Circulytics®	B	Metsä Board is rated B in the Ellen MacArthur Foundation's Circulytics® assessment. The scale ranges from E to A.	Q4/2022

ESG Progress in our 2030 sustainability targets

In 2022, our successes included reducing fossil-based carbon dioxide emissions as well as positive developments in safety at work and the monitoring of supplier responsibility. Lower production in the last quarter of the year weighed on the full year performance in energy efficiency and process water use.

TARGET	TARGET 2030	ACTUAL 2022	PROGRESS
E – ENVIRONMENT			
Safeguarding biodiversity			
Share of certified wood fibre	>90%	83%	Below target
MG: Retention trees at regeneration sites	100%	95%	Below target
MG: Four high biodiversity stumps in harvesting sites	90%	90%	On target
Mitigating climate change and reducing emissions			
Fossil-based carbon dioxide emissions, tonnes (Scope 1 and Scope 2, market based)	0 t	383,098 t	Below target
Share of fossil free energy of total energy consumption	100%	87%	Below target
Share of target group suppliers have set SBTi targets by 2024* (Scope 3)	70%	15%	Below target
Fossil free raw materials and packaging materials, share of dry tonnes	100%	99.3%	Below target
MG: Area of regeneration and management of young stands from the 2018 level	100%	2.8%	Below target
MG: The amount of carbon stored in wood products from the 2018 level	+ 30%	-12.4%	Below target
Sustainable production and efficient use of resources			
Improvement in energy efficiency from the 2018 level	>+ 10%	2.7%	Below target
Reduction in the use of process water per produced tonne from the 2018 level	- 30%	- 12.2%	Below target
Utilisation of side streams	100%	99.9%	Below target
S – SOCIAL RESPONSIBILITY			
Responsible corporate culture and accident free working environment			
Ethics index in ethics barometer	100%	85%	Below target
Total Recordable Injury Frequency (TRIF) per million hours worked	0	6.7	Below target
G – SUSTAINABILITY GOVERNANCE			
Sustainable supply chain			
Suppliers' commitment to the Supplier Code of Conduct, share of total purchases	100%	99%	Below target
Supplier background check passed, share of total purchases	100%	96%	Below target
Supplier sustainability assessment passed, share of total purchases	100%	63%	Below target
Traceability of raw materials, share of total purchases	100%	97%	Below target

MG = Target at Metsä Group level

* 70% of our non-fibre suppliers and of the logistics operators related to our customer deliveries, measured as a share of our total purchases, would set themselves targets in accordance with the SBTi by 2024.



Progress in 2022 compared to the previous year.

Above target ■
On target ■
Below target ■

Material topics

We focus our sustainability work on the most material topics for us and our stakeholders. Metsä Group’s materiality assessment regarding sustainability was updated in autumn 2022, and Metsä Board will report according to the updated topics and targets starting with the reporting of 2023 data.

The process used for the materiality assessment consisted of three stages: identifying the material sustainability topics; prioritising them; and confirming them.

Sustainability frameworks and standards, regulatory requirements, trends, and Metsä Group’s strategy were used to identify the material sustainability topics. In addition, interviews with internal and external stakeholders were carried out to find out their expectations towards the company. The external stakeholders interviewed included customers, investors, goods and service suppliers, and NGOs.

The identified topics were prioritised in a workshop for Metsä Group’s management, where the significance of the topics’ impacts

on Metsä Board’s and entire Metsä Group’s business as well as the surrounding society, people and nature was assessed (so called double materiality). The seven material sustainability topics identified in the materiality assessment concern all Metsä Group’s business operations and account for the most significant impacts across the value chain.

Metsäliitto Cooperative’s Board of Directors confirmed the material topics and the sustainability 2030 targets at the beginning of the year 2023. We will report according to the updated topics and targets starting with the reporting of 2023 data.

Material sustainability topics

TOPIC	IMPACTS	INDICATORS FOR SUSTAINABILITY 2030 TARGETS
E – ENVIRONMENT		
1. Safeguarding biodiversity and ecologically sustainable forestry	We safeguard and enhance biodiversity by increasing the conditions required by species and preserving valuable habitats.	MG: 100% of regeneration felling sites have retention trees MG: 100% of harvesting sites have high biodiversity stumps MG: 0% young stand management have only spruce remaining MG: 10,000 actions to enhance biodiversity
2. Mitigating climate change and reducing emissions	We mitigate climate change and reduce fossil-based carbon dioxide emissions, minimising the environmental impact of products and ensuring that carbon is bound in forests and stored in wood products.	0 t fossil-based carbon dioxide emissions, (Scope 1 & 2) 70% of target group suppliers have set SBTi targets by 2024 (Scope 3) 100% fossil free raw materials and packaging materials MG: +30% forest regeneration and young stand management (ha. compared to 2018) MG: +50% forest fertilization (ha. compared to 2018) MG: +30% share of continuous cover forestry in peatlands MG: +30% amount of carbon stored in wood products (ha. compared to 2018)
3. Sustainable production and efficient use of resources	We use natural resources efficiently and reduce waste.	-35% process water use per tonne of production (m ³ /t, compared to 2018) 10% improvement in energy efficiency (compared to 2018) 0 t of process waste sent to landfills
S – SOCIAL RESPONSIBILITY		
4. Respecting everyone and doing the right thing	We do the right thing – we respect each other and value diversity.	100% implementation of ethics barometer measures 100% anonymous recruitment for open recruitment >30% women in management positions
5. Promoting safety and well-being at work	We promote safety across the value chain.	0 accidents at work (TRIF) AAA job satisfaction among personnel
G – SUSTAINABILITY GOVERNANCE		
6. Innovation and open-minded cooperation and 7. The impact of forest-based bioeconomy for society	We develop new wood-based products with partners. We know the origin of our raw materials. We favour responsible suppliers.	100% traceable raw materials >90% share of certified wood 100% commitment to Supplier Code of Conduct 100% core supplier assessments and audits 100% common sustainability targets with key partners

ESG The entire life cycle of fresh fibre supports the circular economy

By the principles of the circular economy, we continuously invest in the viability of forests and the resource efficiency of our processes, as well as in generating as little waste and emissions as possible and keeping materials in circulation for extended periods.

■ Inbound material flows

99% of raw materials are fossil free

Wood-based

• Wood used for self-produced pulp, million m ³	5.4	(5.2)
• Purchased pulp, 1,000 t*	558	(570)
• Wood used for purchased pulp, million m ³	2.9	(3.1)

Other

• Process chemicals, 1,000 t*	11.0	(8.6)
• Coatings, binders and pigments, 1,000 t*	315	(315)
• Packaging materials, 1,000 t*	30	(36)

* dry tonne

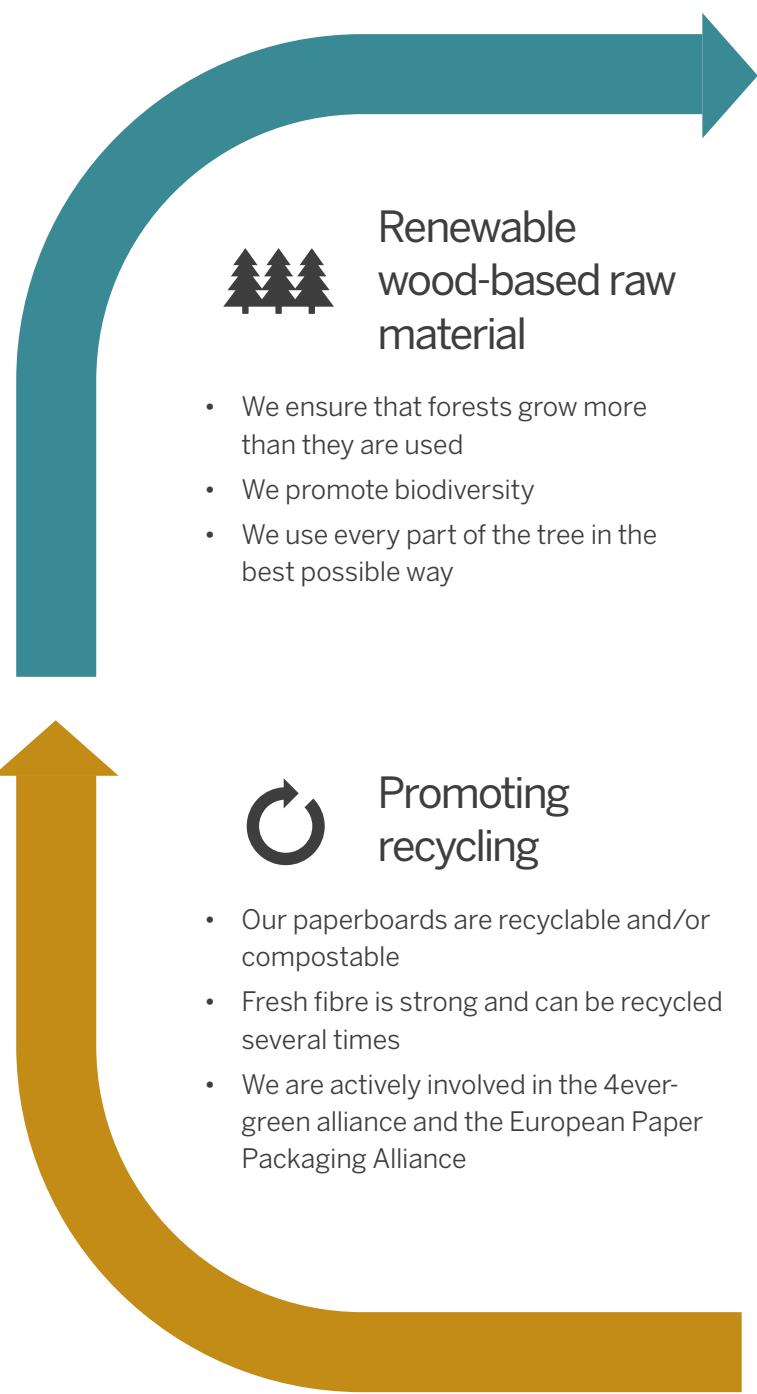
87% of the energy we use is fossil free

• Own fuel consumption, TWh	6.0	(5.4)
• Purchased electricity, TWh	5.2	(5.2)
• Purchased heat, TWh	0.8	(1.2)

Surface water accounts for nearly 100% of water use

• Surface water, 1,000 m ³	110	(115)
• Groundwater*, 1,000 m ³	0.07	(0.06)

* mainly for hygiene and laboratory



Renewable wood-based raw material

- We ensure that forests grow more than they are used
- We promote biodiversity
- We use every part of the tree in the best possible way



Promoting recycling

- Our paperboards are recyclable and/or compostable
- Fresh fibre is strong and can be recycled several times
- We are actively involved in the 4ever-green alliance and the European Paper Packaging Alliance



Resource-efficient production

- We progress towards fossil free production
- We use energy, water and materials efficiently and recycle them in the production process
- We utilise more than 99% of our production side streams in cooperation with our partners



Circulating paperboard solutions

- Paperboard is a clean and safe material
- We reduce the environmental impact of packaging with smartly designed packages that are suitable for their intended purpose, reduce the use of raw materials, replace plastic and are easy to recycle

■ Outbound material flows

Our products support the circular economy

- Paperboard, 1,000 t 1,890 (1,918*)
- Pulp and BCTMP, 1,000 t 1,409 (1,362)
- By-products recovered, 1,000 t 36 (50)
- Bioproducts, such as tall oil
- Bioenergy sold

* The 2021 figure has been revised.

Aiming for zero tonnes of fossil Scope 1 and 2 emissions

- Fossil-based CO₂ (Scope 1 + 2), 1,000 t 383 (439*)
- Fossil-based CO₂e (Scope 3), 1,000 t 1,817 (1,855)
- Biogenic CO₂, 1,000 t 1,951 (1,713)
- Other emissions: Sulphur and nitrogen compounds and particles. See figures p. 60.

* The 2021 figure has been revised.

Around 96% of the water is returned to waterbodies

- Treated wastewater, 1,000 m³ 58,740 (58,738)
- Cooling water 54,291 (57,486)
- Other emissions: COD, BOD, nitrogen and phosphorus compounds, solids, AOX compounds. See figures p. 60.

Side streams and waste mainly for recovery

- Waste to materials use, 1,000 t 60 (46)
- Waste to energy, 1,000 t 74 (60)
- Landfill waste, 1,000 t 0.16 (0.34)
- Hazardous waste, 1,000 t 0.96 (1.6)

ESG Environment



Our environmental operations are guided by the principles of our environmental policy, which concerns matters such as sustainable forest management, environmental responsibility, the continuous improvement of our operations, resource efficiency, stakeholder communication, and our suppliers’ sustainability. Forest use is guided by Metsä Group’s principles for forest use and management.

All Metsä Board production units have a certified ISO 9001 quality management system, ISO 14001 environmental management system, ISO 50001 energy management system, and an energy efficiency system (EES). All our operations are covered by the PEFC and FSC® certified Chains of Custody. In accordance with the systems’ requirements, we conduct regular risk assessments and internal and third-party audits of our operations.

All our mills have environmental permits issued by the authorities, which specify the maximum limits for discharges into

waterbodies and emissions into the atmosphere. The permits also set limits for environmental noise and minimum requirements for the monitoring of emissions and reporting on them.

We engage in continuous dialogue with our stakeholders. All major projects such as new production lines always include an environmental impact assessment, during which we hear the opinions of local residents and other stakeholders.

License codes: PEFC/02–31–92 and FSC®-C001580

Working together to promote the circular economy

In 2022, Metsä Group joined the global circular economy network of the Ellen MacArthur Foundation, which brings together companies, innovators, cities, universities and influencers. This cooperation supports our goal of being a forerunner in a fossil free circular economy.

“The circular economy is more than ramped-up waste management and recycling of end products. The goal is to optimise material, energy and information flows, and generate value across the entire value chain and system. This calls for a dialogue with operators of the value chain,” says **Maija Pohjakallio**, Metsä Group’s VP, Climate and Circular Economy.

For example, in Äänekoski, wood supply and forest services, as well as the operations of Metsä Board, Metsä Fibre, Metsä Spring and Metsä Wood come together with other companies to form an industrial ecosystem in which nearby production units benefit from one another.



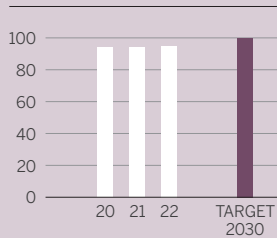
ESG Forest biodiversity and carbon storage

We aim for vibrant, diverse forests that store carbon efficiently and mitigate the impacts of climate change. We always require that the wood we use has a sustainable origin. Our wood supply and forest services provide forest owners with measures and services that promote biodiversity and strengthen forests' carbon storage and adaptation to climate change.

Indicators and progress

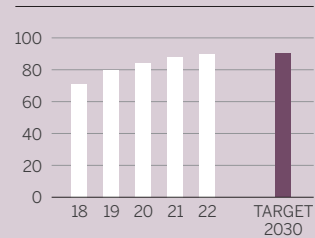
Metsä Group's goal is that in 2030, retention trees will be left on all regeneration felling sites, and four high biodiversity stumps per hectare will be made in 90% of thinning and regeneration felling sites.

RETENTION TREES AT REGENERATION FELLINGS
%



In 2022, retention trees were left on 95% (94) of Metsä Group's regeneration felling sites.

HIGH BIODIVERSITY STUMPS IN HARVESTING SITES, %

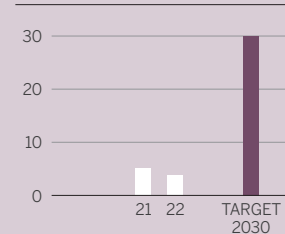


High biodiversity stumps were made on 90% (88) of Metsä Group's thinning and regeneration felling sites.

Metsä Group's goal is to increase the amount of carbon stored in forests by 30% compared to 2018. This will be achieved by increasing the area of newly established forests and the area covered by young stand management.

In 2022, Metsä Group increased the areas of newly established forests and those covered by young stand management by a total of 2.8% (3.8).

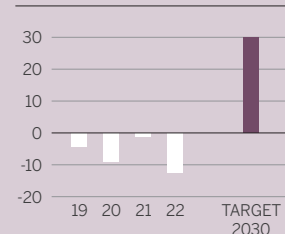
AREA OF REGENERATION AND MANAGEMENT OF YOUNG STANDS, %



Metsä Group aims to increase the amount of carbon bound in long-lived products such as construction materials by 30% compared to 2018.

Metsä Group's long-lived products produced in 2022 stored -12.4% less (-1.2) of carbon compared to 2018.

THE AMOUNT OF CARBON STORED IN WOOD PRODUCTS, %



■ Our operations

Sustainable forest use

The sustainable use of forests must account for all three pillars of sustainability – environmental, social and economic. Sustainable forest use creates wellbeing, mitigates climate change, maintains biodiversity and prevents deforestation. Wood fibre – the renewable raw material provided by forests – is an important alternative to fossil raw materials, and forest industry products play a significant role in the national economy of Metsä Board's home market: the forest industry generates roughly a fifth of Finland's export income from goods.

Metsä Board's mills are located in Finland and Sweden, which are Europe's most forested countries. Forests cover approximately 75% of Finland's and 69% of Sweden's surface area. In both countries, at least half of the forests are owned privately, by ordinary families, meaning that forests are a source of income for many people. This is why it is important for forest owners that their forests remain viable for future generations.

The volume of wood in Finnish and Swedish forests has increased in recent decades: the annual growth of forests surpasses the volume of felling and natural removal of trees. In 2016–2021, forest felling in Finland accounted for an average of 91% of the country's felling potential. However, the rate varied in different regions. In Northern Finland, 76% of the estimated felling potential was used, compared to 96% in Southern and Central Finland (Source: Natural Resources Institute Finland).

In both Finland and Sweden, the law states that a forest must always be regenerated after final felling. Forestry does not cause deforestation in our wood supply area. Instead, deforestation in our wood supply area in Finland and Sweden is caused by other types of land use, such as infrastructure construction.

The targets of Metsä Group's wood supply and forest services extending until the end of 2030 will help us increase the amount of carbon stored in the forests and long-lived wood products and promote the biodiversity of forests.

- In commercial forests: Our ecological sustainability programme focuses on increasing the carbon sinks of forests, as well as improving forest biodiversity and water protection related to forestry work.
- Outside commercial forests: Through its nature programme, Metsä Group provides financial support every year to development projects with a regional impact that promote biodiversity and improve the condition of waterbodies. At the end of 2022, the programme encompassed 16 projects, for which a total of EUR 600.000 had been granted in subsidies.

Promoting biodiversity

We ensure the sustainable origin of wood and promote biodiversity by using only traceable certified or controlled wood. Our goal is to increase our share of certified wood fibre from 83% at present to 90% by the end of 2030 (p. 54–57).



In 2021–2022, Metsä Group surveyed the species living in high biodiversity stumps. The results confirmed that high biodiversity stumps increased the number of species dependent on decaying wood in the forest. Compared to felled stumps, they were home to a significantly larger number of species. Moreover, all the discriminating species detected in the study were found in high biodiversity stumps. These included previously threatened beetle species, whose situation has since improved.

Metsä Group's key measures to increase biodiversity:

- We leave rare broadleaved trees in the forest. Since June 2022, we only accept pine, spruce and birch, as well as aspen with a diameter of less than 40 centimetres, in Finland. The tree species excluded from our wood supply account for three per cent of the volume of Finland's growing stock, but these rare species are significant in view of biodiversity and adaptation to climate change.
- We increase the amount of decaying wood in forests. Decaying wood is increased by retaining dead trees, leaving retention trees preferably in groups, and making high biodiversity stumps during thinning and regeneration felling. High biodiversity stumps are made by cutting a tree trunk at a height of 2–4 metres and leaving the upright stump to decay in the forest. Decaying wood is important for many birds, insects and fungi, some of which are threatened species.
- Mixed forests help us improve the biodiversity of forests and their resilience against storms and insect damage, for example. Metsä Group offers forest owners a forest renewal service in which both spruce and pine are planted in the same area. Broadleaved trees, such as birch, which spreads to stands naturally, must also be retained in forests.
- In line with our policy, we recommend nature management measures in herb-rich forests and voluntary protection of the best sites. We thus direct nature management measures to where they have the greatest impact on biodiversity. Herb-rich forests account for only 1–2% of the surface area of Finland's forests, but they are the primary home for approximately 45% of threatened forest-dwelling species.

- We leave protective thickets for animals at all stages of forest management. Protective thickets comprising different tree species are small, untended thickets that provide shelter and food for birds and mammals, thereby securing the habitats of forest-dwelling species.
- Buffer zones around waterbodies help promote biodiversity and prevent the runoff of soil and nutrients. A buffer zone is a strip along the waterbody where forest management measures are performed more lightly or omitted completely.
- The FSC nature site service helps target protection at the most valuable sites in terms of nature. The FSC nature site service means that Metsä Group offers valuable nature sites required by FSC forest certification to its owner-members who have joined the FSC group and whose own estates do not include such sites. In Finland, FSC forest certification requires that at least five per cent of the surface area of forestland on the forest estate is permanently excluded from forestry use.

Safeguarding carbon sinks

Thanks to forests growing, they act as carbon sinks and mitigate climate change. In sustainable forest management, a forest is regenerated swiftly after harvesting, using seedlings or seeds of Finnish natural tree species, which are rapidly growing and the most suitable for the site. By cleaning and thinning stands, more growth space can be created for the best trees. Forest fertilisation also boosts tree growth. The faster a new forest is established and the better the young trees are managed, the faster the stand develops into a carbon sink. Metsä Group aims to increase the amount of carbon stored in forests by actively offering forest management services to forest owners. We offer forest owners both periodic cover forestry, which includes regeneration felling

and forest regeneration, as well as continuous cover forestry, which means removing only some of the trees at a time. We recommend continuous cover forestry above all for peatlands. However, it is the forest owner who ultimately decides how their forest is managed.

Impact of regulation on forest use

There are several projects under way in the European Union with a direct and indirect bearing on the use of forests within our wood supply area. EU policies place a strong emphasis on the carbon sinks of forests and the safeguarding of biodiversity. The most holistic view of forest use is provided by the EU Forest Strategy, which aims to reconcile the diverse commercial use of forests, their role as carbon sinks, the climate benefits of wood-based products as well as the protection of forests and the safeguarding of their biodiversity. The EU Forest Strategy is not legally binding, but together with other EU initiatives and legislation, such as the Renewable Energy Directive, the Biodiversity Strategy for 2030, and the EU Taxonomy, it will steer the forest-related regulation of EU member states in the coming years.

The EU Forest Strategy acknowledges that forest industry products mitigate climate change by replacing materials whose production generates copious amounts of fossil-based emissions. At the same time, the further measures of the Forest Strategy, such as its policies regarding regeneration felling, may limit opportunities in the commercial use of forests.

From the forest industry's perspective, the effects of the EU Forest Strategy are indeed twofold, and it is possible that EU regulations with an impact on forest use will begin to limit the availability of wood. The role of member states and differences among forests across Europe should be considered when implementing the strategy.

We updated our goals and measures for promoting biodiversity

Metsä Group updated its 2030 objectives related to biodiversity in early 2023. Measures concerning forest nature will be diversified to support the goal of improving the state of nature. Key targets include diversifying the ratio of tree species, adding more decaying trunk wood and diversifying forest structure.

By the end of 2030, retention trees and high biodiversity stumps will be left on all felling sites. In young stand management, we will no longer create spruce forests of a single species.

In Finland, threatened species are primarily found on special sites. In addition to the recommended management measures for herb-rich forests determined in 2021, we have initiated management of ridge slopes and the controlled burning of retention trees. "By managing sunny and hot ridge slopes we can prevent overgrowth, which is a threat to species typical of such slopes. The burning of retention trees creates suitable conditions for the species of burnt areas and accelerates the formation of decaying wood important for biodiversity," says **Vesa Junnikkala**, Sustainability Director for Metsä Group's Wood Supply and Forest Services.



ESG Sustainable products

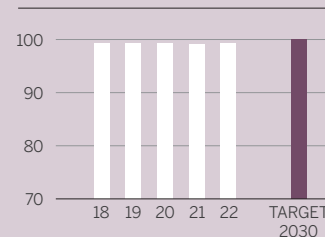
We aim for fully fossil free products and use natural resources as efficiently as possible in accordance with the principles of the circular economy. This reduces the climate and environmental footprints of our products.

■ Indicators and progress

We aim to use solely fossil free raw materials and packaging materials by the end of 2030.

In 2022, 99.3% (99.2) of our raw materials and product packaging materials per dry tonne were fossil free.

FOSSIL FREE RAW MATERIALS
%



■ Our operations

Fossil free products

Our main raw material, wood fibre, accounts for 93% of all our raw materials per dry tonne. In our paperboards, we also use raw materials based on natural minerals such as calcium carbonate, fossil oil-based materials such as latex, and especially in food service packaging also PE coating.

To replace fossil oil-based materials, we are continuing to develop systematic monitoring of the fossil share of all our raw materials, based on the data provided by our suppliers. We actively monitor the needs of our customers and the global markets and have conducted experiments and test runs of packaging materials using raw materials that can replace paperboard latexes and coatings currently in use.

Environmental impacts of products

The environmental impact of our products arises throughout their life cycle, including the production and procurement of raw materials, our own production processes, transports, further processing, and disposal after use. In the assessments of the environmental impact of our paperboards, we use life cycle analyses that help our

customers reduce the environmental impacts of their packaging through appropriate materials choices and packaging solutions. As well as this, the life cycle analyses help us further improve our products' environmental performance.

We always carry out our products' life cycle analyses and the comparisons between different materials in accordance with the ISO 14040 and ISO 14044 standards. Our calculations account for the environmental impact attributable to the production of raw materials and energy, sourcing and transports as well as our own production. In 2022, we published our first environmental product declaration (EPD), verified by an external party, which provides a transparent and comparable report of the life cycle analysis results of our paperboard product. The aspects most relevant in terms of paperboard packaging are the energy used in its production and the light weight of the paperboard itself. As we shift to the use of 100% fossil free energy in our paperboard production, the carbon footprint of our products will become even smaller. For example, according to an independent study, the climate impact of a paperboard box for cherry tomatoes is more than 80% smaller than that of a box made from recycled plastic (Natural Resources Institute Finland).

Our lightweight paperboards, made resource-efficiently and primarily from a renewable raw material, respond well to the needs of the circular economy. All our paperboards are recyclable, depending on the local recycling systems. By ensuring good packaging design and participating in initiatives supporting recycling, we aim for our products to be recycled after use. If recycling is impossible because of food residue or the like, composting is a good alternative for our paperboards. All Metsä Board paperboards

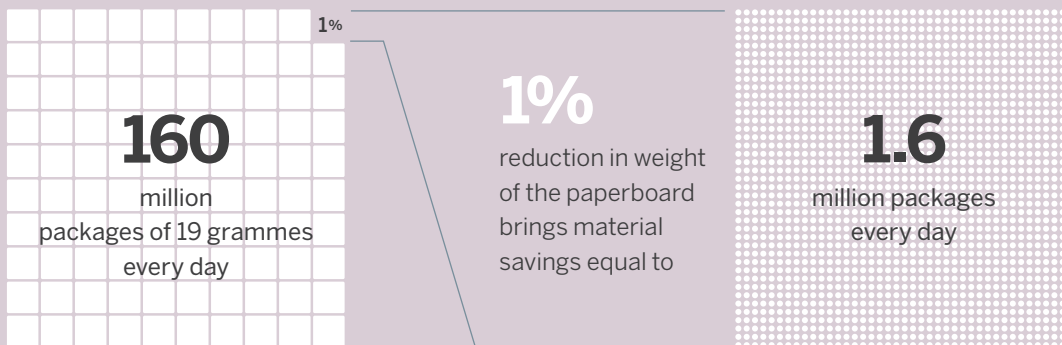
except for the PE-coated grades have been certified as industrially compostable in accordance with the DIN EN 13432 and ASTM D6400 standards. Some of our paperboard grades have also been certified as home compostable in accordance with the NF T 51-800 standard.

→ Read more about our product development and services **pp. 16–17**.

→ Read more about the traceability and risk management of our raw materials **pp. 50–51**.

Even a small reduction in weight has a big impact

Metsä Board's annual folding boxboard capacity is 1.3 million tonnes. This corresponds to



An easily recyclable package reduces carbon footprint

Belgian Ice Cream Group (BIG), part of the Baronie Group, decided to replace the PE-coated paperboard used in the trays holding its ice pralines with MetsäBoard Prime FBB EB, a dispersion-coated paperboard that is easy to recycle. This supports Baronie's goal of reducing packaging waste and improving the recyclability of packages.

The new package was designed and its environmental impacts analysed in collaboration with Metsä Board's packaging design and sustainability services. According to the life cycle analysis (LCA), the transfer to the dispersion-coated paperboard reduced the package's carbon footprint by 32%. In other



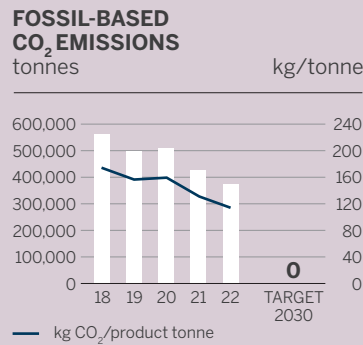
words, by replacing 100 tonnes of PE-coated paperboard with the dispersion-coated alternative, the annual carbon dioxide emissions were reduced by an amount equivalent to a 300,000-kilometre car trip. Thanks to the new tray weighing less, the amount of paperboard needed for an individual tray decreased by 5%, and eliminating the PE coating reduces the use of plastic.

Climate and energy

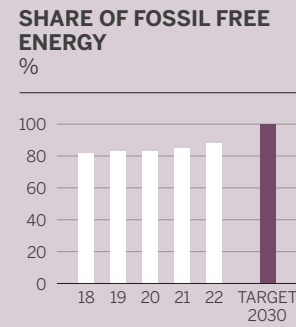
To mitigate climate change, we will reduce the fossil carbon dioxide emissions from our production to zero, use energy more efficiently and commit our suppliers to setting reduction targets for their emissions.

Indicators and progress

By the end of 2030, we aim to reduce our direct and indirect fossil-based carbon dioxide emissions (Scopes 1 and 2) to zero and increase our share of fossil free energy to 100%. Our goal has been approved by the Science Based Targets initiative (SBTi), and it meets the strictest requirements of the Paris Agreement, which aims to limit global warming to 1.5 degrees.

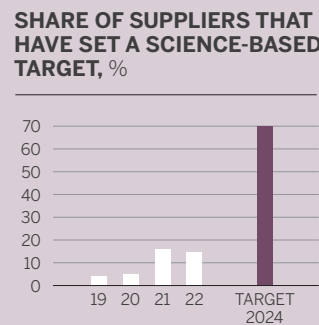


Since 2018, we have reduced our fossil-based CO₂ emissions (Scopes 1 and 2, market-based) by 33% (23) per tonne produced.



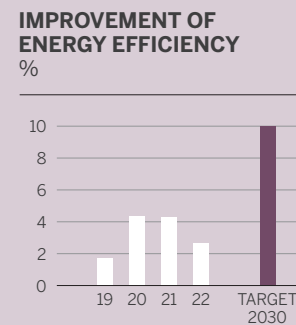
In 2022, fossil free energy accounted for 87% (85) of our energy mix.

As for our value chain (Scope 3), our goal approved by the SBTi is that 70% of our non-fibre suppliers and the logistics operators related to our customer deliveries, measured as a share of our total purchases, set themselves targets in accordance with the SBTi by 2024.



By the end of 2022, 15% (16) of our suppliers belonging to the target group had set targets in accordance with the SBTi.

Our goal is to improve our energy efficiency by at least 10% compared to the 2018 level by 2030.



By the end of 2022, our energy efficiency had improved by 2.7% (4.3) compared to our base year of 2018. Lower production in the last quarter of the year reduced energy efficiency.



Our operations

Greenhouse gas emissions

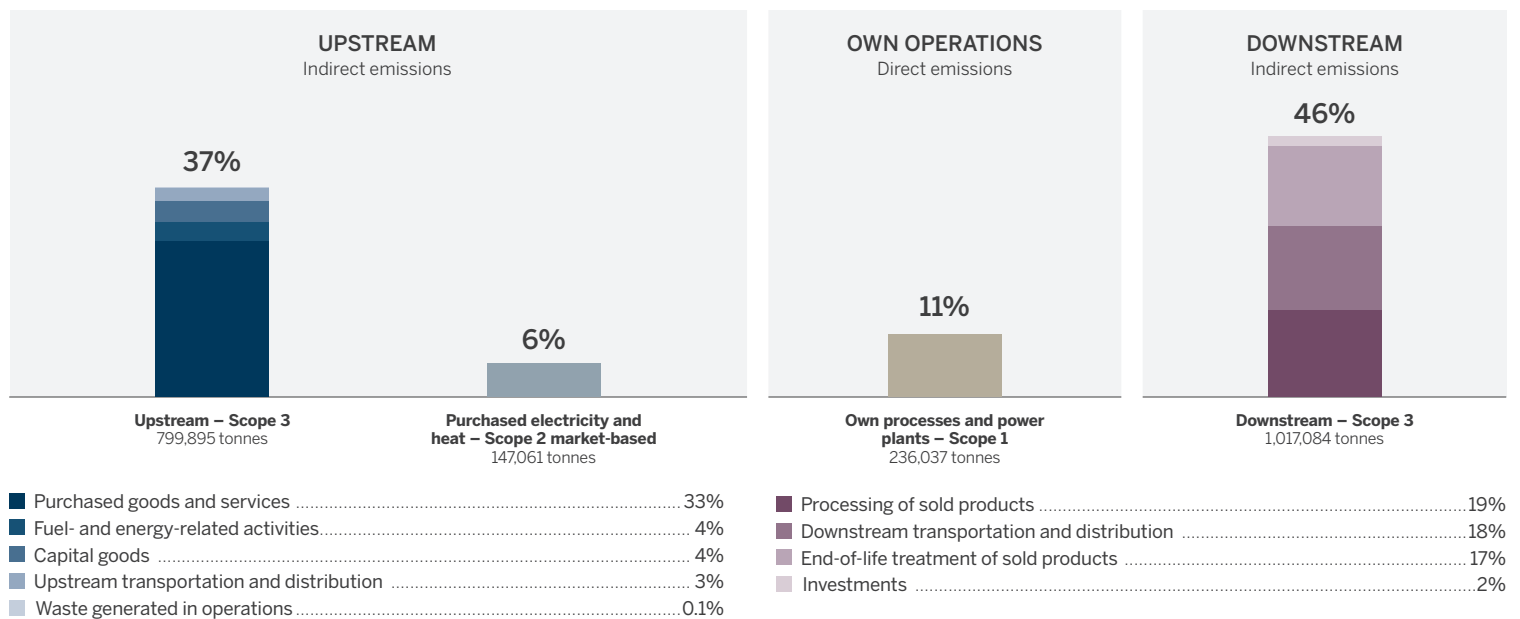
Greenhouse gases most significant for our operations and the environment include the carbon dioxide emissions caused by our own energy generation and production processes (Scope 1), the generation of purchased energy (Scope 2) and the rest of our value chain (Scope 3).

In 2022, Metsä Board's Scope 1 emissions declined slightly from the previous year, despite full ownership of the Hämeenkyrö power plant being transferred to Metsä Board, meaning that the power plant's emissions are now reported as the Kyro mill's Scope 1 emissions instead of Scope 2 emissions. At the company level, Scope 1 emissions decreased thanks to the Simpele mill using less peat and the Husum mill replacing heavy fuel oil with bio-based fuel. Moreover, Husum's Scope 1 emissions were higher in 2021 due to the fire that broke out on the pulp mill's chip conveyor, which increased the

mill's oil consumption. The change in Hämeenkyrö power plant's ownership and an increase in the use of fossil free purchased energy contributed to the decrease of Scope 2 emissions.

The emissions of our value chain (Scope 3) accounted for 83% (81) of all our fossil greenhouse gas emissions in 2022. A sizeable portion of the emissions in our value chain is attributable to the production of the raw materials we purchase – including pulp, binding agents, pigments and process chemicals – and the further processing and transport of the products we sell, and their treatment at the end of their life cycles. To reduce our value chain's emissions, we commit our suppliers to setting science-based reduction targets for emissions. A recommendation to this effect is included in Metsä Group's Supplier Code of Conduct, and the matter is discussed at meetings with suppliers. We also favour low-emission modes of transport as much as possible (p. 38). In 2022, Metsä Group and the VR logistics group agreed a new joint target to halve emissions from transport covered by their cooperation by 2030. VR handles Metsä Board's train transports in Finland.

GREENHOUSE GAS EMISSIONS IN 2022 WERE APPROXIMATELY 2.2 MILLION TONNES IN TOTAL



GREENHOUSE GAS EMISSIONS (CO₂) 2018–2022

	2022	2021	2020	2019	2018
Direct fossil-based CO ₂ emissions (Scope 1), t ¹⁾	236,037	255,467	240,036	250,259	288,579
Indirect fossil-based CO ₂ emissions (Scope 2, market-based), t ²⁾	147,061	184,028	282,236	262,442	275,048
Indirect fossil-based CO ₂ emissions (Scope 2, location-based), t ²⁾	291,482	313,030	383,937	384,781	431,037
Indirect fossil-based CO ₂ e emissions (Scope 3), t ³⁾	1,816,979	1,854,840	1,847,773	1,026,896	1,058,455
Biogenic CO ₂ emissions, t	1,950,901	1,712,639	1,812,952	1,815,179	1,837,299
Fossil-based CO ₂ emissions (Scope 1 + Scope 2, market-based), kg CO ₂ /tonne produced ⁴⁾	116.1	134.0	161.7	159.8	173.5

¹⁾ Scope 1 emissions consist of carbon dioxide emissions. The 2019 figure has been retroactively corrected due to more detailed emission measurements.

²⁾ Scope 2 emissions consist of carbon dioxide emissions. The calculation of market- and location-based Scope 2 emissions has been revised retroactively due to changes in fuel-specific emission factors for purchased heat, which is why the figures for the years 2018–2021 have been corrected. The amount of location-based Scope 2 emissions is affected by the average energy distribution of Metsä Board's production countries.

³⁾ Scope 3 emissions consist of carbon dioxide and other greenhouse gas emissions converted into carbon dioxide equivalents. The increase in Scope 3 emissions after 2019 is explained by changes in calculation methodology in 2020: two new categories (Processing of sold products and End of life treatment of sold products) were added in the calculations. Calculation methodology related to purchased chemicals was also updated.

⁴⁾ Due to the revised calculation of market-based Scope 2 emissions and revisions of paperboard tonnes used in the environmental calculation, the figures for the years 2018–2021 have been corrected retroactively.

Further details about the principles of emissions calculations are available on pages 66–67.



Roadmap for mitigating climate change

Our plan for transitioning to entirely fossil free production supports the goal of limiting climate change to no more than 1.5 °C above the pre-industrial era. It also helps adapt our operations to a low-carbon future. Our roadmap comprises mill-specific investments and measures that enable us to replace the fossil fuels used by our production units and power plants with renewable fuels and non-fossil electricity. We will also switch to renewable or fossil free alternatives in terms of purchased energy. We will also continue to improve the efficiency of our energy and water use. Water use makes a difference, given that the use of process water and wastewater treatment consume energy and thereby generate carbon dioxide emissions.

The first phase of the Husum pulp mill's renewal, comprising a new recovery boiler and turbine, was completed at the end of 2022. This will increase the mill's production of renewable energy and raise the electricity self-sufficiency of the Husum integrated mill. In addition, the use of heavy fuel oil as a support fuel decreased, and

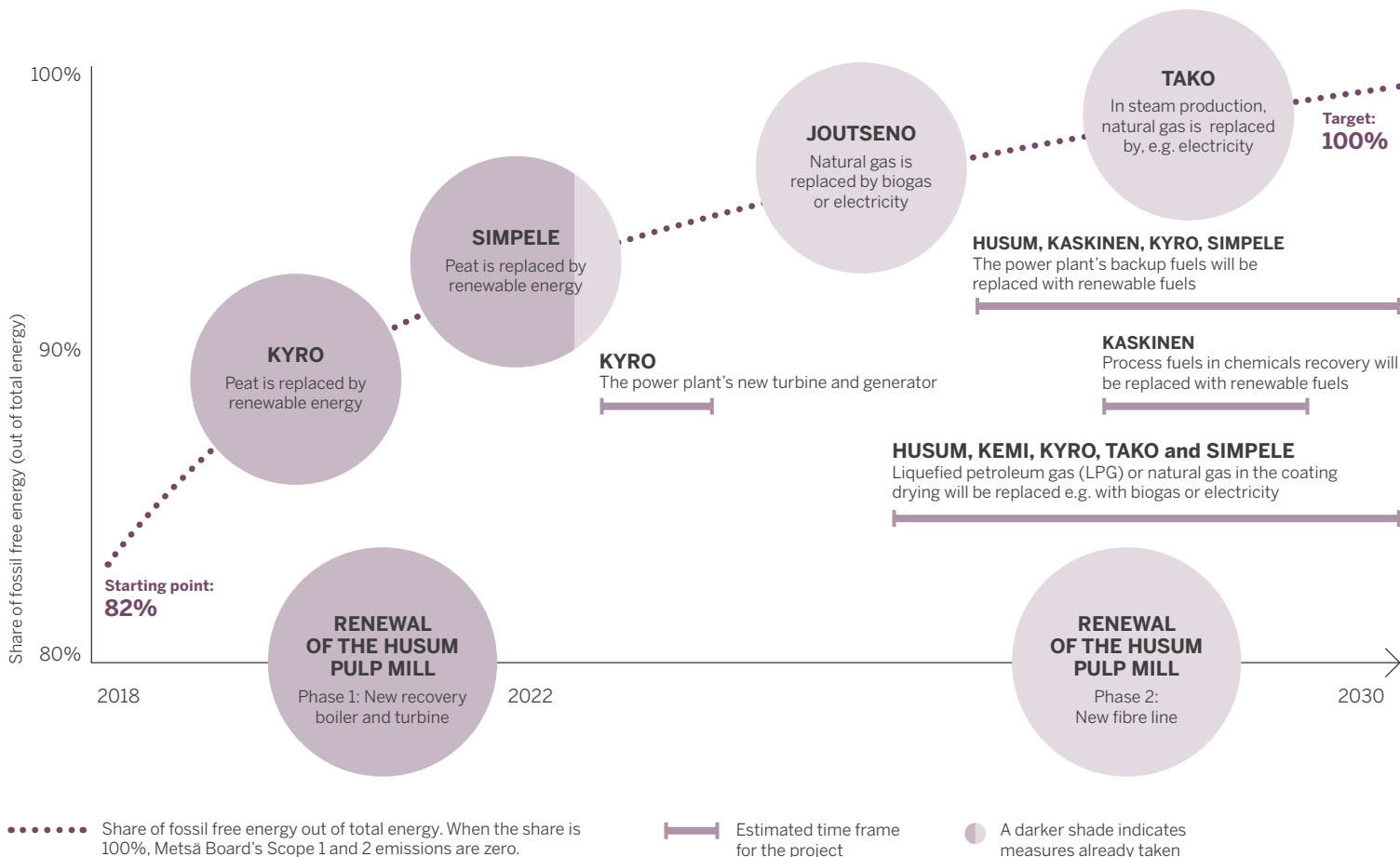
the necessary backup fuels will be replaced with renewable alternatives by 2030. The energy source used in the recovery boiler is the wood-based black liquor generated alongside pulp production.

In 2022, it was decided to invest in a turbine and generator for the Kyro mill's biopower plant. Thanks to the improved efficiency of the new turbine, the share of electricity produced by the biopower plant will increase from around 30% to around 50% of the mill's total electricity use. The investment is scheduled to be completed by the end of 2024.

Energy and water efficiency will improve thanks to the 2022 investment in a lamella clarifier for chemically treating water used as process water at the Kyro mill, as well as the introduction of a heat exchanger for cooling the debarking department, and the utilisation of waste heat at the Simpele mill. These measures will reduce raw water intake and water heating needs, thereby reducing the use of water and energy.

Roadmap to fossil free mills by the end of 2030

Key measures, according to plan, for reducing fossil-based carbon dioxide emissions to zero. Some of the projects still lack a final investment decision and the times shown are indicative. The purchasing of power and heat will shift to fossil free energy sources. See also our interactive roadmaps on our sustainability website at <https://metsaboard.impact.page/roadmap/Home>.



Energy

Most of the energy we use (Scopes 1 and 2) is already based on renewable energy produced of fractions generated in our processes and wood supply, including black liquor, bark and logging residue. We have analysed the risks related to this bio-based energy, and all the biomass we use is climate neutral in accordance with EU regulations. In addition to renewable energy, nuclear power is an important fossil free source of energy for us.

Despite the halt to natural gas deliveries from Russia, the supply of natural gas to Metsä Board's Joutseno, Kyro and Tako mills continued uninterrupted in 2022. The Kyro and Joutseno mills will have the resources in place to use liquefied natural gas in early 2023. In addition, natural gas has been partly replaced with oil in the Tako mill. The use of alternative forms of energy will not slow down Metsä Board's goal of gradually transitioning to fully fossil free energy by the end of 2030.

ENERGY CONSUMPTION 2018–2022

	2022	2021	2020	2019	2018
Energy consumption, GWh (as primary energy)	11,965	11,860	11,844	11,699	11,675
Energy consumption, GWh (according to GRI)	8,561	8,428	8,355	8,398	8,643

Energy self-sufficiency

Metsä Board's self-sufficiency in electricity is high. In its self-sufficiency, the company includes its own electricity generation, electricity purchased at cost price from Pohjolan Voima¹⁾ (known as the Mankala principle), and electricity purchased from Metsä Fibre, its associated company. During 2023–2024, the company's electricity self-sufficiency will increase, when Husum's new recovery boiler and turbine as well as Olkiluoto 3 reach their full production capacity. Self-sufficiency will be further increased by Metsä Fibre's new bioproduct mill, which will start up in the second half of 2023. Respectively, later in 2023 energy consumption will be increased by capacity expansions of folding boxboard in Husum as well as white kraftliner in Kemi. Heat is mainly produced from fractions generated in our own processes and wood supply, including black liquor, bark and logging residue. The company hedges against the price risk of gas and fuels purchased on the market in accordance with its commodity hedging policy. The degree and duration of hedging depends on the type of commodity.

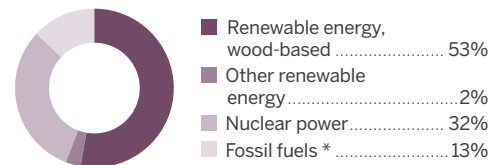
1) Metsä Board ownerships in nuclear power plants are: 5.2% in OL1 and OL2 and 1.5% in OL3 through its ownership in Pohjolan Voima.

INTERACTIVE ROADMAPS ON 2030 CLIMATE AND WATER TARGETS

On its website, Metsä Board has published detailed interactive roadmaps of the measures with which it aims to achieve its targets for mitigating climate change and reducing water by the end of 2030.

TOTAL ENERGY CONSUMPTION BY ENERGY SOURCE IN 2022

12.0 TWh (primary energy)

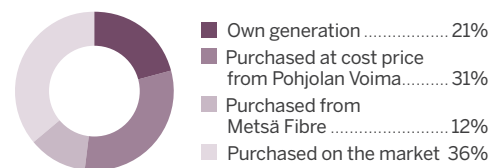


* Gas 7%, oil 3%, coal < 2%, recycled fuel 1%, peat 1%

Metsä Board does not use coal in its own energy production, but the share of coal is based on purchased electricity.

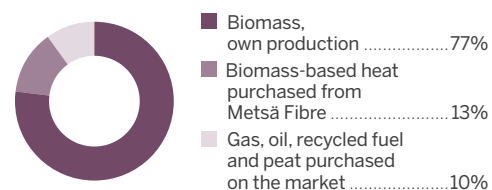
ELECTRICITY BY SOURCING METHOD

2.4 TWh



HEAT AND FUELS BY SOURCING METHOD

6.2 TWh (primary energy)



ESG Climate change creates risks and opportunities

While the promotion of sustainability creates business opportunities for Metsä Board, climate change and biodiversity also involve risks. At Metsä Board, these risks particularly concern the use of forests, energy and water. The identified climate-related risks and opportunities concern mainly the medium-term (1–5 years) and long-term (more than 5 years) future. Weather-related risks such as dry summers and rainy winters may also occur in the short term (0–1 years). Our reporting on these issues complies with the recommendations of TCFD.

The transition risks and opportunities arise from the transition to a low-carbon economy, i.e. compliance with the goals of the Paris Agreement of limiting global warming to less than 2, or preferably to 1.5, degrees.

Risks and opportunities	Impact	Management	
Regulation	The regulation aiming to combat climate change and reduce greenhouse gas emissions poses significant requirements for a new kind of production technology and results in changes to the pricing of energy and greenhouse gas emissions. This can increase costs in both production and transport.	↓	Metsä Board has set targets for improving energy efficiency and shift to the use of entirely fossil free energy in its production. We also encourage our suppliers to set targets for emission reductions.
	Regulation that emphasises the use of forests as carbon sinks and the protection of forests to secure biodiversity limits harvesting volumes.	↓	Metsä Group's wood supply has set targets, the achievement of which increases the sequestration of carbon in forests and helps secure the biodiversity of forests. We use our raw material resource-efficiently to avoid waste in production. Our aim is to make full use of the production side streams.
	Regulation that acknowledges that forest industry products can replace materials made from fossil-based raw materials, the production of which, furthermore, generates substantial amounts of fossil-based emissions.	↑	The main raw material of Metsä Board's products is renewable wood fibre and our target is for all our raw materials and packaging materials to be fossil free. The use of fossil free energy in production and the light weight of the products reduce their carbon footprint.
Markets and reputation	Consumers' critical attitude towards the use of forests – forests are seen as carbon sinks or as needing protection.	↓	All the wood fibre we use is traceable and sourced from sustainably managed forests which are certified or, at the least, meet the criteria for controlled wood. Metsä Board communicates openly on the impact of its operations and products with the help of life cycle assessments, for instance, and aims for active dialogue with customers, suppliers and other stakeholders.
	Consumers favour easily recyclable packaging made from a renewable, fossil free raw material.	↑	The main raw material of Metsä Board's products is renewable wood fibre and our target is for all our raw materials and packaging materials to be fossil free. The use of fossil free energy in production and the light weight of the products reduce their carbon footprint. All our paperboards are recyclable and/or compostable. Good packaging design allows us to further reduce the environmental impact of paperboard packaging and increase recyclability.
	Wood use is increasingly being directed to products other than paperboard products (other bio-based products).	↓	Metsä Board participates in projects that develop new types of wood fibre-based packaging solutions (such as ExpandFibre).
	Wood is Finland's most significant processed natural resource, providing a good basis for the bioeconomy, circular economy and innovations based on a renewable raw material.	↑	Metsä Board's main raw material is renewable and recyclable wood fibre. Paperboard already has an extensive recycling infrastructure, and Metsä Board actively participates in the activities of organisations promoting recycling (including 4evergreen and the European Paper Packaging Alliance).

The physical risks and opportunities involve changes in temperatures and precipitation, and they will materialise if climate change is not mitigated.

Acute changes	Risks and opportunities	Impact	Management
Extreme weather phenomena	Storms, drought and floods cause disruptions in production or complicate the transport of raw materials and products.	↓	Metsä Board prepares for the risks arising from extreme weather phenomena through both company and mill-level risk assessments. Examples of such measures include sufficient reserves of wood, the control of water levels with dam arrangements, and ensuring power distribution in exceptional situations. The supply chain is preparing for alternative partners or transport routes.

Chronic changes	Risks and opportunities	Impact	Management
Rising average temperature and changes in precipitation	The increased frequency of droughts weakens the availability of the process and cooling water needed by mills and causes production breaks.	↓	Metsä Board's mills are not located in high water risk areas, which supports the company's competitiveness in the face of climate change. The company's target to reduce the use of process water and enhance the recycling of water within the process also reduces the water risk.
	Increased precipitation and floods impair the quality of surface waters, thereby impairing the availability of process and cooling water and causing production breaks.	↓	Metsä Board has drawn up plans on how to secure paperboard deliveries in the event that production is interrupted at one of its mills.
	Harvesting conditions are complicated due to a lack of snow and frost and because of increased precipitation.	↓	Metsä Group actively monitors which areas allow harvesting and what are the alternative wood supply areas. When necessary, wood reserves can be increased during good harvesting conditions. Metsä Board's long-term contract with Norra Skog increases the delivery reliability of wood, particularly in Sweden.
	Damage caused by snow, storms, drought, forest fires, insects and fungi are increasing in forests, and changes are occurring in the prevalence of tree species. Alien species are likewise causing problems in forests.	↓	Metsä Group's wood supply provides sustainable forest management services which support forests' adaptation to climate change and help to secure the biodiversity of forests.
	Global warming is expected to increase the growth of forests and the wood removal, which will increase the availability of wood and lower the costs of wood supply.	↑	Cooperation and long-term wood supply contracts (with e.g. Norra Skog) will improve the delivery reliability of wood even further.

↓ Potential negative impact on business operations

↑ Potential positive impact on business operations

→ Reporting in accordance with TCFD's recommendations pp. 64–65.

→ Reporting required by the European Union's taxonomy on sustainable finance pp. 82–85.

ESG Other emissions

We monitor our environmental impact closely and use the best available technology in our production.

■ Our operations

Emissions to air and water

The bulk of our atmospheric emissions results from the energy generation required to produce pulp, high-yield pulp, and paperboard. Besides the climate impact of carbon dioxide, our key emissions into air consist of sulphur and nitrogen oxides, which cause acidification. We also measure particulate concentrations from our mills' flue gases, and in the production of high-yield pulp, we monitor malodorous sulphur compounds. Our mills may also have local noise impacts.

Our wastewater discharges are largely the result of our products' production process. The key indicators to be monitored include the biological and chemical oxygen demand (BOD, COD), the amount of nutrient discharges (phosphorus and nitrogen) with an impact on eutrophication, the amount of solids, and the chlorine-containing AOX compounds generated in the bleaching of pulp. Our mills' impact on waterbodies is typically small compared to the diffuse source input attributable to agriculture and forestry as well as scattered settlement. In Finland, for instance, only 3–4% of nutrient emissions derive from the pulp and paper industry (the Finnish Forest Industries Federation).

Deviations from environmental permit conditions

We use the best available technology in our production and continuously monitor that our mills operate in compliance with the environmental certificates issued to them. Any deviations and the corrective measures pertaining to them are reported to the authorities. In 2022, Metsä Board's mills recorded some cases in which permit conditions were exceeded at a monthly level. Our mill-specific emissions and deviations from environmental permit conditions are reported on pages 60–61.

Transport

Given that the majority of our products is sold to countries other than Finland or Sweden, the transport distances are often long. We minimise the environmental impact of logistics with careful route planning and by developing more efficient operating methods. As far as possible, we favour the alternatives that generate the least emissions, such as marine and rail transports instead of road transports. Measured as a share of our 2022 logistics costs, maritime transports accounted for 44% (39) of our transports, road transports for 37% (38), and rail transports for 5% (6), while 14% (17) of our transports were related to port and warehouse operations. Since 2022, some of the maritime transports departing from Kemi are carried out with lower-emission LNG vessels. Vessels with lower emissions have also been introduced in maritime transports departing from Helsinki for the Iberian Peninsula.



Metsä Board has started an environmental impact assessment (EIA) procedure for a folding boxboard mill it is planning to build in Kaskinen, Finland. The environmental permit will set out the scope of operations and environmental impact.

ESG Waste and by-products

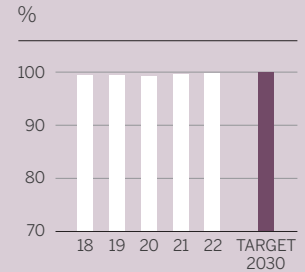
We invest in resource efficiency so that there is no waste in pulp and board production. In this way, we reduce waste.

Indicators and progress

We aim to make 100% use of all production side streams to ensure our processes do not generate any landfill waste after 2030.

In 2022, we utilised 99.9% (99.8) of our side streams: 55% were reused as materials, and 45% in energy production.

UTILISATION OF PRODUCTION SIDE STREAMS



Our operations

Waste and by-products

Our production side streams consist of by-products generated in our production, including ash used as fertiliser and recovered lime fractions, as well as process waste such as green liquor dregs and other types of sludge. Our operations also generate hazardous waste and municipal and construction waste.

We improve our recovery methods continuously, so as not to generate waste in the production of pulp and paperboard. We are also seeking new ways to reuse production side streams and use organic waste for energy production. Our biggest challenge is to find applications for the green liquor dregs generated in pulp production, and we are actively exploring solutions for its utilisation.

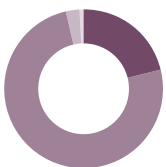
In 2022, our operations generated a total of 36,063 tonnes of by-products and 134,587 tonnes of waste. Our target of using 100% of our production side streams covers all by-products and 96.4% of non-hazardous waste in 2022.

WASTE USE AND DISPOSAL

	On-site, t	Off-site, t	Total, t
Process waste (non-hazardous waste)			
Material utilisation	18,009	36,921	54,930
Energy recovery	57,696	16,060	73,756
Landfill	54	76	130
Other non-hazardous waste			
Material utilisation		4,611	4,611
Energy recovery		167	167
Landfill		33	33
Hazardous waste			
Material utilisation		142	142
Energy recovery		14	14
Incineration without energy recovery		736	736
Landfill		5	5
Other disposal *		64	64

* Disposal and treatment of waste other than landfill. The amount also includes repacking and pre-processing before disposal.

WASTE AND BY-PRODUCTS 2022, t



By-products	36,063
Process waste (non-hazardous waste)	128,816
Other non-hazardous waste	4,811
Hazardous waste	960

ESG Water

We invest in making water use more efficient, which supports the circular economy, the management of water resources, and the achievement of our energy and climate targets.

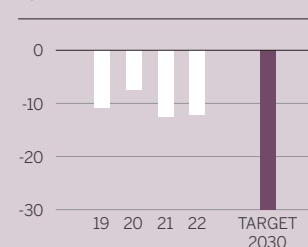
■ Indicators and progress

Our aim is to reduce the use of process water by 30% per tonne produced from the 2018 level.

In 2022, we reduced our process water use by 12.2% (12.6) per tonne produced from the 2018 level.

Lower production in the last quarter of the year weighed on the full-year progress in process water use.

**REDUCTION IN
PROCESS WATER USE**
%



■ Our operations

Water use

We strive to optimise the use of water in our processes and enhance the recycling of process water in the production process, the aim being to reduce the need to withdraw new raw water. We circulate water at our paperboard mills an average of 12–14 times, and up to 30 times at our BCTMP mills. This allows us to both minimise wastewater discharges and save energy, which reduces our climate impact. It also reduces our water risk (pp. 37 and 63).

All of the process and cooling water we use is withdrawn from nearby surface waters, such as rivers and lakes. The maximum volumes for water intake are defined in the water intake permit issued by the authorities. Given that all our mills are in Finland and Sweden, in areas with plenty of water, we do not withdraw any water from areas with a high or extremely high baseline water stress (WRI Aqueduct Water Risk Atlas). After use, the process water is carefully treated before it is returned to the waterbodies. As the cooling water flows within its own closed cycle, it remains clean at all times and is returned as such to the waterbodies.

In 2022, Metsä Board's use of fresh water totalled 110 million cubic metres (115 million m³). Surface water accounted for nearly 100% and groundwater for 0.06% of our water intake. We withdrew 109,901 thousand m³ (115,034) of surface water, of which roughly

half was used as process water and the other half as cooling water. A small amount of groundwater, 65 thousand m³ (61), was used primarily for drinking and hygiene purposes.

Our water consumption is very small in proportion to our total water use, as we return around 96% of the water to waterbodies after use. The remaining 4% either evaporates during the process or is bound to products. In 2022, our water consumption was approximately 4,399 thousand m³.

Roadmap for reducing water use

To achieve our 2030 target, we have defined mill-specific measures for enhancing the recycling of water and reducing the withdrawal of raw water from waterbodies. The Simpele paperboard mill, for example, will invest in the renewal of its pulp and white water system in 2021–2023. This will reduce both the use of process water and energy. In 2021–2023, the Kemi paperboard mill's development programme will reduce the mill's water use by approximately 40% and energy consumption by around 5% per tonne of paperboard produced. The Husum integrated mill accounts for roughly 40% of our water use, which is why the renewal of the Husum pulp mill will reduce Metsä Board's water use significantly by 2030.

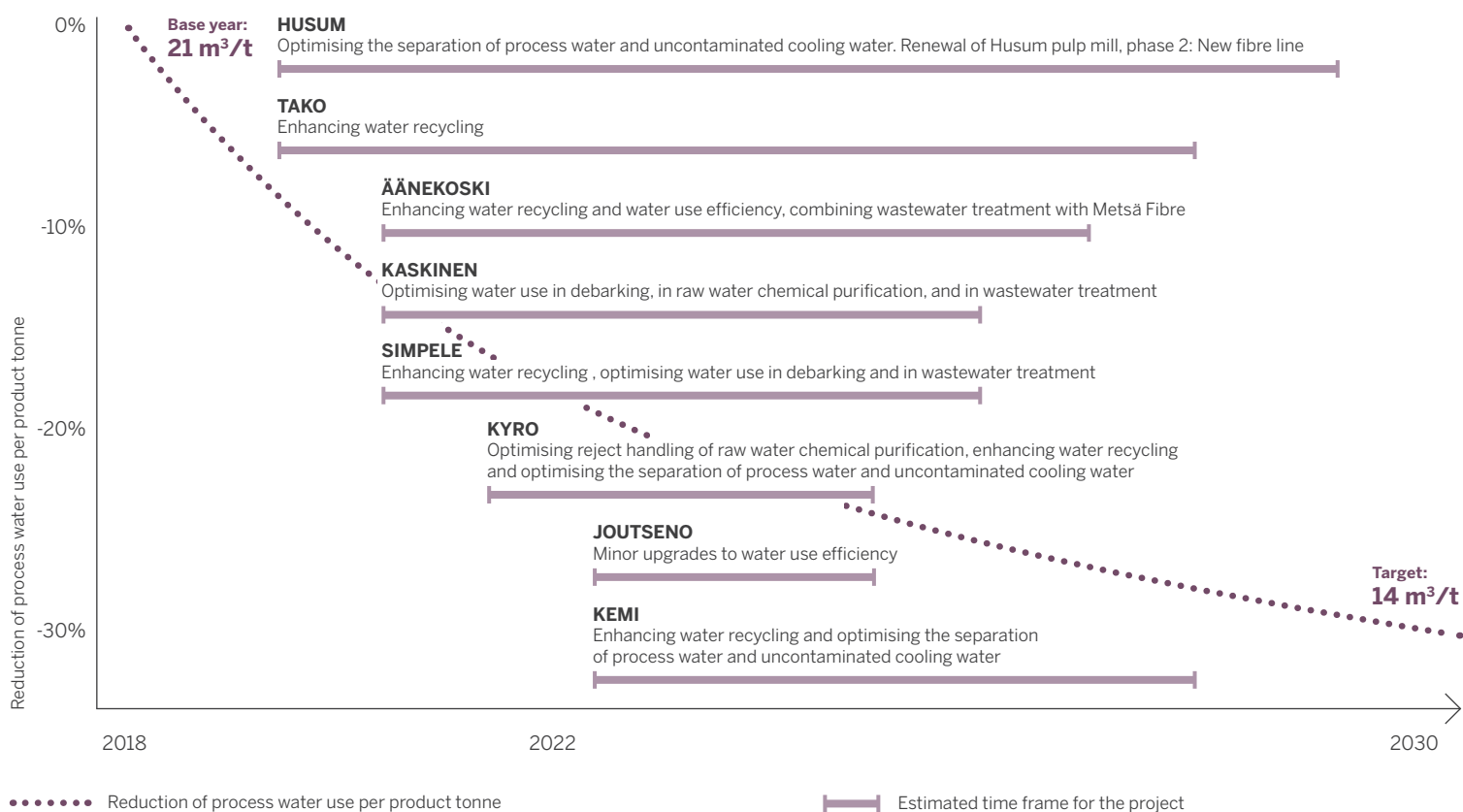
WATER USE 2018–2022

	2022	2021	2020	2019	2018
Water withdrawal, 1,000 m ³	109,967	115,095	113,633	109,087*	105,921
Of water withdrawal used as process water, 1,000 m ³	60,186	59,551	62,037	59,381	67,495*
Of water withdrawal used as cooling water, 1,000 m ³	54,291	57,486	54,690	53,352	54,804
Wastewater discharges from process water, 1,000 m ³	58,740	58,738	60,119*	59,326	67,133*

* The measurement data has been revised and the figures have been retroactively corrected from the figures published in the 2021 report.

Roadmap for reduced process water use by the end of 2030

To achieve our target, we have defined mill-specific measures which improve water recycling and reduce water withdrawal from natural sources. Some of the projects still lack a final investment decision and the times shown are indicative. Over 50% of total process water reductions per product tonne will be due to the phase 2 of the renewal of Husum pulp mill. See also our interactive roadmaps on our sustainability website at <https://metsaboard.impact.page/roadmap/Home>.



ESG Social responsibility



Our operations are guided by Metsä Group's Code of Conduct and in the field of social responsibility by the human resources and equality policies. We require our suppliers to commit to our Supplier Code of Conduct.

We respect internationally recognised human rights in accordance with the United Nations' Universal Declaration of Human Rights and the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work. We comply with legal reporting obligations, such as the United Kingdom's Modern Slavery Act, and do not approve child labour or forced labour. We are committed to operating according to the UN's principles concerning business operations and human rights, and we require the same from our business partners.

All our mills have management systems for quality, occupational health and safety, and food safety (ISO 9001, ISO 45001, ISO 22000). Our mills that produce paperboard for food packaging also have the FSSC 22000 system, which is used in the food industry. We ensure that our partners operating in our mill areas also comply with the requirements of our management systems.

Multiple skills required in the production of premium paperboards

The renewal of the operating model used at Metsä Board's Kemi paperboard mill was initiated in connection with the mill's development programme. As part of the programme, the production of base pulp used in paperboard production will become part of the paperboard mill process, and product storage will be automated. This will create entirely new duties and competence areas.

"We want to support our employees' learning and offer them increasingly versatile duties," says Mill Director **Timo Ahonen**. "Multiple skill sets and varied duties boost motivation and enable the introduction of new perspectives and ideas into the joint development of operations."





Workplace community

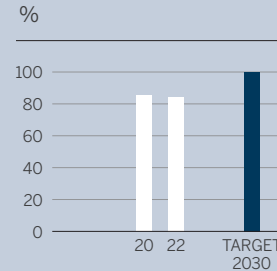
We want to ensure that our values are visible in the daily work of every employee, and that we treat each other respectfully. We are committed to developing a responsible corporate culture in which safety, diversity, equality and inclusion are realised.

Indicators and progress

We aim for our ethics index, which depicts the level of ethics in our business, to be 100% by the end of 2030.

In 2022, our ethics index was 85% (85). Of our employees, 52% (58) responded to the ethics barometer survey.

ETHICS INDEX



We use the Pulse survey to measure the success of our personnel strategy.

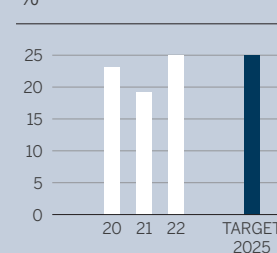
The 2022 Pulse survey:

- 73% of respondents would recommend the company as an employer
- 77% of respondents felt that the company operates ethically correct

We aim for women to account for at least 25% of our executives (Vice President or higher) by 2025.

In 2022, women accounted for 25% (19) of our executives.

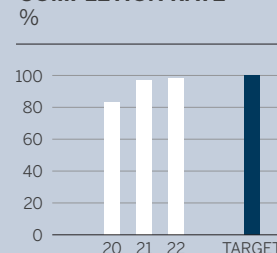
SHARE OF WOMEN IN EXECUTIVE MANAGEMENT



We increase awareness of diversity, equality and inclusion (DEI) through our e-learning course, which all employees are required to complete.

By the end of 2022, the e-learning course on DEI had been completed by 98% (97) of our personnel.

DIVERSITY, EQUALITY AND INCLUSION E-LEARNING COMPLETION RATE





Our operations

Working conditions

All our production units and 87% of our personnel are in Finland and Sweden, both of which have high-standard statutory requirements concerning working conditions, including reasonable working hours, annual leave, parental leave and part-time work. In 2022, we harmonised our payroll practices concerning our Finnish personnel's family leave. Our approach now exceeds the requirements of family leave legislation and provides parents with more equal opportunities to care for their children. We also comply with local legislation in all the other countries in which we operate. All our employees can choose whether they belong or do not belong to a trade union.

At the beginning of 2022, we moved from national collective agreements to company-specific collective agreements that are in force until further notice. The agreements were negotiated with the

trade unions. Moreover, elected representatives of personnel have been on the mills' management teams since 2022.

Our entire personnel is entitled to free occupational health care, and we encourage our employees to anticipate and assess their own working ability and health. Benefits pertaining to wellbeing at work are equally available to permanent employees and employees with a fixed-term contract. In our work ability management, we have adopted an early intervention model that encompasses all our employees. It means supporting wellbeing and working ability by addressing any challenges at an early stage.

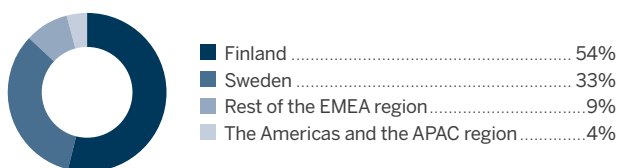
Because of the coronavirus pandemic, employees whose duties allowed it continued to work remotely until the summer of 2022. In August, we introduced a hybrid model, which enables employees to work remotely part of the week, depending on the nature of their duties.

Personnel in
17 countries

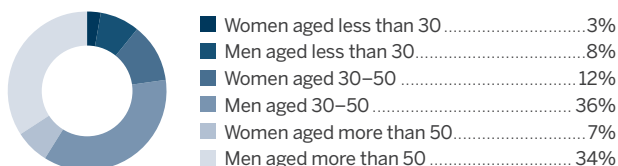
Permanent employees recruited
207

Summer employees
279

PERSONNEL'S DISTRIBUTION BY REGION



PERSONNEL'S AGE AND GENDER DISTRIBUTION



KEY PERSONNEL FIGURES

	2022	2021	2020
Total number of employees FTE ^{1) 2)}	2,248	2,389	2,370
Share of blue-collar of all employees, %	63.4	64.1	64.7
Share of white-collar of all employees, %	36.6	35.9	35.3
Share of permanent employees, %	91.8	91.9	94.0
Share of full-time employees, %	96.6	96.6	96.4
Average age in years	45.8	46.1	46.4
Average years in service	17.0	17.8	18.6
Employee turnover rate, % ³⁾	7.8	5.2	4.5
Average training hours per employee ²⁾	15.0	11.0	11.8
Average training hours (blue-collar) ²⁾	15.0	9.5	8.8
Average training hours (white-collar) ²⁾	15.1	13.7	16.0
Employees covered by collective agreement, % ²⁾	75.4	72.2	78.0

¹⁾ Full-time equivalent FTE on 31 Dec 2022

²⁾ The former subsidiary Hangö Stevedoring is included in the figures until the end of 2021.

³⁾ The figure includes redundancies caused by restructuring of business. In 2022, Metsä Board started restructuring pertaining to approximately 100 permanent or temporary employees to centralise customer service and distribution logistics functions in EMEA. The effects of the restructuring will be realised in 2023.

In November, the Simpele paperboard mill hosted technology students and personnel from LUT University as part of the EU's Equal Career Paths for Women – NOW! campaign, the key goal of which is to promote and support women's equal employment and career advancement.



Workplace community and strategy

Motivated people is one of the Metsä Board's strategic programmes. The programme focuses on the development of management and employees' competence; harmonised operating models at mills; a diverse, equal and inclusive company culture; and future personnel needs.

We want everyone in our workplace community to understand their role and the significance of their work in implementing our strategy. We measure our progress with our ethics barometer and personnel survey, which are conducted in alternate years. In 2022, it was the turn of the ethics barometer. We also introduced the Pulse survey in 2022. Conducted four times a year, it measures our personnel's commitment to the company and their opinions about our level of business ethics.

We seek to ensure the availability and retention of qualified personnel with our development programmes and successor planning, and by investing in cooperation with educational institutions and in our attractiveness as an employer. We use competence surveys to support the development of multiple skills and competence measurement. Regular and consistent monitoring and planning help provide everyone with a personal development plan to support their development at both personal and team levels. The aim is to ensure the adoption of the agreed best practices in all our locations. In 2022, we began developing the Husum mill's operating model jointly with the employees to ensure the model supports the

considerable technical investments made. The experiences gained will also be used at our other mills.

We encourage our employees to actively develop their competence and participate in various types of training. To promote continuous development, Metsä Group launched Metsä Finance Academy, a training programme for all financial management employees, in 2022. Similar programmes are now being designed for other fields of competence. We also launched mentoring programmes to support professional growth and enable the use of tacit knowledge.

In 2022, we introduced induction training for supervisors, which focuses on topics such as performance management, the supporting role of occupational health care in supervisory work, work-related legislation and challenging situations in daily work.

Metsä Board has a bonus scheme based on the company's strategy and personal targets. It covers the entire personnel. The personal performance bonus target of each Metsä Board employee includes an ESG target. Personal targets and development goals are set, and their progress is monitored in PDAs, which all employees conduct with their supervisor twice a year.

We prepare for future retirements by making retirement forecasts and drawing up resource plans based on them. We recruit new talent through collaboration with educational institutions, summer jobs, and apprenticeships in production and maintenance, for example.



Ethics barometer

The Ethics barometer measures our employees' experience of our ethics: what we do well, and where we still have room to improve. The results of the barometer are expressed as an ethics index (85/100%), which indicates that our personnel's awareness of the requirements concerning business ethics is at a high level, our employees find the topic important, and our company operates ethically. The areas in greatest need of improvement were the equal treatment of employees and a culture in which the reporting of unethical behaviour is encouraged, and concerns are addressed. The risk of financial misconduct was not highlighted in the barometer results.

The results of the ethics barometer were used to determine development measures aimed at improving the issues detected and reaching the target of 100% set for the ethics index. A total of 22 local and function-specific measures to be carried out in 2023 were decided in Metsä Board. We also launched the following Metsä Group-wide development measures.

- Our entire personnel will receive training in the core content of our Code of Conduct through a revised e-learning course.
- In training for managers, more emphasis will be placed on the importance of addressing ethical concerns and creating a culture that encourages the reporting of such concerns.
- Anonymous recruiting will be adopted as the primary recruiting method.
- The transparency of recruiting will be increased by publishing all vacancies internally, except for vacancies that involve successor planning.
- Local workshops will be organised to promote the Metsä For All vision.

Diversity, equality and inclusion

We are committed to promoting an equal culture that does not allow discrimination, and in which everyone has the opportunity to be accepted and succeed. We want to ensure that personal characteristics – such as gender, age, sexual orientation, disability, ethnic background and nationality – have no impact on the individual's opportunity to succeed at work. In this respect, our activities are guided by the results of the ethics barometer, the Metsä For All vision and our equality targets.

The most important measure promoting equality is the implementation of the Metsä For All vision through communication and workshops for local management. As part of this measure, which will continue in 2023, development measures will be specified locally.

In 2022, we changed our job titles to make them gender-neutral and adopted anonymous recruiting as our main recruiting method. A separate module on diversity, equality and inclusion was added to all supervisor and leadership trainings.

With the aid of our equality targets, we strive to increase the share of women in top management, rectify unjustified differences in pay and promote equality.

Promoting diversity and equality in recruiting

- Anonymous recruiting is our main recruiting method.
- The system automatically hides all the information regarding applicants' personal characteristics such as name, age and gender during the application screening phase.
- We support the equal treatment of applications, based only on competence and qualifications, as well as the equal treatment of applicants and the diversity of personnel. We reduce the impact of unconscious bias and any resulting discrimination during the processing of applications.

Focus areas of the Metsä For All vision in 2021–2023

EQUAL OPPORTUNITIES AND GENDER EQUALITY

- Increasing the share of women at different organisational levels
- Ensuring equal pay
- Equality training for the entire personnel
- Gender-neutral job titles

DIVERSITY

- Recruitment practices that support diversity
- Ensuring international skills in the organisation

INCLUSION AND CULTURAL CHANGE

- Developing the personnel's awareness and skills
- Supporting the cultural change by means of communications
- Promoting work-life balance

SHARE OF WOMEN AT METSÄ BOARD

	2022	2021	2020
Share of women within all employees, %	21.9	21.9	21.3
Share of women in manager positions, % ¹⁾	21.3	22.8	23.0
Share of women in executive management, VP, SVP, CEO % ²⁾	25.0	19.2	23.1
Share of women in the Corporate Management Team, %	14.3	14.3	33.3
Share of women in the Board of Directors, %	33.3	33.3	22.2

¹⁾ Share of women within all managers.

²⁾ The definition has been clarified. Women in the target group (VP, SVP or CEO) must have an IPE of at least 58. With this revision, the figures for 2021 and 2020 have been recalculated retrospectively.

The former subsidiary Hangö Stevedoring is not included in the figures.

REMUNERATION AT METSÄ BOARD AS A WHOLE AND BY PRODUCTION COUNTRY 2022

	Metsä Board	Finland	Sweden
Annual total earnings of person with highest wages compared to the average total earnings of other personnel	30.5	32.2	6.7
Women's total earnings compared to men's total earnings, white-collars ¹⁾	0.95	0.97	0.92
Women's total earnings compared to men's total earnings, blue-collars ¹⁾	0.94	0.93	0.95

¹⁾ Weighted average of women's total salary compared to men's total salary in the same job grade. White-collars: Includes 98% of white-collar personnel.

Human rights

We respect human rights in everything we do. We do not condone human rights violations in any way or form, and we are committed to ensuring that our operations do not result in negative human rights impacts. We are committed to correcting any shortcomings brought to light and to cooperating in this. Human rights are covered in various e-learning courses such as the Code of Conduct, sustainability as well as the diversity, equality and inclusion e-learning, which all our employees are required to complete.

In our own operations, inputs into safety at work and the development of diversity, equality and inclusion were among the key practical measures promoting human rights in 2022.

Our Supplier Code of Conduct also specifies requirements for our suppliers' human rights responsibilities. We survey our supply chain and customers to detect any human rights risks as part of our Know Your Business Partner background checks. No cases of human rights violations related to our operations or subcontracting chain were brought to our attention in 2022. Read more about our Code of Conduct (pp. 52–53), and how we manage risks in our supply chain (pp. 54–57).

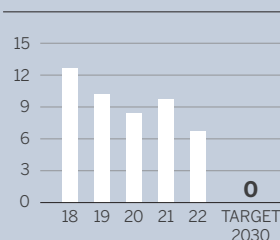
ESG Safety at work

The safety of our employees is a top priority for us, and we work systematically to reduce the number of occupational accidents. In the development of safety at work, we focus on personal risk assessment, the deployment of common safety standards, and the development of hand safety.

■ Indicators and progress

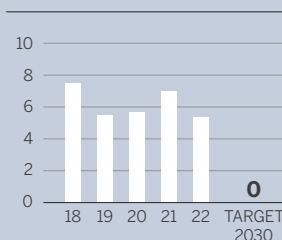
We aim for zero accidents by 2030.

TOTAL RECORDABLE INCIDENT FREQUENCY (TRIF)
per million hours worked



In 2022, the total recordable injury frequency (TRIF) was 6.7 (9.8).

LOST-TIME ACCIDENT FREQUENCY RATE (LTA1F)
per million hours worked



In 2022, the lost-time accident rate (LTA1F) was 5.4 (7.0).

Metsä Board has also specified annual targets for its proactive safety indicators – namely, safety observations, safety walks, safety talks and personal risk assessments.

The 2022 result for safety observations was 104%, safety walks 144%, safety talks 139% and personal risk assessments 255%,

while the target is 100%. In addition, 77% of the target group conducted the targeted number of risk assessments per person.

■ Our operations

Operating methods

We manage risks associated with safety at work by complying with the ISO 45001 standard for occupational health and safety, and with the common safety management principles, daily management processes, safety at work standards, and key safety guidelines applied throughout Metsä Group. The common principles and operating methods support operations in line with the ISO standard at our mills and comply with our company's Code of Conduct and safety policy. The implementation of processes at

mills is monitored with internal audits. External annual audits are carried out in accordance with the ISO 45001 standard.

Risk assessment and management is supported by a health, safety, environment and quality (HSEQ) system, intended for the recording and monitoring of accidents, safety observations, close calls, corrective measures, and our personnel briefing sessions, known as safety talks. In addition to safety matters, the same system is used for recording entries concerning environmental

matters and product safety. These observations can also be recorded by our partners. The HSEQ system is also utilised in internal and external audits.

All our mills follow the 5S method to increase productivity, safety at work and wellbeing. The method is a five-step system for keeping workstations safe, efficient and neat. The steps that the five S's stand for are sorting, setting in order, shining, standardising and sustaining. Among other improvements, 5S has reduced the number of falls and tripping, and the resulting accidents.

Each of our mills has an occupational health and safety (OHS) committee which convenes regularly to promote the development of local safety at work. At some of our mills, we have also set up safety development teams to monitor the realisation of proactive safety work, among other things. Our personnel are actively involved in making observations about safety issues, and they participate in training focusing on safety at work.

The focal areas of safety development

Our focus in the development of safety at work is on personal risk assessment, the improvement of hand safety and the introduction of common safety standards.

- The purpose of personal risk assessments is to prevent accidents by identifying any hazards involved before initiating work.
- The goal of our hand safety programme is to halve the number of hand and finger injuries in 2022–2023. Hand injuries are the most typical accidents at Metsä Board.
- Safety at work standards harmonise the operating methods of our production units, and everyone is expected to follow them in their daily work.

In our development work, we invite all our mill employees to discuss and identify ways to improve safety and share best practices among all mills. We have organised personnel training on risk

KEY SAFETY INDICATORS

	2022	2021	2020
Sickness absences, % of theoretical working hours	4.9	4.1	3.9
Total Recordable Injury Frequency (TRIF) per million hours worked	6.7	9.8	8.4
Lost-time accident frequency (LTA1F) per million hours worked	5.4	7.0	5.7
Number of lost-time accidents (LTA1), external partners ¹⁾	6	5	7
Accident severity rate	15.0	12.3	9.2
Accident severity rate, external partners ¹⁾	22.3	18.2	12.1
Number of fatal occupational accidents ²⁾	0	0	0

¹⁾ Our external partners working in a mill area, excluding major investment projects (e.g. the Husum recovery boiler and turbine, board machine investments and the Kemi board mill investment).

²⁾ Includes also our external partners.

The former subsidiary Hangö Stevedoring is included in the figures until the end of February 2022.

identification, hand safety and safety at work standards. These measures promoted positive safety development at our mills in 2022, but our accident frequency is still high compared to our target of zero accidents. Hand injuries were still the most typical accidents.

Safety requirements for partners

We ensure that our partners comply with the requirements of ISO 45000. All our external partners like cleaning and maintenance companies working in our mill areas must complete a safety induction before being granted an access pass to the area. Drivers of heavy goods vehicles, who deliver goods to or pick up goods from our mill, complete their own safety induction. We also organise regular safety information sessions, including safety talks, for partners. We investigate and prepare reports on all accidents occurring to our partners in mill areas.

Risk assessment reduces accidents

Personal risk assessment is one of Metsä Board's focal areas in safety at work. The risk assessment project initiated in 2022 aims to prevent accidents at work, and it has already produced good results. The number of accidents has decreased, while the number of risk assessments conducted by employees has increased substantially.

Employees conduct an assessment of potential hazards whenever they are to carry out a task that differs from their own daily work. This is also important in service or repair work and when using special tools. The assessment list helps them systematically evaluate safety to determine whether the required permits to work and protective equipment are in order, and whether any elements in the work environment or task may pose a risk of accident.



ESG Product safety

The safety of materials is one of the key properties of packaging. Our comprehensive product safety work helps ensure that products are safe for consumers.

Raw materials

All of Metsä Board's paperboards are made of renewable, recyclable fresh fibre. Fresh fibre paperboards do not alter the odour or taint the properties of the products packaged in them, and they are the safest choice for wood-based food packaging and other sensitive packaging end uses.

Metsä Group's business operations cover the entire production chain, from the forest to the pulp and paperboard mill. This ensures that we know exactly what our paperboard is made from.

Only carefully selected chemicals are used in our paperboard production process. Each chemical undergoes a detailed inspection to ensure it complies with required international regulations and other requirements for food contact material, for example. All the chemicals used at our mills must pass our extensive safety-at-work and environmental evaluations. Our fresh fibre products do not contain unknown chemicals, such as ink residues, which may be found in paperboards made of recycled fibre.

Production environment

As our paperboards are part of the food supply chain, our product safety criteria and practices are equally stringent as those followed

in the food industry. Our mills follow good manufacturing practice (GMP), which is a requirement for production of all food contact materials. In addition, all of Metsä Board's mills have an ISO 22000 certified food safety system, and the mills producing paperboard for food contact use have also been certified according to the requirements of the FSSC 22000 food safety system.

In addition to the product safety requirements for our own production, we also require our suppliers and subcontractors to meet equal standards so that we can ensure the cleanliness and safety of products in all stages of the supply chain. We use regular product safety questionnaires, audits, and follow-ups to ensure that the risks are controlled throughout the production and supply chain.

Compliance

Direct food contact materials are regulated strictly around the world. Metsä Board assures the safety of its products in compliance with the legislation applicable in its market areas in Europe, the Americas and Asia. Our team of product safety experts continuously follows developments in the relevant regulations and requirements. The team's competence is supported with regular training.

Product safety risks are managed throughout the production and supply chain



Raw materials

All the wood raw material used in our production comes from controlled or certified forests and is traceable. The chemicals we use are carefully chosen and safe for use. Chemicals suppliers are required to respond to our product safety questionnaire every year.



Production

Our mills operate according to Good Manufacturing Practice (GMP), and they have certified ISO/FSSC 22000 food safety systems in place, the status of which is ensured annually with external and internal audits.



Product safety

Our products are regularly tested for quality and safety in internal and external laboratories, accounting for various end uses, including food packaging.

Our products are tested regularly in accredited laboratories to ensure they meet the required quality and safety standards. Laboratory analyses together with detailed internal risk analyses form the basis for our Product Safety Statement, which includes product-specific information about product safety and compliance.

At the EU level, risks detected in food contact materials and product recalls are monitored and reported through RASFF alerts. There were no product safety related RASFF notifications concerning Metsä Board's products nor any recalls of consumer packaging made from our paperboard in 2022.



Fresh fibre paperboard is a safe choice for food packaging

Fazer, a Finnish food industry company, chose MetsäBoard Prime FBB EB, Metsä Board's lightweight and recyclable dispersion-coated paperboard, as the packaging material for its chocolate Christmas calendar. Fresh fibre paperboard is a safe choice for a Christmas calendar where the chocolate is in direct contact with paperboard. "Our fresh fibre paperboard has neutral properties in terms of odour and flavour. It ensures that the chocolate retains its excellent flavour for the consumer, as intended," says **Olli Haaranoja**, Sales Director at Metsä Board.

The choice of material reduces annual plastic use by 1,200 kilograms compared to the PE-coated paperboard previously in use. In addition, it makes the calendar easier to recycle. The lightweight paperboard also reduces the carbon footprint of the calendar box by approximately 25 per cent. The change in calendar material is part of Fazer's sustainable packaging programme.



Transport

Careful packaging, requirements on the supply chain, and regular audits ensure the cleanliness and safety of our products during transport and storage.



Converting

Premium paperboards guarantee high performance and quality in converting. Uninterrupted production reduces product safety risks at all different stages of converting and processing.



Product safety and consumers

The main function of packaging is to ensure that the packaged product, such as food, stays safe for consumers. Laboratory analyses and detailed internal risk analyses form the basis for our Product Safety Statement.

ESG Sustainability governance



In addition to applicable legislation, our work and decision-making are guided by Metsä Group's Code of Conduct. These are complemented, among other things, by policies concerning personnel, equality, information security, competition law, sourcing and environmental matters. From our suppliers, we require a commitment to our Supplier Code of Conduct or supplier's own equivalent Code of Conduct.

We are committed to acting in accordance with the UN Guiding Principles on Business and Human Rights, and we expect the same from our business partners. Since 2003 we support the UN Global Compact and its principles on human rights, labour, the environment and anti-corruption, as well as the UN CEO Water Mandate.

→ Read also about Metsä Board's corporate governance on **pp. 169–175**.

Code of Conduct e-learning was renewed

Our Code of Conduct contains the key principles on compliance, responsible business and respect for people. In November 2022, a revised online training course was published, covering all 15 of our Code of Conduct principles and guidance on how to report perceived wrongdoing. The training, aimed at all employees, is available in ten languages.

"The renewed e-learning training supports all of us in doing the right thing. This will ensure a common understanding the requirements set for business ethics and enable our employees to identify and raise ethically challenging situations in a timely manner," says **Tarja Tudor**, Vice President, Compliance & Ethics at Metsä Group.





A culture of doing the right thing

We aim to have a culture of doing the right thing and address any shortcomings across the value chain.

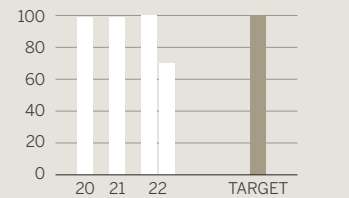
Indicators and progress

Our goal is that all our employees complete the Code of Conduct e-learning course.

By the end of 2022, 70% of our employees had completed the Code of Conduct e-learning course launched in November 2022.

100% (99) had completed the previous version of the course.

CODE OF CONDUCT E-LEARNING COMPLETION RATE
%



Our operations

Code of Conduct and steering responsible business

In its Code of Conduct, Metsä Board is committed to respecting human rights and to responsible business operations, including anti-corruption and anti-bribery as well as environmental responsibility. Compliance with the Code of Conduct and the personnel's competence on business ethics are supported through regular training and the ethics barometer survey.

The Code of Conduct e-learning course was revised in November 2022. The course covers the company's key ethical principles and describes best sustainable business practices with the help of examples and assignments. All our employees are required to complete the Code of Conduct e-learning course every three years.

In addition, all employees must complete e-learning courses on diversity, equality and inclusion, sustainability, and the principles of information security and information protection. Depending on their duties, employees are also required to complete e-learning courses focused on, for example competition, procurement, contract and legal policies. In 2022, advanced training in the Metsä Group's competition policy was organised for various target groups.

The ethics barometer, conducted for the second time in 2022, measures our employees' experience on realisation of ethics from different perspectives. The ethics barometer is a tool that helps us detect areas of development related to topics such as anti-corruption and anti-bribery or the prevention of misconduct. The results of the ethics barometer led to the decision that in trainings for managers, the importance of addressing ethical concerns will receive greater emphasis and the reporting of misconduct will be further encouraged. Based on the ethics barometer, financial misconduct, corruption, conflicts of interest, attempts to inappropriately influence partners' decision making, and data protection violations are not considered essential risks. The results of the ethics barometer are presented from the workplace community's perspective on page 46.

We follow appropriate due diligence in ensuring the sustainability of our suppliers, customers and other partners and carry out background checks as part of our Know Your Business Partner process. Knowing the background of business partners helps us operate according to regulations and manage risks related to trade sanctions, corruption, money laundering, human rights and cases involving irregularities. Read more about the sustainability of our supply chain and our third-party due diligence on pages 54–57.



Compliance and Ethics Channel

We encourage our employees and stakeholders to report any breaches of legislation and ethical concerns they detect. Any observations can be reported to the line managers, local management, HR or the Compliance Committee or through Metsä Group's Compliance and Ethics channel.

The Compliance and Ethics Channel is open to everyone, and reports can be submitted in ten languages, as well as anonymously if required. The channel's technical implementation is handled by an external service provider. We are committed to protecting the privacy of whistleblowers, and we do not accept any countermeasures against those who have reported shortcomings in good faith. No such countermeasures came to our attention in 2022.

We are committed to investigate all suspected violations brought to our attention through the Compliance and Ethics Channel or in some other manner. The investigations are steered by the Compliance Committee, composed of the directors in charge of Metsä Group's legal services, compliance and internal auditing. The committee is also tasked with monitoring that the consequences of

the investigations are applied consistently in cases of equal gravity and that the corrective actions are sufficient. Any illegal activities are reported to the authorities. The changes required in the EU Whistleblower Protection Directive have been taken into account in our countries of operation with respect to the Compliance and Ethics Channel, the investigation of reported violations and the protection of whistleblowers.

In 2022, Metsä Board received a total of 6 (10) reports that resulted in an investigation. The reported incidents are divided into the following categories: fraud or other criminal behaviour; corruption and bribery; competition law; conflicts of interest; general personnel matters; discrimination; privacy and information security; safety at work; the environment; breaches of the Supplier Code of Conduct; and other reports. None of the cases resulted in legal proceedings, investigation by the authorities or fines, or concerned corruption, bribery, human rights violations, or the use of child labour.

ESG Sustainability of the supply chain

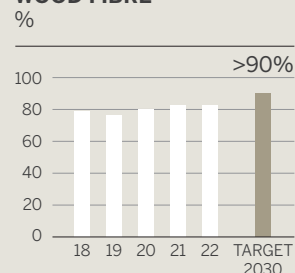
We know the origin of our raw materials and who we work with across the value chain.

Indicators and progress

Our target is to increase the share of certified wood fibre to at least 90% of all the fibre we use by the end of 2030.

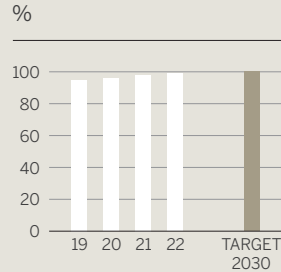
The wood we use always meets at least the criteria for PEFC Controlled Sources and FSC® Controlled Wood. In 2022, 83% (83) of the wood we used came from certified forests and 17% (17) from controlled forests.

SHARE OF CERTIFIED WOOD FIBRE

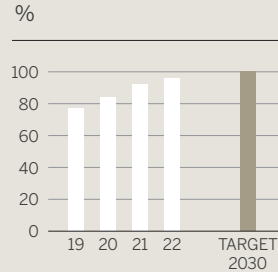


We aim for a 100% sustainable supply chain, which we assess based on our suppliers' commitment to the Supplier Code of Conduct and their success in passing our background checks and sustainability assessment.

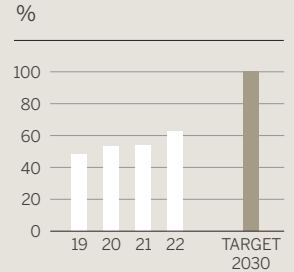
SUPPLIERS' COMMITMENT TO THE SUPPLIER CODE OF CONDUCT



SUPPLIER BACKGROUND CHECK PASSED



SUPPLIER SUSTAINABILITY ASSESSMENT PASSED

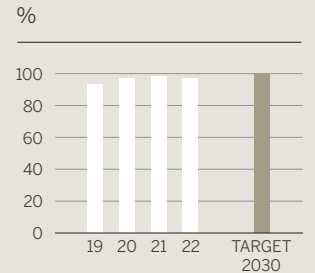


Of our purchases in 2022, 99% (98) came from suppliers committed to our Supplier Code of Conduct. Suppliers that have passed the Know Your Business Partner background checks accounted for 96% (92) of our total purchases. As for the separate sustainability assessment of our key suppliers and potentially risky suppliers, our requirements are met by 63% (54) of our suppliers, calculated according to our total purchases.

We aim to know the country of manufacture of all our raw materials and packaging materials by 2030.

In 2022, we knew the origin – at least the country of manufacture – of 97% (98) of the total purchases of raw materials and packaging materials.

TRACEABILITY OF RAW MATERIALS



■ Our operations

A sustainable supply chain

It is important for us that our customers, suppliers and other partners also operate sustainably. We use local suppliers whenever possible. In 2022, 81% (78) of all our purchases originated from Finland or Sweden, in which our production units are located. The sustainability of our supply chain is separately ensured for wood and fibre as well as other raw materials and services.

Wood supply

Our wood supply operations are guided by environmental policy, Metsä Group's principles for forest use and management, and the requirements of the PEFC and FSC® chains of custody.

Metsä Group's Wood Supply and Forest Services is responsible for our wood supply. The pulp used in paperboard production is manufactured in Metsä Board's own high-yield pulp and pulp mills or our associated company Metsä Fibre's pulp mills. Knowing the origin of the wood fibre, self-sufficiency in pulp, and the control of chemicals at all stages of production ensure the availability of fibre, the consistently high quality of the products, and an uninterrupted chain of product safety.



All the wood fibre we use is traceable

All parties involved in the processing of wood and pulp in our value chain comply with the requirements of the PEFC and FSC chains of custody. The wood fibre we use is therefore traceable. In addition to sustainable forest sites, we choose our partners responsibly.



PEFC/02-31-92
FSC®-C001580



Customer

Forest certification and our Chain of Custody system give our customers the opportunity to tell their own clients about a product's sustainability. Certification and traceability ensure that the wood used in a product comes from sustainably managed forests.



Paperboard, pulp and high-yield pulp mills

The pulp used in paperboard production is manufactured in Metsä Board's own high-yield pulp and pulp mills or its associated company Metsä Fibre's pulp mills. These mills purchase all their wood from Metsä Group's wood supply. The mills record the volume, origin and certification of the wood they purchase, and ensure through calculations that the volume of certified products they sell corresponds with the volume of inbound certified wood. The certification details are shown in the orders and the related documents.



Wood supply and forest services

All wood can be traced with the help of maps, the details entered in data systems, and various documents.

Metsä Group's wood supply calculates the share of certified wood and sells a corresponding volume of certified wood to the mills. We also require a sustainable origin from non-certified wood, and the wood always meets at least the requirements of PEFC Controlled Sources and FSC Controlled Wood.



Forest owners

Most of the wood we use comes from PEFC or FSC-certified Northern European forests. The forest owners have agreed to the requirements of forest certification. Metsä Group and external auditors verify the sustainable forest management by auditing harvesting sites, for example.

For our customers to be able to purchase certified paperboard or pulp, both the forests and the Chain of Custody must be certified.

Forest certifications define strict criteria for the ecological, social and economic sustainability of forest management. The requirements pertain, among other things, to the safeguarding of the forests' biodiversity, maintaining the forests' growth, and securing the rights of Indigenous peoples. Forest certification requires an external third party to audit the certified forest areas and regularly implemented measures. According to Metsä Group's policy, requirements concerning biodiversity, the environment and social responsibility as well as statutory requirements are also followed in uncertified forests so that the criteria set for controlled wood are met.

Our Chain of Custody is annually assessed through internal and third-party audits. The audits cover Metsä Group's business operations from the forest to the end product. The audits monitor the operations of the wood suppliers and harvesting contractors as well as the traceability of the wood fibre within our own processes. The auditing covers a range of aspects related to environmental

and social responsibility, such as the wood's legal origin, the securing of Indigenous people's rights, safety at work, and traceability and calculation practices, which should accord with certification standards. This allows us to ensure the wood's sustainable origin and the share of certified wood used in our production. If deviations are observed in the audits, we implement the corrective measures immediately.

In 2022, our wood use totalled 8.3 million cubic metres (8.3 million m³). The volume includes the wood used in Metsä Board's own production of pulp and high-yield pulp as well as the wood used in the pulp purchased from Metsä Fibre. Of the wood used by Metsä Board, 12% came from the sawmill industry's side streams, woodchips. Of all the wood fibre we used, 83% (83) came from certified forests and 17% (17) was controlled wood. All the wood fibre we use meets the requirements of the PEFC and FSC chains of custody.

The availability of certified wood fibre is limited – around 11% of the world's forests are certified. The war that Russia started in Ukraine in February 2022 has reduced the volume of certified wood

available, as forest certification standards prohibited during the 2022 spring the use of Russian and Belarusian wood in PEFC- and FSC-certified products and products containing controlled wood. Metsä Board has managed to retain a high level of certification in its wood use thanks to the high share of certified forests in our main wood supply areas: around 90% in Finland and 65% in Sweden.

→ Read more about forest biodiversity and carbon storage (pp. 27–29)

WOOD SUPPLY AREAS IN 2022



* Wood supply from Russia was discontinued in March 2022.

Procurement of other raw materials and services

The sustainability of suppliers providing material other than wood or fibre, including chemicals, machinery, equipment, transport and other services, is centrally ensured in Metsä Group's procurement process.

Our procurement process includes a number of risk management tools:

- The minimum requirements for our suppliers are detailed in our Supplier Code of Conduct. The Code sets requirements on human rights responsibilities, health, safety and environmental responsibilities, and includes a recommendation to set emission reduction targets for greenhouse gases. Our Code of Conduct is part of our purchase agreements, and all our suppliers are required to commit to them or to their own equivalent principles. The agreements may furthermore contain other sustainability requirements.
- In our supplier selection process, we assess the sustainability risks of all our suppliers with the help of country risk classifications. We also analyse category-specific risks.
- Third-party due diligence is carried out for most of our suppliers as part of the Know Your Business Partner process. It provides us with a better understanding of who we are working with and helps us reduce the risk of participating in illegal activities. The checks cover the background of a customer, supplier, or

other partner in terms of trade sanctions, money laundering, corruption, human rights violations, and other key risks.

- A separate sustainability assessment is conducted for our most significant suppliers and potentially risky suppliers. It comprises a self-assessment form for the supplier, an analysis of the responses and any recommendations for developing the supplier's operations.
- Metsä Group or an external party audits some of the suppliers. In our audits, we focus on the way in which suppliers handle environmental matters and ensure quality and safety at work in their operations. We have trained our auditors to detect risks related to forced labour and labour exploitation.
- We investigate the origin – at least the country of origin – of our raw materials and packaging materials with product safety questionnaires.
- We also require our suppliers to meet our requirements with regard to the cleanliness and safety of products (pp. 50–51).
- We monitor the development of sustainability of the suppliers for whom we have recommended development measures.
- We require our employees in the procurement organisation to complete e-learning courses in topics such as procurement, agreement and competition policy.

In 2022, we continued to improve the traceability of our raw materials, including process, basic and coating chemicals, as well as packaging materials. We aim to make information about the origin of raw materials a more inherent part of risk analyses and to better target supplier background checks and audits at suppliers in risk countries. In 2022, a third party audited 14 (17) of our suppliers and Metsä Group audited 2 (0).

ESG Advocacy

We take part in advocacy as part of Metsä Group. We focus on promoting the bioeconomy, and the role of forests, the forest industry, and wood-based products in mitigating climate change and securing biodiversity. We increase understanding of fresh fibre as an enabler of the fibre cycle, the benefits of wood fibre-based packaging materials, and product and food safety.

Our advocacy efforts focus on developing regulation at the national and European Union level. Topics relevant for the paperboard and packaging industry at the EU level include the promotion of the circular economy, sustainable product policies, the proposed ecodesign regulation, the proposed regulation concerning packaging and packaging waste, and the sustainable finance taxonomy.

Key memberships in organisations

Metsä Board furthers the recyclability of fibre-based packaging and participates in the activities of the 4evergreen alliance, which brings together the entire packaging value chain. In 2022, our representatives were active in 4evergreen's Steering Group and team of public relations experts.

We also promote fibre-based food packaging that is sustainable in terms of the environment and health, and participate in the activities of the European Paper Packaging Alliance (EPPA), which

represents paperboard producers and packaging converters. As part of Metsä Group, we are an active member in the Confederation of European Paper Industries (Cepi), which supports the EU's goal of achieving climate neutrality by 2050. Metsä Group's President and CEO chairs the Board of Cepi.

We are also involved in a number of national-level advocacy organisations, the most important of which are the Finnish Forest Industries Federation, the Swedish Forest Industries Federation, and Die Papierindustrie, an association of German paper mills.

In 2022, Metsä Board paid a total of EUR 650,000 in membership fees to industrial associations. Metsä Group's parent company, Metsäliitto Cooperative, has registered with the EU Transparency Register, maintained by the European Parliament and European Commission, and has signed the Register's Code of Conduct.

According to **Ritva Mönkäre**, Metsä Board's Communications Manager and Brussels-based **Tytti Peltonen**, Metsä Group's Vice President, Corporate Affairs, active science-based advocacy helps improve the functioning and environmental impact of regulation.



Environmental benefits from single-use fibre packaging

In takeaway restaurants, single-use fibre packaging is a better solution than reusable packaging in terms of the environment. This was the finding of a life-cycle assessment (LCA) conducted by Ramboll, an independent consultancy, and published by the EPPA in 2022. During its life cycle, single-use takeaway packaging generates less CO₂ emissions and consumes less water than reusable tableware, for example. A similar result was arrived at in a life-cycle assessment conducted a year earlier by Ramboll and published by the EPPA, which studied the environmental impacts of packaging used in European fast food restaurants.

→ Further information about the study is available at eppa-eu.org



Open day drew a crowd in Simpele

The open day organised at the Simpele paperboard mill in September 2022 attracted numerous students and other residents from Simpele and neighbouring municipalities. In addition to presenting the paperboard mill, the event showcased Metsä Group's other business areas and products. "It was great to see that so many people were interested in our mill and its operations. We were positively surprised by the event attracting 1,300 visitors. For many, the tour of the mill was a highlight of the day," says **Timo Tallinen**, Director of the Simpele mill. Open days organised at mills are an established way for Metsä Board to present its operations to local residents and other people interested in the topic.

Encouraging children and young people to exercise

Metsä Group is the main partner of the Finnish Athletics Federation in the field of athletics for children and young people. The Finnish Athletics Federation annually organises around 500 club competitions across Finland, reaching out to approximately 30,000 children and young people aged 5–15. The goal of club competitions is to encourage the age group to try different disciplines and get to know a variety of hobbies in a safe and cheerful way.



MILL-SPECIFIC INFORMATION

The data in the table have been assured by an independent third-party (limited assurance). The Assurance Report is available on page 68.

Mills	Joutseno	Kaskinen	Kemi	Kyro	Simpele	Tako	Äänekoski	Husum	Others ⁶⁾	Total
COUNTRIES	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	SWEDEN		
Personnel										
Number of employees, FTE ¹⁾	54	84	128	143	273	193	192	693	488	2,248
Total Recordable Injury Frequency (TRIF) ²⁾	0	6.7	9.1	7.8	6.3	21	6.1	6.0		6.7
Lost-time accident frequency (LTAIF) ³⁾	0	6.7	4.5	7.8	4.2	18	6.1	4.3		5.4
Sickness absences, % ⁴⁾	7	3.1	4.5	5.1	4.6	7.2	6.4	6		4.9
Management systems										
ISO 9001	x	x	x	x	x	x	x	x		
ISO 14001	x	x	x	x	x	x	x	x		
ISO 50001	x	x	x	x	x	x	x	x		
ISO 45001	x	x	x	x	x	x	x	x		
ISO 22000	x	x	x	x	x	x	x	x		
FSSC 22000			x	x	x		x	x		
Chain of custody										
PEFC	x	x	x	x	x	x	x	x		
FSC®	x	x	x	x	x	x	x	x		
Emissions to air (t)										
Biogenic CO ₂	0	168,978	0	118,611	177,268	1,072	0	1,484,972		1,950,901
Fossil-based CO ₂ (Scope 1)	26,969	8,307	6,884	16,873	43,301	70,545	0	63,158		236,037
Sulphur (SO ₂) ⁵⁾	0	29	0	53	81	0	0	255		418
Total reduced sulphur (TRS)	0	0	0	0	0	0	0	60		60
Nitrogen oxides (NO ₂)	14	103	3	81	126	48	0	851		1,226
Particles	10	8	0	5	2	0	0	260		285
Discharges to water (t)										
Adsorbable organic halogen (AOX)	0	0	0	0	0	0	0	50		50
Chemical oxygen demand (COD)	679	892	264	154	225	166	512	7,476		10,368
Biological oxygen demand (BOD)	5	40	30	11	27	45	165	323		647
Total phosphorus	0	2	1	1	1	1	1	15		23
Total nitrogen	4	14	31	13	9	1	10	90		172
Total suspended solids	40	123	124	78	40	29	95	988		1,517
Water use (1,000 m³)										
Water sourcing	6,414	13,821	9,625	4,292	27,372	3,803	0	44,640		109,967
Wastewater flow	563	2,999	7,706	3,026	4,514	2,469	2,890	34,573		58,740
Waste and by-products (t)										
Utilised by-products and waste	21,410	20,493	5,800	23,900	23,110	5,833	11,232	57,749		169,527
Landfill waste	0	4.8	101	3.8	0	0.00	54	0		163
Hazardous waste	42	293	4	24	87	58	27	424		960

¹⁾ Full-time equivalent on 31 December 2022

²⁾ Total Recordable Incident Frequency per million hours worked. TRIF = number of accidents x 1,000,000 / hours worked. The TRIF rate includes not only accidents at work resulting in absence but also accidents at work requiring compensatory work or medical treatment. The former subsidiary Hangö Stevedoring is included in the Total figure until the end of February 2022.

³⁾ LTA1 frequency rate. Accidents at work resulting to at least one day sick leave, excluding the day of the accident, per million hours worked. The former subsidiary Hangö Stevedoring is included in the Total figure until the end of February 2022.

⁴⁾ % of theoretical working time. The former subsidiary Hangö Stevedoring is included in the Total figure until the end of February 2022.

⁵⁾ SO₂ calculation contains also TRS (Husum)

⁶⁾ Includes personnel from sales and logistics operations, management and subsidiaries. Production, emissions and waste originate from Äänevoima's production of energy sold for external use. Personnel figures of Others are included in Metsä Board's total figures.

PRODUCTION CAPACITIES

Board mills

Tonnes	Country	Machines	Folding boxboard	White kraftliner	Total
Tampere (Tako)	Finland	2	210,000		210,000
Kyröskoski (Kyro)	Finland	1	190,000		190,000
Äänekoski	Finland	1	260,000		260,000
Simpele	Finland	1	300,000		300,000
Kemi	Finland	1		425,000	425,000
Husum	Sweden	2	400,000	250,000	650,000
Total		8	1,360,000	675,000	2,035,000

Pulp and BCTMP mills

Tonnes	Country	Chemical pulp	BCTMP	Total
Husum	Sweden	730,000		730,000
Joutseno	Finland		360,000	360,000
Kaskinen	Finland		390,000	390,000
Total		730,000	750,000	1,480,000

Metsä Fibre pulp mills ¹⁾

Tonnes	Country	Chemical pulp	BCTMP	Total
Äänekoski	Finland	1,300,000		1,300,000
Kemi	Finland	610,000		610,000
Rauma	Finland	650,000		650,000
Joutseno	Finland	690,000		690,000
Total		3,250,000		3,250,000

¹⁾ Metsä Board owns 24.9% of Metsä Fibre

ENVIRONMENTAL PERMIT LIMIT VIOLATIONS

In 2022, there were no environmental incidents or permit violations at Metsä Board's mills that would have caused significant environmental impacts, and would have been followed by claims, compensations or significant media coverage. The incidents that have caused violations of monthly permit limit values are detailed in the table below. There were no exceedances at quarterly or annual level.

The data in the table have been assured by an independent third-party (limited assurance). The Assurance Report is available on page 68.

Unit	Incident	Corrective actions
Äänekoski	The reduction of suspended solids at the wastewater treatment plant failed to meet the permit conditions in August.	Review and adjustment of flocculant input.
Kyro	The monthly phosphorus limit for wastewater was exceeded in September.	Adjustment of the aeration and process at the wastewater treatment plant.
Kyro	The monthly limit for phosphorus and solids in wastewater was exceeded in November.	More precise adjustments to the process during the mill's maintenance shutdown.
Tako	The monthly limit for suspended solids in wastewater was exceeded in November.	More precise sampling. The incident was likely caused by a sampling error.

Disclosure in accordance with the SASB Standard

Our reporting concerning 2022 follows the SASB Industry Standard for Pulp & Paper Products, which falls under the SASB Industry Class Renewable Resources & Alternative Energy. References to more detailed information are given in the table. The data in the table have been assured by an independent third-party (limited assurance). For the Assurance Report, see page 68.

CODE	ACCOUNTING METRIC	CATEGORY	COMMENTS AND REFERENCES
Greenhouse gas emissions			
RR-PP-110a.1.	Gross global Scope 1 emissions (gross)	Quantitative	236,037 tonnes of fossil-based Scope 1 carbon dioxide emissions. We also disclose fossil-based Scope 2 carbon dioxide emissions, Scope 3 greenhouse gas emissions as well as biogenic carbon dioxide emissions (p. 33). For Scopes 1 and 2 the emissions of other greenhouse gases are estimated to be very low and immaterial in terms of the disclosures.
RR-PP-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets.	Discussion and analysis	Our target is to reduce our Scope 1 and market-based Scope 2 emissions by 100% from the baseline year of 2018 by the end of 2030. According to the target, all our mills will abandon the use of fossil-based energy sources, and thereby our fossil-based Scope 1 and Scope 2 emissions will reduce to zero. In 2018–2022, our Scope 1 and 2 emissions per tonne produced reduced by 33%. Further information about our progress in this respect and on our plan for achieving the target can be found on pp. 32–33.
Air quality			
RR-PP-120a.1	NO _x (excluding N ₂ O)	Quantitative	1,226 tonnes (as NO ₂)
	SO ₂	Quantitative	418 tonnes
	Volatile Organic Compounds (VOCs)	Quantitative	Our production processes do not generate substantial amounts of VOCs and Metsä Board is not obligated to measure them regularly. This is why Metsä Board does not consider VOCs material in terms of the disclosures.
	Particulate matter (PM)	Quantitative	285 tonnes
	Hazardous Air Pollutants (HAPs)	Quantitative	Our production processes do not generate substantial amounts of HAPs and Metsä Board is not obligated to measure them regularly. This is why Metsä Board does not consider HAPs material in terms of the disclosures.
Energy management			
RR-PP-130a.1	Total energy consumed	Quantitative	8,561 GWh (according to the GRI calculation method, end-use) In accordance with the established practice, we disclose energy consumption as gigawatt hours and based on lower heating values (pp. 34–35).
	Percentage grid electricity	Quantitative	22%
	Percentage from biomass	Quantitative	67%
	Percentage from other renewable energy	Quantitative	3% In addition to renewable energy sources, nuclear power produced without fossil fuels plays an important role in achieving our fossil free target
	Total self-generated energy	Quantitative	4,941 GWh of which 4,345 GWh is renewable energy and 67 GWh was sold outside Metsä Board. Sold energy was mainly based on bio-based energy sources
	Risks and uncertainties related to the use of biomass as an energy source	Discussion and analysis	The biomass we use is mainly based on the use of the black liquor, bark and logging residue generated in the context of our production and wood supply. A risk analysis has been performed in terms of the biomass, and all the biomass we use is climate neutral in accordance with EU regulations and meets the EU's sustainability criteria. Should the sustainability criteria change in the long run, some additional costs may be allocated to biomass's energy use.

CODE	ACCOUNTING METRIC	CATEGORY	COMMENTS AND REFERENCES
Water management			
RR-PP-140a.1	Total water withdrawn	Quantitative	109,901 (1,000 m ³) surface water 65 (1,000 m ³) groundwater Nearly 100% of the process and cooling water is surface water. We mainly use groundwater for hygiene, laboratory, etc. purposes.
	Total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Quantitative	4,399 (1,000 m ³) water consumed Of all the water we use 96% is returned to waterbodies after use and roughly 4%, either evaporates during the process or is bound to products (pp. 40–41). The figure is based on a value that takes into account direct water intake and the water contained in the raw materials (p. 67). 0% of the water comes from areas with high or extremely high baseline water stress (WRI Aqueduct Water Risk Atlas).
RR-PP-140a.2	Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and analysis	All our mills are located in areas with ample water resources, due to which our water use does not impair the availability of water to other parties. Risk assessments are carried out twice a year at the company level. At the production unit level risk assessments are done in accordance with certified management systems. Climate change may also cause water-related risks in the future (pp. 36–37). Our target of reducing the use of process water by 30% per tonne produced during 2018–2030 reduces our water risk.
Supply chain management			
RR-PP-430a.1	Percentage of wood fibre sourced from (1) third-party certified forestlands and percentage to each standard and (2) meeting other fibre sourcing standards and percentage to each standard	Quantitative	83% of the wood fibre we use comes from PEFC or FSC®-certified forests, and 17% of the fibre meets the criteria for PEFC Controlled Sources and FSC Controlled Wood. Thus the wood fibre we use is traceable (p. 54–57). In our view the properties of PEFC-certified and FSC-certified wood fibre are not materially different, due to which we do not disclose their percentages separately.
RR-PP-430a.2	Amount of recycled and recovered fibre procured	Quantitative	0 tonnes Metsä Board produces premium paperboards made from pure, traceable fresh fibre also suitable for demanding end uses requiring a high level of hygiene. We promote the circular economy throughout our value chain (pp. 8–9, 24–25, 30–31). Our life cycle assessments have shown the carbon footprint of packaging made from our fresh fibre paperboard is up to more than 50% smaller than that of packaging made from recycled fibre of equal stiffness (2019). Metsä Board is prepared for the reputational and physical risks associated with forest use (pp. 36–37).
Activity metrics			
RR-PP-000.A	Pulp production	Quantitative	1,409,000 tonnes (chemical pulp and BCTMP)
RR-PP-000.B	Paper production	Quantitative	1,890,000 tonnes (folding boxboard and white kraftliners)
RR-PP-000.C	Total wood fibre sourced	Quantitative	8.3 million m ³ . It is our company's established custom to indicate volume as cubic metres, not as tonnes (pp. 55–57).

Disclosures in accordance with the TCFD recommendations

Metsä Board’s disclosures concerning climate-related risks and opportunities in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) are compiled in the table below. The references to more detailed information are indicated with abbreviations: (AR) Annual Report, (BDR) Board of Directors’ Report, (CG) Corporate Governance Statement.

Governance	
Disclose the organisation’s governance around climate-related risks and opportunities	
a) Describe the Board’s oversight of climate-related risks and opportunities.	AR: Sustainability management pp. 20–21 CG: Risk management p. 174
b) Describe the management’s role in assessing and managing climate-related risks and opportunities.	AR: Sustainability management pp. 20–21 CG: Risk management p. 174
Strategy	
Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation’s business operations, strategy and financial planning where such information is material.	
a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	AR: Strategy pp. 8–9 AR: Operating environment pp. 12–14 AR: Product and service development pp. 16–17 AR: Climate-related risks and opportunities pp. 36–37 AR: Sustainable products pp. 30–31 BDR: Most significant risks and uncertainties pp. 85–88 CG: Risk management p. 174
b) Describe the impact of climate-related risks and opportunities on the organisation’s businesses, strategy, and financial planning.	AR: Strategy pp. 8–9 AR: Sustainability management pp. 20–21 AR: Climate-related risks and opportunities pp. 36–37 BDR: Most significant risks and uncertainties pp. 85–88 CG: Risk management p. 174
c) Describe the resilience of the organisation’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	In line with Metsä Board’s strategy, the company has a plan to achieve zero carbon dioxide emissions (Scope 1 and Scope 2, market-based) at all its mills by the end of 2030. The emissions target is science-based and approved by SBTi (1.5°C target level). The target is also fossil free for all raw materials. To mitigate climate change and to adapt to a low-carbon future, investments and development measures have been and will be made in energy efficiency and the transition to fossil free energy sources in own energy production and in purchased energy. The company has analysed climate-related scenarios and examined the potential effects of transitional and physical risks and opportunities on its business. Metsä Board employs, among others, analyses based on the RCP 2.6, RCP 4.5 and RCP 8.5 scenarios (Representative Concentration Pathways). AR: Product and service development pp. 16–17 AR: Sustainable products pp. 30–31 AR: Climate-related risks and opportunities pp. 36–37 AR: Forests, climate and the environment pp. 27–41 BDR: Most significant risks and uncertainties pp. 85–88

Risk management

Disclose how the organisation identifies, assesses and manages climate-related risks.

a) Describe the organisation's processes for identifying and assessing climate-related risks.	<p>Climate-related risks have been integrated into Metsä Board's overall risk management:</p> <p>AR: Sustainability management pp. 20–21 AR: Climate-related risks and opportunities pp. 36–37 BDR: Most significant risks and uncertainties pp. 85–88 CG: Risk management p. 174</p>
b) Describe the organisation's processes for managing climate-related risks.	<p>BDR: Most significant risks and uncertainties pp. 85–88 CG: Risk management p. 174</p>
c) Describe how the processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management.	<p>Climate-related risks have been integrated into Metsä Board's overall risk management:</p> <p>AR: Sustainability management pp. 20–21 BDR: Most significant risks and uncertainties pp. 85–88 CG: Risk management p. 174</p> <p>Climate-related risks are assessed as part of Metsä Board's assessment process for overall risks. The results of the risk assessment are presented to the Board of Directors and the Audit Committee twice a year. The risks are assessed with a risk matrix which accounts for the magnitude of a risk's potential financial impact and the likelihood of the risk's materialisation.</p>

Metrics and targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	<p>AR: Sustainability targets pp. 22–23 AR: Sustainable products pp. 30–31 AR: Forests, climate and the environment pp. 27–41</p>
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas emissions and the related risks.	<p>Scope 1, Scope 2 and Scope 3 emissions: AR: Climate and energy pp. 32–37</p>
c) Describe the targets used by the organisation to manage climate related risks and opportunities and performance against targets.	<p>AR: Sustainability targets pp. 22–23 AR: Sustainable products pp. 30–31 AR: Forests, climate and the environment pp. 27–41</p>

Principles of sustainability reporting

Metsä Board Corporation and its subsidiaries comprise a forest industry group “Metsä Board” or “the Group”. Metsä Board’s business operations comprise folding boxboards, white kraftliners and market pulp.

Non-financial reporting covers the entire Metsä Board Group, including Metsä Board Corporation and all companies in which the Group directly or indirectly holds more than 50% of the votes, unless otherwise stated. Metsä Board owns 24.9% of its associated company Metsä Fibre, and the financial reporting includes the share of Metsä Fibre’s result corresponding to this holding. In non-financial reporting, the corresponding share of Metsä Fibre’s sustainability information is not included in Metsä Board’s sustainability information, with the exception of Metsä Fibre’s Scope 1 and Scope 2 emissions, which are taken into account in the emissions from Metsä Board’s value chain (Scope 3).

- Environmental data are compiled from the operations of production units, and they have an environmental permit for their operations.
- Personnel data are compiled for all employees of the Group. The reporting also covers subcontractors in terms of accidents.
- This report also contains information related to the value chain, such as Scope 3 emissions and key figures describing the sustainability of suppliers.

Metsä Board’s sustainability themes and key figures are based on Metsä Group’s materiality assessment conducted in 2018. Based on the materiality assessment, the most relevant indicators for the company’s operations, products and stakeholders have been selected. The materiality analysis and material topics were updated in 2022. The updated themes and targets will be adopted as of the reporting of 2023 data. Further information on the materiality assessment and its results is available on page 23.

Sustainability Report 2022 follows the SASB Industry Standard for Pulp & Paper Products, which falls under the SASB Industry Class Renewable Resources & Alternative Energy. The reporting has been substantially supplemented by applying the Global Reporting Initiative (GRI) 2021 standards. The reporting period is 1 January–31 December 2022. The previous Sustainability Report was published on 23 February 2022. The report is published annually.

Certain sustainability performance data and claims related to them have been externally assured (limited assurance) by an independent third party PricewaterhouseCoopers Oy. Assurance was conducted in compliance with international standards on

assurance engagements, ISAE 3000 (Revised) and ISAE 3410. The assurance report is available on page 68. Assurance covers:

- Data in the Non-financial key figures table (p. 79)
- EU Taxonomy KPIs (pp. 83–85)
- Data in the mill-specific information table (p. 60).
- Data in the environmental permit limit violations table (p. 61)
- Data in the SASB reporting table (pp. 62–63)

Environmental reporting principles

Only material flows (raw materials, energy, water, products and waste) to and from industrial sites are taken into account. For example, interim storage is not reported for waste.

The Group’s greenhouse gas emissions are calculated in accordance with the GHG Protocol (GHG Protocol Corporate Accounting and Reporting Standard and Corporate Value Chain (Scope 3) Accounting and Reporting Standard). Reporting covers direct carbon dioxide emissions (Scope 1) from Metsä Board’s own operations, indirect carbon dioxide emissions (Scope 2) from the generation of purchased energy, and indirect greenhouse gas emissions from the rest of the value chain (Scope 3), including upstream and downstream emissions in the GHG Protocol Scope 3 emission categories identified as significant.

For Scope 1 and 2 emissions, the climate impact consists of CO₂ emissions, as the share of other greenhouse gas emissions is estimated to be very low and therefore irrelevant for reporting purposes. Scope 3 emissions consist of CO₂ and other greenhouse gases. All Scope 3 emissions have been converted into CO₂ equivalents. Biogenic CO₂ emissions originate from wood-based fuels, and the CO₂ emission factor used for their calculation is 396 tonnes of CO₂/GWh. Emissions from power plants are allocated to mills, which use the energy from those power plants.

Scope 1 emissions are calculated from fuels used at Metsä Board’s production units. Calculation is based on supplier-specific emission factors for fuels or nationally specified emission factors.

Scope 2 emissions include emissions from purchased electricity and heat used at Metsä Board’s production units. Emissions from purchased electricity have been calculated using two different methods. The market-based method uses supplier-specific emission factors for electricity, supplemented by national residual-mix emission factors for untracked purchased electricity. The

location-based method uses country-specific emission factors for average electricity generation. Residual-mix and country-specific emission factors are obtained from the AIB's (Association of Issuing Bodies) report on European emission factors. Heat is obtained as a direct energy transfer from pulp mills and emissions are determined by actual fuel consumption.

Scope 3 emissions are calculated using primary data on Metsä Board's procurement (e.g. t, m³, EUR, tkm). Life-cycle emission factors available from various databases, such as ecoinvent, Defra and GaBi, are primarily used in the calculation. Based on the information obtained from suppliers, supplier-specific factors are used where applicable, for example, for pulp procured from Metsä Fibre and for certain purchased chemicals. Scope 3 reporting covers the following emissions categories:

- Purchased goods and services: procured wood and pulp and other raw materials and services
- Capital goods: purchased capital goods
- Fuel- and energy-related activities: impacts of energy production (other than the emissions included in Scope 1 and 2)
- Upstream transportation and distribution: wood and pulp transports to Metsä Board's mills
- Waste generated in operations: treatment of landfill and hazardous waste
- Downstream transportation and distribution: third-party product transports to customers purchased by Metsä Board
- Processing of sold products: expected further processing of the sold market pulp and high-yield pulp
- End-of-life treatment of sold products: expected end-of-life treatment of the sold paperboard (combustion, landfill, recycling)
- Investments: Metsä Board's share (24.9%) of Metsä Fibre's Scope 1 and 2 emissions

Energy consumption is expressed both as primary energy consumption and final energy consumption. Primary energy consumption includes the energy consumed in end use and the amount of energy used to produce energy. For purchased electricity, primary energy is calculated by dividing the amount of purchased electricity by the assumed efficiency of energy production: traditional fuels 0.4, nuclear power 0.33, hydro, wind and solar power 1. The total energy of purchased heat is calculated based on the actual fuel consumption of nearby power plants.

Calculated according to the GRI, Metsä Board's final energy consumption is 8.6 TWh. This calculation method does not take into account the efficiency factors of electricity and heat. Final energy consumption is obtained by summing up renewable fuel, i.e. biomass (4.93 TWh), non-renewable fuel (1.03 TWh), self-generated hydropower (0.03 TWh), purchased electricity (1.92 TWh) and purchased heat (0.73 TWh) consumed at the mills. Sold heat and electricity (0.07 TWh) are deducted from this. Energy consumption for 2018 and the tonnes of paperboard produced used in environmental accounting have been revised. The revisions have retroactively impacted on the figures related to the reduction in process water use and improvement in energy efficiency.

Waste volumes include moisture. Waste figures include volumes for final disposal (material and energy recovery, landfilling and

hazardous waste treatment). Part of the reported waste comes directly from the mill process and part from interim storage. Waste generated in the mill process and transferred to interim storage is not included in this figure.

Wastewater discharges are based on laboratory measurements, as in reporting to authorities. Discharges of external wastewater treated in our wastewater treatment plants are not taken into account in Metsä Board's reporting. The allocation of emissions between internal and external inflows is carried out assuming theoretical chemical oxygen demand (COD) reductions for each inflow, which are then corrected according to the actual COD reduction for the whole plant. Other discharges are allocated according to the flow. In the mill integrates, the amount of COD is allocated to parties using the wastewater treatment plant based on the quality of COD.

At Tako mill, some of the wastewater discharges are fed through the municipal wastewater treatment plant, which assumes an 85% reduction in COD. Emissions of biological oxygen demand (BOD), phosphorus and suspended solids are calculated based on the flow, using the following residual concentrations: BOD 10 mg/l, total phosphorus 0.5 mg/l and total suspended solids 10 mg/l. Total nitrogen emissions are considered zero because municipal wastewater contains excess nitrogen, and a reduction of our BOD binds nitrogen to biomass, reducing the mill's total nitrogen emissions.

Water consumption is an estimate of the amount of water evaporated during production and wastewater treatment, and bound in products and wastewater treatment sludges. The calculation is based on an estimate that takes into account, in addition to the above, direct abstraction, water contained in raw materials and water returned to water bodies.

Personnel reporting principles

The number of employees is reported as full-time equivalents (FTE). The sickness absence rate is calculated per theoretical hours worked. LTA1F, i.e. the lost-time accident rate, includes all accidents at work that have resulted in at least one day of absence, excluding the day of the accident. TRIF, i.e. the frequency of accidents at work, includes not only accidents at work resulting in absence but also accidents at work requiring compensatory work or medical treatment. Both measures are calculated as follows: number of accidents x 1,000,000 / hours worked.

For external partners, the number of accidents resulting in absence (LTA1), the accident severity rate and the number of fatal occupational accidents are reported. The figures cover our partners operating on the mill site, excluding major investment projects, e.g. the Husum recovery boiler and board machine investments and the Kemi paperboard mill investment.

Women's share in executive management includes women with the management level of VP, SVP or CEO and a management requirement level of IPE 58 at least. New entrants include only new permanent employees. Leavers include only permanent employees who have left the company. Employee turnover rate includes all permanent leavers and redundancies due to business restructuring and is calculated per the average permanent head count.

Independent practitioner's limited assurance report

(Translation of the Finnish Original)

To the Management of Metsä Board Oyj

We have been engaged by the Management of Metsä Board Oyj (hereinafter also the "Company") to perform a limited assurance engagement on selected sustainability information for the reporting period 1 January 2022 to 31 December 2022, disclosed in the Company's Annual and Sustainability Report 2022 (hereinafter the Selected sustainability information).

Selected sustainability information

The selected sustainability information within the scope of assurance are the economic, social and environmental sustainability indicators including EU Taxonomy KPIs for climate change mitigation and climate change adaptation as identified in the table "Data in scope of assurance" in the Company's Annual and Sustainability Report 2022.

Management's responsibility

The Management of the Company is responsible for preparing the Selected sustainability information in accordance with the Reporting criteria as set out in the Company's reporting instructions described in the Company's Annual and Sustainability Report 2022, the GRI Standards of the Global Reporting Initiative, SASB Pulp and Paper Products Sector Standard and EU Taxonomy Regulation (EU 2020/852) and Delegated Act (EU 2021/2178) (collectively "Reporting criteria").

The Management of the Company is also responsible for such internal control as the management determines is necessary to enable the preparation of the Selected sustainability information that is free from material misstatement, whether due to fraud or error.

Practitioner's independence, other ethical requirements and quality control

We have complied with the independence and other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (IESBA Code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

PricewaterhouseCoopers Oy applies International Standard on Quality Control (ISQC) 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Practitioner's responsibility

Our responsibility is to express a limited assurance conclusion on the Selected sustainability information based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (revised) "Assurance Engagements Other than Audits or Reviews of Historical Financial Information" and, in respect of greenhouse gas emissions, ISAE 3410 "Assurance Engagements on Greenhouse Gas Statements". These standards require that we plan and perform the engagement to obtain limited assurance about whether the Selected sustainability information is free from material misstatement.

In a limited assurance engagement, the evidence-gathering procedures are more limited than for a reasonable assurance engagement, and therefore less

assurance is obtained than in a reasonable assurance engagement. An assurance engagement involves performing procedures to obtain evidence about the amounts and other information in the Selected sustainability information. The procedures selected depend on the practitioner's judgment, including an assessment of the risks of material misstatement of the Selected sustainability information.

Our work consisted of, amongst others, the following procedures:

- Interviewing senior management of the Company.
- Conducting two site visits (one video interview and one on-site) with Metsä Board's production sites in Finland and Sweden.
- Interviewing employees responsible for collecting and reporting the selected information on sustainability indicators at the Group level.
- Assessing how Group employees apply the reporting instructions and procedures of the Company.
- Testing the accuracy and completeness of the information from original documents and systems on a sample basis.
- Testing the consolidation of information and performing recalculations on a sample basis.
- Considering the disclosure and presentation of the Selected sustainability information.

Limited assurance conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that Metsä Board Oyj's Selected sustainability information for the reporting period 1 January 2022 to 31 December 2022 is not properly prepared, in all material respects, in accordance with the Reporting criteria.

When reading our limited assurance report, the inherent limitations to the accuracy and completeness of sustainability information should be taken into consideration.

Our assurance report has been prepared in accordance with the terms of our engagement. We do not accept, or assume responsibility to anyone else, except to Metsä Board Oyj for our work, for this report, or for the conclusions that we have reached.

Helsinki 21 February 2023
PricewaterhouseCoopers Oy

Mikael Niskala
Partner
ESG Reporting & Assurance

Karsten Westerling
Partner, KHT
ESG Reporting & Assurance

Data in the scope of assurance

Non-financial key figures in the Disclosure of non-financial information:

Environment

Share of certified wood fibre, %
Traceability of raw materials, % of total purchases
Share of fossil free raw materials and packaging materials, % of dry tonnes
Direct fossil-based CO ₂ emissions (Scope 1), t
Indirect fossil-based CO ₂ emissions (Scope 2, market-based), t
Indirect fossil-based CO ₂ emissions (Scope 2, location-based), t
Indirect fossil-based CO ₂ e emissions (Scope 3), t
Share of target group suppliers who have set SBTi targets (Scope 3), %
Share of fossil free energy (Scope 1 + 2, market-based), %
Improvement in energy efficiency from 2018 level, %
Reduction in the use of process water per produced tonne compared to 2018 level, %
Utilisation of production side streams, %

Social responsibility and personnel

Total Recordable Injury Frequency (TRIF) per million hours worked
Lost-time accident frequency (LTA1F) per million hours worked
Share of women in executive management (Vice President or higher) by 2025, %
Diversity, equality and inclusion e-learning completion rate, %
Women's total earnings compared to men's total earnings for white-collars/blue-collars

Anti-corruption, anti-bribery and corporate culture

Code of Conduct e-learning completion rate, %
Ethics index of the Ethics barometer
Suppliers' commitment to the Supplier Code of Conduct, % of total purchases
Supplier background check passed, % of total purchases
Supplier sustainability assessment passed, % of total purchases

EU Taxonomy KPIs for climate change mitigation and adaptation in the Disclosure of non-financial information.

Mill-specific information based on the GRI Standards:

Personnel

Number of employees, FTE
Total recordable injury frequency, TRIF
Lost-time accident frequency, LTA1F
Sickness absenteeism, %

Management system

ISO 9001
ISO 14001
ISO 50001
ISO 45001
ISO 22000
FSSC 22000

Chain of custody

PEFC
FSC®

Emissions to air (t)

Biogenic CO ₂
Fossil-based CO ₂ (Scope 1)
Sulphur (SO ₂)
Total reduced sulphur
Nitrogen oxides (NO _x)
Particles

Discharges to water (t)

Adsorbable organic halogen (AOX)
Chemical oxygen demand (COD)
Biological oxygen demand (BOD)
Total phosphorus
Total nitrogen
Total suspended solids

Water use (1 000 m³)

Water withdrawal
Wastewater flow

Waste and by-products (t)

Recovered by-products and waste
Landfill waste
Hazardous waste

Environmental permit limit violations based on the GRI Standards.

SASB metrics based on the SASB Pulp & Paper Products Industry Standard:

Greenhouse gas emissions

RR-PP-110a.1

Gross global Scope 1 emissions

RR-PP-110a.2

Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets

Air quality

RR-PP-120a.1

NO_x (excluding N₂O)

SO₂

Volatile Organic Compounds (VOCs)

Particulate matter (PM)

Hazardous Air Pollutants (HAPs)

Energy management

RR-PP-130a.1

Total energy consumed

Percentage grid electricity

Percentage from biomass

Percentage from other renewable energy

Total self-generated energy

Risks and uncertainties related to the use of biomass as an energy source

Water management

RR-PP-140a.1

Total water withdrawn

Total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress

RR-PP-140a.2

Description of water management risks and discussion of strategies and practices to mitigate those risks

Supply chain management

RR-PP-430a.1

Percentage of wood fibre sourced from (1) third-party certified forestlands and percentage to each standard and (2) meeting other fibre sourcing standards and percentage to each standard

RR-PP-430a.2

Amount of recycled and recovered fibre procured

Activity metrics

RR-PP-000.A Pulp production

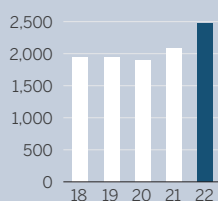
RR-PP-000.B Paper production

RR-PP-000.C Total wood fibre sourced

Key figures

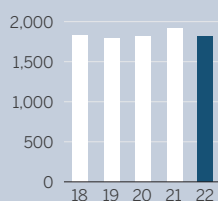
SALES

EUR million



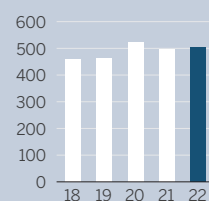
PAPERBOARD DELIVERIES

1,000 tonnes



METSÄ BOARD'S MARKET PULP DELIVERIES ¹⁾

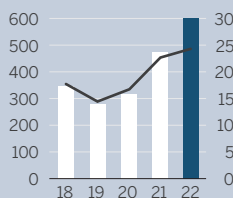
1,000 tonnes



¹⁾ includes chemical pulp and high-yield pulp (BCTMP)

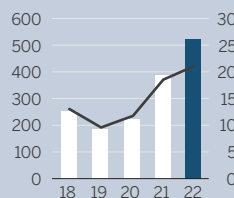
COMPARABLE EBITDA

EUR million,
% of sales

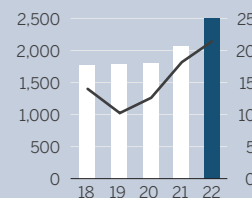


COMPARABLE OPERATING RESULT

EUR million,
% of sales

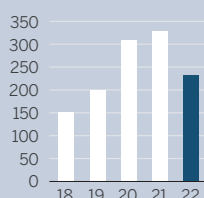


CAPITAL EMPLOYED, EUR million RETURN ON CAPITAL EMPLOYED, %



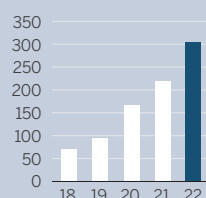
CASH FLOW FROM OPERATIONS

EUR million

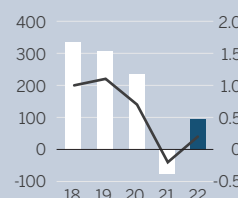


TOTAL INVESTMENTS

EUR million

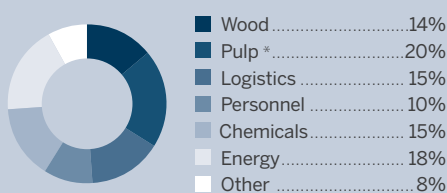


INTEREST-BEARING NET DEBT, EUR million INTEREST-BEARING NET DEBT / EBITDA, COMPARABLE

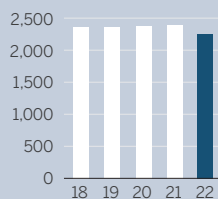


TOTAL COSTS 2022

EUR 2.1 billion

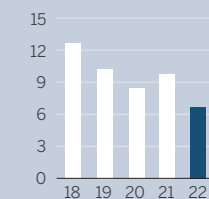


PERSONNEL AT THE END OF PERIOD



TOTAL RECORDABLE INJURY FREQUENCY (TRIF)

per million hours worked



*) Pulp: Metsä Board purchases all external pulp from its associated company Metsä Fibre, of which Metsä Board owns 24.9%. Metsä Fibre's pulp cost structure in 2022: wood 51%, chemicals 15%, logistics 12%, personnel 5%, other 17%.

Development of key figures per share can be found on page 164.

Report of the Board of Directors 2022

■ Metsä Board's business

Metsä Board produces high-quality, sustainable fresh fibre paperboards, and is Europe's largest producer of folding boxboard and white kraftliners. The company's folding boxboard is mainly used to package consumer products such as food and pharmaceuticals, while its white kraftliners are mainly used for various packaging needs in the retail sector. More than half of the white kraftliners made by Metsä Board are coated. The total annual paperboard capacity is approximately 2 million tonnes, and it is sold to approximately 100 countries. Metsä Board's main market areas are Europe and North America.

Metsä Board produces chemical pulp and bleached high-yield pulp (BCTMP), which are used in its own paperboard production, with some sold as market pulp. The annual capacity for pulp and BCTMP is roughly 1.5 million tonnes. In addition, Metsä Board owns 24.9% of its associated company Metsä Fibre, a global leader in the production of softwood market pulp. Metsä Fibre's annual pulp capacity is roughly 3.3 million tonnes.

■ Strategy and financial targets

Metsä Board's strategy is to grow in fibre-based packaging materials and renew its industrial operations. To implement this strategy, the company has significant growth and development investments ongoing and planned to meet the rapidly growing demand for recyclable and plastic-replacing packaging materials in Europe and North America. Metsä Board's production is located close to its most important raw material, the high-quality Northern wood fibre. The company aims to maintain high self-sufficiency in pulp and energy.

Metsä Board's decision-making is guided by financial and sustainability targets, as well as long-term shareholder value growth. The company focuses on continuous cost efficiency improvements and on customers who benefit from the high performance of the company's products and services. The objective is to pay a competitive dividend and maintain a strong balance sheet.

In 2022, Metsä Board's financial targets and dividend policy remain unchanged:

The comparable return on capital employed (ROCE) is at minimum 12%.

- Actual in 2022 was 20.9%.

A ratio of interest-bearing net debt to comparable EBITDA at maximum 2.5.

- Actual in 2022 was 0.2.

In line with dividend policy, Metsä Board aims to distribute at least 50% of the result for the financial period in dividends every year.

- The Board of Directors' proposal to the AGM on the dividend for the 2022 financial year, EUR 0.58 per share, corresponds to 50% of the result for the financial period.

■ Market environment

Paperboards

Global megatrends pose requirements for the safety, quality, sustainability and recyclability of packaging. Pure and easily recyclable fresh fibre paperboards made from renewable raw materials replace non-renewable packaging materials like plastic. The coronavirus pandemic shifted consumption from services to goods and accelerated the demand for fresh fibre paperboards in nearly all end uses. At the end of 2022, the general decline in the demand for consumer products, and the inventory adjustments made in the value chain reduced the demand for paperboards. In addition, the volumes of paperboard imported from Asia to Europe increased towards the end of the year as the global challenges in logistics eased.

In 2022, the deliveries of European folding boxboard and white kraftliners to Europe decreased significantly from the previous year. Correspondingly, market prices increased notably. Metsä Board accounted for 33% (34) of the overall deliveries of European folding boxboard producers and for 57% (56) of exports from Europe.

In the United States, the 2022 production volumes of solid bleached board for local consumption increased, and those of food service board increased notably compared to the previous year. The market prices of both solid bleached board and food service boards grew significantly.

Market pulp

Metsä Board and its associated company Metsä Fibre sell mainly long-fibre pulp to Europe, the Middle East, Africa and Asia. In the long run, demand for market pulp will be supported by the global growth in demand for packaging and hygiene products made from renewable materials.

In 2022, the demand for long-fibre market pulp was mainly at a good level in Europe. In China, overall economic activity was weakened by the strict coronavirus measures, but the demand for pulp remained at a good level in view of supply. In the last quarter, demand for market pulp declined in both Europe and China. The global supply for long-fibre market pulp decreased due to several planned and unplanned production shutdowns, as well as challenges in logistics, which eased towards the end of the year. The prices of market pulp (PIX) increased from the previous year in both Europe and China.

Key figures

	2022	2021	2020
Sales, EUR million	2,479.6	2,084.1	1,889.5
EBITDA, EUR million	614.6	466.0	321.8
comparable, EUR million	602.8	472.2	315.8
EBITDA, % of sales	24.8	22.4	17.0
comparable, % of sales	24.3	22.7	16.7
Operating result, EUR million	531.5	375.9	227.3
comparable, EUR million	520.7	386.6	221.2
Operating result, % of sales	21.4	18.0	12.0
comparable, % of sales	21.0	18.6	11.7
Result before taxes, EUR million	524.9	365.8	212.3
comparable, EUR million	514.6	376.6	206.3
Result for the period, EUR million	461.3	314.0	170.1
comparable, EUR million	451.4	326.6	165.3
Earnings per share, EUR	1.15	0.82	0.48
comparable, EUR	1.13	0.85	0.46
Return on equity, %	22.5	19.4	12.5
comparable, %	22.0	20.2	12.1
Return on capital employed, %	21.4	18.2	12.6
comparable, %	20.9	18.7	12.2
Equity ratio ¹⁾ , %	66	63	60
Net gearing ¹⁾ , %	4	-4	17
Interest-bearing net liabilities/comparable EBITDA	0.2	-0.2	0.7
Shareholders' equity per share ¹⁾ , EUR	5.86	4.78	3.89
Interest-bearing net liabilities ¹⁾ , EUR million	94.5	-78.4	235.5
Total investment, EUR million	304.1	220.2	166.4
Net cash flow from operations, EUR million	232.0	329.6	307.7
Personnel ¹⁾	2,248	2,389	2,370

¹⁾ at the end of the period

Delivery and production volumes

1,000 t	2022	2021	2020
Delivery volumes			
Folding boxboard	1,208	1,296	1,223
White kraftliner	609	627	587
Metsä Board's market pulp ¹⁾	503	496	521
Metsä Fibre's market pulp ²⁾	717	762	696
Production volumes			
Folding boxboard	1,272	1,272	1,249
White kraftliner	605	634	591
Metsä Board's pulp ¹⁾	1,409	1,362	1,371
Metsä Fibre's pulp ²⁾	731	747	702

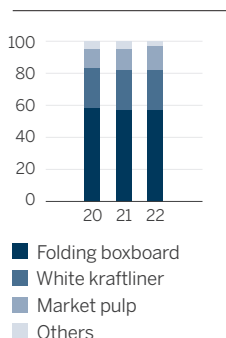
¹⁾ Includes chemical pulp and high-yield pulp (BCTMP).

²⁾ Equal to Metsä Board's 24.9% holding in Metsä Fibre.

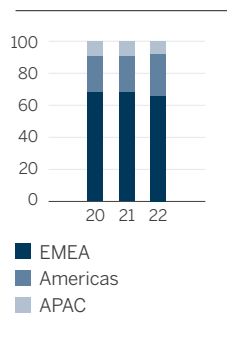
■ Sales and result

Metsä Board's sales were EUR 2,479.6 million (2,084.1). Sales increased due to the higher average prices of paperboards and market pulp.

**SALES SPLIT
BY PRODUCT**
%



**SALES SPLIT
BY REGION**
%



The comparable operating result was EUR 520.7 million (386.6), and the operating result was EUR 531.5 million (375.9). Items affecting comparability totalled EUR 10.8 million in the financial period. They comprised EUR 19.2 million from the sale of the share capital in Hangö Stevedoring Ab; a EUR 6.5 million capital gain from the sale of a land area unrelated to business operations; EUR -5.5 million from the restructuring of customer service and supply chain management; a EUR 2.8 million capital gain related to the divestment of shares; a EUR -1.0 million impairment recognised for Russian operations; a EUR -10.5 million impairment recognised for the Russian operations of the associated company Metsä Fibre; a EUR -1.2 million impairment recognised in the assets of Metsä Fibre's Kyrö sawmill, and EUR 0.3 million for other items.

The comparable operating result improved especially due to the higher average prices of paperboard. Higher market pulp prices and the sales of by-products from pulp production also improved the operating result. On the other hand, the lower paperboard delivery volumes weakened the operating result.

Exchange rate fluctuations, including hedges, had a positive impact of EUR 57 million on the operating result compared to the comparison period.

Costs increased rapidly especially in chemicals, energy and logistics. In chemicals, price increases were particularly notable for caustic soda, peroxides, starch and latexes. Energy costs were driven especially by higher electricity prices. Logistics costs increased due to the limited availability of transport capacity and higher fuel prices. Wood costs increased because of the rise in wood prices and harvesting and transport costs. In the paperboard business, profitability was weakened by higher pulp prices, but the

overall impact of pulp on Metsä Board's result was markedly positive. The general cost inflation also affected fixed costs. In 2022, inflation accounted for approximately 20% of Metsä Board's overall costs.

Unused emissions allowances were sold for a total of approximately EUR 29 million during the year (1–12/2021: EUR 21 million).

The associated company Metsä Fibre's share of Metsä Board's comparable result in January–December was EUR 174.7 million (123.0). Metsä Fibre's profitability improved thanks to higher sales prices and the US dollar strengthening against the euro, which also compensated for the strongly increased production costs.

Financial income and expenses totalled EUR -6.6 million (-10.0), including foreign exchange rate differences from accounts receivable, accounts payable, financial items and the valuation of currency hedging instruments, totalling EUR -5.0 million (-2.3). A total of EUR 8.2 million of interest expenses for ongoing investments were capitalised in investment costs.

The result before taxes was EUR 524.9 million (365.8). The comparable result before taxes was EUR 514.6 million (376.6). Income taxes amounted to EUR 63.5 million (51.8).

Earnings per share were EUR 1.15 (0.82), and comparable earnings per share were EUR 1.13 (0.85). The return on equity was 22.5% (19.4), and the comparable return on equity was 22.0% (20.2). The return on capital employed was 21.4% (18.2), and the comparable return on capital employed was 20.9% (18.7).

■ Business development

Paperboard sales

Metsä Board's paperboard deliveries in January–December totalled 1,817,000 tonnes (1–12/2021: 1,922,000).

In the comparison year 2021, paperboard delivery volumes were at a record high and occasionally exceeded Metsä Board's production capacity. The demand for paperboards remained exceptionally high in the first half of 2022, but normalised in the second half of the year. The change in demand for paperboards in the latter part of the year was driven by the decreasing demand for consumer products and the inventory adjustments in the value chain.

In the first half of the year, Metsä Board intentionally increased its very low inventories, partly in preparation for the investment shutdown of Husum folding boxboard in the autumn 2023.

The folding boxboard volumes previously directed to Russia were successfully reallocated to new markets. In 2021, around 130,000 tonnes of folding boxboard were delivered to Russia.

The sales of dispersion coated barrier board, produced in Kyrö folding boxboard mill, has been rapid. Metsä Board estimates that in 2023 roughly half of the mill's production volume will be dispersion coated barrier board.

The prices of paperboards continued to increase in the fourth quarter. In 2022, the average prices of Metsä Board's paperboards in euros increased by approximately 25% from the previous year. The strengthening of the US dollar against the euro contributed to the increase.

Market pulp sales

Metsä Board's market pulp deliveries totalled 503,000 tonnes (496,000) in January–December, the EMEA region accounting for 72% (66), and the APAC region for 28% (34).

The associated company Metsä Fibre's overall paperboard deliveries totalled 2,880,000 (3,058,000) tonnes, of which 54% was delivered to the EMEA region, 43% to the APAC region, and 3% to the Americas. Metsä Board holds 24.9% of Metsä Fibre.

Paperboard, pulp and BCTMP production

The production volume of paperboard totalled 1,877,000 tonnes (1,906,000), while the combined production volume of pulp and BCTMP amounted to 1,409,000 tonnes (1,362,000). Paperboard production was restricted in the latter part of the year to meet demand. The combined production volume of pulp and BCTMP was at a record high in 2022.

In 2021, a fire broke out on the chip conveyor of the Husum pulp mill, closing Husum's pulp production for around four weeks. Paperboard production was run at a lower-than-normal capacity following the pulp mill's shutdown. The production losses resulting from the fire amounted to roughly 50,000 tonnes in pulp and roughly 30,000 tonnes in paperboard.

Corporate transactions

On 1 January 2022, Metsä Board acquired all the shares in Hämeenkyrön Voima Oy held by Pohjolan Voima Oyj and DL Power Oy, part of Leppäkoski Group. The company was merged with the parent company in the third quarter. The arrangement will not have a significant impact on Metsä Board's key financial figures.

The share capital of Metsä Board's subsidiary Oy Hangö Stevedoring Ab was sold to Euroports Finland Oy on 31 March 2022. The company recognised a capital gain of EUR 19.2 million in its January–March operating result as an item affecting comparability.

Impacts of Russia's war in Ukraine

Russia's attack on Ukraine in early 2022 has had an impact on Metsä Board's business operations. In 2021, Russia accounted for 5.6%, and Ukraine for 0.7%, of Metsä Board's sales. Folding boxboard deliveries to Russia were approximately 130,000 tonnes in 2021, mainly to multinational brand owners. In March 2022, Metsä Board discontinued its sales to Russia, and reallocated the delivery volumes to its main markets Europe and North America.

Metsä Group, responsible for Metsä Board's wood procurement, discontinued its wood procurement from Russia in March and focused it on Finland and Sweden. In 2021, Russian wood accounted for approximately 9% of Metsä Board's wood supply. Imports from Russia have been mainly birch wood, for which the market situation has tightened throughout Metsä Group's operating area.

In May, Russia halted natural gas supplies to Finland. Prior to this, Metsä Board's Joutseno BCTMP mill and the Tako and Kyro paperboard mills used natural gas imported from Russia in their production. Despite the halt to deliveries from Russia, the mills have been supplied with natural gas without disruption. Natural gas has also been replaced by oil, and during the first quarter in 2023, the company will have the readiness to use LNG

in its Kyro and Joutseno mills. Constraints in the availability of alternative energy sources could affect the continuity of Metsä Board's production. In the long term, by the end of 2030 at the latest, Metsä Board's target is that all the energy it uses will be fossil free.

Impacts of COVID-19

The pandemic shifted consumption from services to goods and increased the consumption of products used at home. Metsä Board's paperboard product portfolio responded well to the changes in demand resulting from the pandemic, and strong cash flow supported the financial flexibility. Metsä Board's production and deliveries ran smoothly during the pandemic.

Most of the strict precautionary measures adopted at Metsä Board's production and office units during the pandemic were mainly completely lifted during the second half of the year. The company continues its efforts to ensure the health of employees, prevent the spread of the virus and secure business continuity. The situation is monitored continuously, and local precautionary measures can be quickly initiated if required. From 2023 onwards, the development of the COVID-19 and its effects will only be reported if they have a material impact on Metsä Board's business or financial situation

■ Cash flow

Net cash flow from operations in January–December 2022 was EUR 232.0 million (1–12/2021: 329.6). Working capital increased by EUR 151.4 million (decreased of 49.5). The increase in working capital derived from the increase in paperboard inventories, a rise in inventory value due to cost inflation, and the increase in trade receivables resulting from the higher prices of finished products.

■ Balance sheet and financing

Metsä Board's equity ratio at the end of the financial period was 66% (31 December 2021: 63) and the net gearing ratio was 4% (-4). The ratio of interest-bearing net liabilities to comparable EBITDA in the previous 12 months was 0.2 (-0.2).

At the end of the financial period, interest-bearing liabilities totalled EUR 453.0 million (31 December 2021: 448.6). Non-euro-denominated loans accounted for 2.0% of loans and floating-rate loans for 13.9%, the rest being fixed-rate loans. The average interest rate on liabilities was 2.2% (2.3), and the average maturity of non-current liabilities was 4.0 years (4.7). The interest rate maturity of loans was 36.1 months (45.3).

At the end of the financial period, interest-bearing net debt totalled EUR 94.5 million (31 December 2021: -78.4).

Metsä Board's liquidity has remained strong. At the end of the financial period, the available liquidity was EUR 556.0 million (31 December 2021: 916.0), consisting of the following items: liquid assets and investments of EUR 356.2 million and a syndicated credit facility (revolving credit facility) of EUR 200.0 million. Of the liquid assets, EUR 338.6 million consisted of short-term deposits with Metsä Group Treasury, and EUR 17.6 million were cash funds and investments. Other interest-bearing receivables amounted

to EUR 2.4 million. In addition to items reported as liquidity, the liquidity re-serve is complemented by Metsä Group's internal un-drawn short-term credit facility of EUR 150.0 million and undrawn pension premium (TyEL) funds of EUR 227.6 million.

The fair value of other non-current investments was EUR 345.4 million at the end of the financial period (31 December 2021: 181.0). The change in value was related to the increase in the fair value of Pohjolan Voima Oyj's shares, which was caused by updating the long-term electricity price forecast used in the share valuation model.

At the end of the financial period, an average of 8.5 months of the net foreign currency exposure was hedged, including the hedging of the balance sheet position of trade receivables and trade payables.

Metsä Board has investment grade credit ratings by S&P Global and Moody's Investor Service. In December 2022 Moody's upgraded Metsä Board's rating to Baa2 (was Baa3), with stable outlook (was positive). The company's rating by S&P Global is BBB-, with a stable outlook.

■ Investments

Investments during the financial period totalled EUR 304.1 million (1–12/2021: 220.2), with growth and development investments accounting for 74%, acquired business operations for 10%, and maintenance investments for 16%. Out of total investments, the company's own property, plant and equipment amounted to EUR 278.1 million (216.1), and leased property, plant and equipment to EUR 26.1 (4.1). In the latter, the most significant item was the machinery and equipment for the boiler plant from the acquisition of Hämeenkyrön Voima Oy, totalling EUR 18.0 million.

Renewal of the Husum pulp mill

Metsä Board initiated the first phase of the renewal of the Husum pulp mill in 2019. The first phase included a new recovery boiler and turbine. By the end of the financial period, the investments made in the project totalled EUR 370 million. The total investment value of the first phase is estimated to be EUR 380 million.

The new recovery boiler and turbine will increase the pulp mill's electricity production, which will improve the energy self-sufficiency of the integrated mill and bring Metsä Board closer to its goal of completely fossil free production by 2030. The new recovery boiler and turbine will also reduce the energy and maintenance costs of the integrated mill, improve production efficiency and shorten the duration of annual maintenance works. The investment is expected to improve Metsä Board's annual cash flow by approximately EUR 35 million, of which at least half is expected to be realised in 2023.

The plan is to replace the current fibre lines with a new fibre line during the second phase of the investment, later in the 2020s.

Development programme of the Kemi paperboard mill

In 2021, Metsä Board initiated the development programme for the Kemi paperboard mill, which will increase the mill's annual white-top kraftliner capacity by around 40,000 tonnes. The company estimates that investment value of the programme, originally EUR 67 million, will be higher due

to, among other things, rapid cost inflation. The investments will take place in 2021–2023.

The programme includes a series of modernisation and bottleneck investments in the paperboard production line. As part of the programme, Metsä Board will also buy a modernised production line for unbleached pulp from Metsä Fibre. The production line's annual capacity is roughly 180,000 tonnes. The development programme will reduce the mill's water use by 40% and energy use by 5% per tonne of paperboard produced.

Increasing the production capacity of folding boxboard in Husum

Metsä Board will increase its annual production capacity of folding boxboard by 200,000 tonnes at the Husum integrated mill in Sweden. Following the investment, the production capacity of folding boxboard of the BM1 will be 600,000 tonnes per year. The value of the investment is approximately EUR 210 million. It will take place in 2021–2024, mainly in 2022 and 2023.

The investment is expected to increase Metsä Board's annual sales by approximately EUR 200 million and improve annual comparable EBITDA by approximately EUR 50 million. The company expects to achieve the growth and improved result in full in 2026.

Due to the growing logistics volumes of the Husum integrated mill, the port concept will also be renewed. The value of the investments still partly being planned is EUR 20–30 million. The investments mainly target new warehouse capacity, expected to be completed in 2023.

Pre-engineering for new folding boxboard mill in Kaskinen

In autumn 2022, Metsä Board launched pre-engineering for a new folding boxboard mill with an annual capacity of approximately 800,000 tonnes in Kaskinen. The pre-engineering includes technical design, infrastructure and logistics solutions, and tendering for the main equipment. In addition, an environmental impact assessment (EIA) and an environmental permit process are ongoing. A potential investment decision could be made in 2024 at the earliest.

Metsä Fibre's Kemi bioproduct mill

Metsä Board's associated company Metsä Fibre is building a new bioproduct mill in Kemi. The mill is expected to be completed in 2023. The new bioproduct mill will produce annually some 1.5 million tonnes of softwood and hardwood pulp as well as other bioproducts.

The pulp production capacity includes the existing pulp production line for unbleached pulp used in the production of white kraftliner, with an annual capacity of roughly 180,000 tonnes. The new mill will replace the current pulp mill in Kemi, with an annual capacity of about 610,000 tonnes.

The bioproduct mill will not use any fossil fuels, and its electricity self-sufficiency will be 250%.

The estimated investment value of Metsä Fibre's bioproduct mill is EUR 2.02 billion (Interim report for January–September 2022: EUR 1.85 billion). The financing of bioproduct mill is composed of internal financing and debt. Metsä Board will not invest equity in Metsä Fibre to finance the project.

■ R&D and innovation

In Metsä Board's R&D, ensuring and developing the recyclability and compostability of paperboards is of key importance. In the fibre-based packaging material circular economy, the company's task is to provide the market with premium fresh fibre paperboards as resource-efficiently as possible, contribute to the replacement of fossil-based materials and reduce the carbon footprint of packaging.

The company continues to focus on reducing the weight of paperboard and developing recyclable protective coatings for use in food packaging. The weight reduction of paperboards plays a key role in the pre-engineering of the Kaskinen folding boxboard mill, which aims for world-class resource efficiency and a product that enables a reduced carbon footprint. The mill is designed to run fully fossil free production with notably lower wood, energy and water consumption per tonne of folding boxboard produced compared to currently operating production units.

In the biobarrier programme launched in 2021, the company continued to study new alternative products for reducing plastic. Several potential products are being tested in the laboratory, and some have proceeded to production testing.

In 2022, Metsä Board's 360 Services system was used actively to strengthen customer relationships. The Excellence Centre in Äänekoski hosted 45 packaging development workshops.

The production of Metsä Group's 3D fibre product began in May 2022 at Metsä Group and Valmet's demo plant in Äänekoski. The products are pressed into their final form using brand new technology. The renewable and recyclable product is a good alternative to plastic in food packaging, for example.

In 2022, Metsä Board's research and development expenses totalled EUR 6.1 million (6.0), or 0.2% (0.3) of sales. The costs include direct expenses, excluding depreciations and operational investments.

■ Disclosure of non-financial information

Business model

Metsä Board is part of Metsä Group, and benefits from Metsä Group's unique value chain, from pure northern fibre to end products. The company produces premium recyclable fresh fibre paperboards, used mainly in consumer product packaging. Metsä Board's eight production units are located in Finland and Sweden, close to its main raw material, high-quality northern wood fibre. The raw wood is sourced centrally through Metsä Group, mainly from Finland and Sweden. The wood is sourced only from forests, in which the regeneration of the forests and biodiversity is safeguarded. This is explained in more detail in the section Environment - Forests and raw materials. Most of the wood purchased in Finland comes from forests owned by Metsäliitto Cooperative's owner-members. In Sweden, the company has a long-term wood delivery agreement with the Swedish forest owner cooperative Norra Skog.

Metsä Board owns 24.9% of its associate company Metsä Fibre. Metsä Board's own pulp production and holding in Metsä Fibre together secure

the company's self-sufficiency in pulp and ensure end products of consistently high quality.

Metsä Board's decision-making is guided by financial and sustainability targets and long-term, responsible growth of shareholder value. Climate change mitigation and efficient use of resources are an integral part of the company's strategy and operational business. Metsä Board's goal is to have fossil free production and products by the end of 2030. Lightweight, recyclable and/or compostable products that are produced resource-efficiently have a low carbon footprint, support the circular economy and offer alternatives to plastics. For example, a Metsä Board cherry tomato box made from paperboard has a carbon footprint up to 80% lower than a box made from recycled plastic, according to an independent study (Source: Natural Resources Institute Finland). Meeting ambitious targets will require investments, operational development and introduction of new solutions. For more information on sustainability targets, see the section on Material aspects related to non-financial information.

Sustainability governance

Work at Metsä Board is guided by Metsä Group's Code of Conduct, complemented by policies concerning personnel, equality, environmental matters, competition law and information security, among other things. All Metsä Board mills apply quality, occupational health and safety, environmental and energy efficiency management systems as well as the management and monitoring system required by food safety.

At Metsä Board, the realisation of sustainability is supported and monitored by the company's Board of Directors, CEO and Corporate Management Team. Sustainability is incorporated into the company's strategy, long-term business and investment plans, risk assessments and annual action plans approved by the company's Board of Directors. The Board discusses and approves sustainability topics presented by the CEO, such as sustainability targets and related investment plans, and monitors their implementation. Sustainability topics are regularly discussed by Metsä Board's Corporate Management Team and Board of Directors several times a year. The CEO is responsible for implementing sustainability measures in accordance with the instructions given by the Board of Directors. The SVP, Development, is responsible for research and development, business development and sustainability, and participates in Metsä Group's Sustainability Process Management Team and reports on the realized results of the sustainability measures to the Sustainability Process Management Team quarterly. Each Metsä Board employee's performance bonus target includes a measurable sustainability target, which is defined on a person- or unit-specific basis based on the job function. In 2022, the management's sustainability targets included occupational safety, reduction of energy and water use, sustainability cooperation with customers and development of sustainable products. For a more detailed description of sustainability management and the link between sustainability and remuneration, see Metsä Board's Sustainability Report 2022 pages 20–21.

Reporting principles and data quality

The reporting of non-financial information covers the entire Metsä Board Corporation, including all companies in which Metsä Board directly or indirectly holds more than 50% of the votes. Metsä Board owns 24.9 per cent of its associated company, Metsä Fibre, and financial reporting includes a share of Metsä Fibre's result corresponding to this holding. In non-financial reporting, this ownership share of Metsä Fibre's sustainability information is not included in Metsä Board's sustainability information, with the exception of Metsä Fibre's Scope 1 and Scope 2 emissions, which are taken into account in Metsä Board's value chain emissions (Scope 3). Environmental data are compiled from the operations of the production units. Personnel data are compiled for all Metsä Board employees.

In addition to Metsä Board's own operations, the reporting covers indirect greenhouse gas emissions from the purchased energy (Scope 2) and from the rest of the value chain (Scope 3), including upstream and downstream emissions in the GHG Protocol's emission categories identified as significant in the calculation. More information can be found in the Environment - Climate and energy section. Metsä Board also reports indicators on the sustainability performance of its suppliers. A more detailed description of the reporting principles can be found in Metsä Board's Sustainability Report 2022 on pages 66–67.

All data included in the tables pertaining non-financial information and the EU taxonomy have been assured (limited assurance) by an independent third party PricewaterhouseCoopers Oy. The assurance was performed in accordance with the international assurance standards ISAE 3000 (Revised) and ISAE 3410. The assurance report is published in Metsä Board's Sustainability Report 2022 on page 68.

Material aspects related to non-financial information

Promoting sustainability includes complying with good corporate governance, carrying social and environmental responsibility, respecting business ethics and human rights, and continuous improvement in all these areas. In addition to its own operations, Metsä Board requires sustainability from its supply chain. Metsä Board's sustainability targets cover the environment, social responsibility and governance. These and other key performance indicators are summarized in the table Non-financial key figures. The targets are based on Metsä Board's business strategy, Metsä Group's strategic sustainability targets and a materiality analysis completed in 2018. The materiality analysis considered the impacts of the Metsä Board

and the entire Metsä Group's operations on society and the environment, and stakeholder perspectives. According to the materiality analysis, the material sustainability topics were: safety at work, local and social impact, sustainable forest management, resource efficiency, renewable energy, emissions to air and water, water use, circular economy and new bioproducts, responsible supply chain and product safety.

The materiality analysis and material topics were updated in 2022. The identification of material sustainability topics was based on sustainability frameworks and standards, regulatory requirements, trends, and interviews with internal and external stakeholders. The identified topics were prioritized in a management's workshop, where the significance of their positive and negative impacts on Metsä Board and the entire Metsä Group's business, the surrounding society, people and nature (the so-called "double materiality") was assessed. Metsäliitto Cooperative's Board of Directors confirmed the material topics and the sustainability 2030 targets in the beginning of the year 2023. Metsä Board will report in accordance with the updated material topics and clarified sustainability targets starting from the reporting of 2023 data.

Risks related to non-financial information

The risks related to environmental, personnel and social issues, respect for human rights as well as the anti-corruption and anti-bribery activities are described in more detail in the Board of Directors' Report in the section Most significant risks and uncertainties. The key risks are related to climate change and biodiversity loss, which at Metsä Board in particular affect the use of forests, energy and water. For these, the company has sustainability targets by the end of 2030, and their achievement is regularly monitored. The achievements are reported in the table Non-financial key figures. Metsä Board reports on climate-related risks and opportunities in accordance with the recommendations of TCFD (Task Force on Climate-related Financial Disclosures). Climate risks are divided into 1) transition risks, i.e., the risks arising from the transition to a low-carbon economy and 2) physical risks, which involve changes in temperatures and precipitation, and which will arise if climate change is not mitigated. A table of the TCFD-compliant reporting is published on pages 64–65 of Metsä Board's Sustainability Report 2022 and the TCFD-compliant risks and opportunities related to climate change and biodiversity loss are described on pages 36–37.

Non-financial key figures

	2022	2021	Target 2030
Environment			
Share of certified wood fibre, %	83	83	>90
Traceability of raw materials, % of total purchases	97	98	100
Share of fossil free raw materials and packaging materials, % of dry tonnes	99.3	99.2	100
Direct fossil-based CO ₂ emissions (Scope 1), t	236,037	255,467	0
Indirect fossil-based CO ₂ emissions (Scope 2, market-based), t ¹⁾	147,061	184,028	0
Indirect fossil-based CO ₂ emissions (Scope 2, location-based), t ²⁾	291,482	313,030	
Indirect fossil-based CO ₂ e emissions (Scope 3), t ³⁾	1,816,979	1,854,840	
Share of target group suppliers who have set SBTi targets (Scope 3), % ³⁾	15	16	
Share of fossil free energy (Scope 1 + 2, market-based), %	87	85	100
Improvement in energy efficiency from 2018 level, % ⁴⁾	+2.7	+4.3	10
Reduction in the use of process water per produced tonne compared to 2018 level, % ⁵⁾	-12.2	-12.6	-30
Utilisation of production side streams, %	99.9	99.8	100
Social responsibility and personnel			
Total Recordable Injury Frequency (TRIF) per million hours worked ⁶⁾	6.7	9.8	0
Lost-time accident frequency (LTA1F) per million hours worked ⁶⁾	5.4	7.0	0
Share of women in executive management (Vice President or higher) by 2025, % ⁷⁾	25.0	19.2	25
Diversity, equality and inclusion e-learning completion rate, % ⁸⁾	98	97	100
Women's total earnings compared to men's total earnings for white-collars/blue-collars ⁹⁾	0.95/0.94	0.92/0.93	1.0
Anti-corruption, anti-bribery and corporate culture			
Code of Conduct e-learning completion rate, %	100	99	100
Ethics index of the ethics barometer, % ¹⁰⁾	85	-	100
Suppliers' commitment to the Supplier Code of Conduct, % of total purchases	99	98	100
Supplier background check passed, % of total purchases	96	92	100
Supplier sustainability assessment passed, % of total purchases	63	54	100

1) The 2021 figure for market-based Scope 2 emissions has been revised from the previously reported 173,371 tonnes to 184,028 tonnes.

2) The amount of location-based Scope 2 emissions is affected by the average energy distribution of Metsä Board's production countries. The 2021 figure has been revised from the previously reported 306,555 tonnes to 313,030 tonnes.

3) 70% of the non-fibre suppliers and logistics operators related to customer deliveries, measured as a share of our total purchases, would set themselves targets in accordance with the SBTi by 2024.

4) The 2021 figure for energy efficiency improvement has been revised from the previously reported +1.9% to +4.3%.

5) The 2021 figure for the reduction of process water use has been revised from the previously reported -13.5% to -12.6%.

6) The former subsidiary Hangö Stevedoring is included in the figures until the end of February 2022.

7) The 2021 figure for the share of women in executive management has been revised from the previously reported 16.1% to 19.2%.

8) The former subsidiary Hangö Stevedoring is included in the 2021 figure.

9) Weighted average of women's total salary compared to men's total salary in the same job grade. Includes 98% of white-collar personnel.

10) The previous ethics barometer was conducted in 2020 (ethics index: 85%). In 2021, we implemented the selected development actions based on the results of the previous ethics barometer.

Environment

Metsä Board's operations related to environment follow the following policies, principles and management systems:

- Metsä Group's Code of Conduct
- Metsä Group's Supplier Code of Conduct
- Metsä Group's Environmental Policy
- Metsä Group's principles of environmental management
- Metsä Group's principles for forest use and management
- ISO 9001
- ISO 14001
- ISO 50001
- PEFC (License code: PEFC/02-31-92)
- FSC® (License code: FSC®-C001580)
- UN Global Compact

Forests and raw materials

Metsä Board's wood supply is carried out by Metsä Group's wood supply and forest services. The wood fibre's sustainability and traceability are ensured by practices which meet the requirements of the PEFC Chain-of-Custody and FSC Chain-of-Custody systems. These practices are assessed annually through Metsä Group's internal audits and third-party audits. These audits monitor environmental and social responsibility issues in the operations of wood suppliers and harvesters, as well as the traceability of wood fibre in our own processes.

Metsä Board aims for certified wood to account for at least 90% of all the wood fibre used by the company by 2030. In 2022, 83% (83) of the wood fibre came from PEFC- or FSC-certified forests and 17% (17) met the requirements for PEFC or FSC controlled wood. Metsä Group's wood supply and forest services have targets for the end of 2030 to increase the amount of carbon sequestered in forests and wood products and to safeguard forest biodiversity. Metsä Group regularly monitors indicators such as the increase of forest management services that promote carbon

sequestration and the prevalence of high biodiversity stumps and retention trees that improve forest biodiversity. For more information on these, see Metsä Board's Sustainability Report 2022 pages 26–29.

Regarding other raw materials, the systematic collection of origin data continues to be developed. In 2022, the origin, at least the country of manufacture, was known for 97% (98) of the total purchases of raw materials and packaging materials, including fully traceable wood. The proportion of fossil free raw materials, including the packaging materials of the company's own products, was 99.3% (99.2).

Climate and energy

Metsä Board's targets for reducing greenhouse gas emissions are approved by the Science Based Targets initiative (SBTi) and are in line with the Business Ambition for 1.5°C commitment. Metsä Board aims to use only fossil free energy by the end of 2030. In essence, this refers to a situation in which the company's mills do not use fossil fuels or purchase energy generated with fossil fuels, meaning that the target for fossil-based CO₂ emissions (Scope 1 and Scope 2, market-based) is zero.

In 2022, 87% (85) of the energy used by Metsä Board was fossil free. The company has reduced its fossil-based CO₂ emissions (Scope 1 and 2) per tonne produced by 33% in 2018–2022. To achieve the fossil free target, the company has drawn up an investment and action plan applicable to all its mills. In 2022, the new recovery boiler and the turbine at the Husum pulp mill started up, increasing bioenergy production and improving the electricity self-sufficiency of the entire integrate. Other key measures during the year included the reduction of peat use at the Simpele mill and the investment decision to replace the turbine and generator at the Kyro mill's biopower plant in 2022–2024.

Despite the end of natural gas supplies from Russia, Metsä Board's Joutseno, Kyro and Tako mills have been operating without disruptions. Natural gas has been partially replaced by oil and the Kyro and Joutseno mills are ready to switch to LNG in the first half of 2023. The use of substitute energy sources will not slow down Metsä Board's target of a phased transition to completely fossil free energy (Scope 1 and 2) by the end of 2030.

The fossil free production target is supported by energy efficiency improvements, where the company aims to achieve at least a 10% improvement in 2018–2030. In 2022, energy efficiency improved by 2.7% (4.3) compared to 2018. The change compared to corresponding year was due to the adjustment of production to meet demand at the end of 2022. Key measures to improve energy efficiency in 2022 included an investment in a lamella separator for the chemical purification of water used as process water at the Kyro mill, as well as the introduction of a heat exchanger and utilization of waste heat in the debarking plant of the Simpele mill. Both measures reduce raw water intake and the need for water heating, thus reducing water and energy use.

For the value chain (Scope 3), Metsä Board's Science Based Target is that 70% of its non-fibre suppliers and of the logistics operators related to its customer deliveries, measured as a share of the company's purchasing costs, set themselves targets in accordance with SBTi by 2024. The recommendation to set SBTi targets is included in Metsä Group's Supplier Code of Conduct and is discussed in supplier meetings. By the end of 2022, 15% (16) of the suppliers in Metsä Board's SBT target group had set a target. In 2023–2024, Metsä Board will update its value chain related emission

reduction targets and also set a land use related emission reduction target, the so-called FLAG target.

Value chain emissions (Scope 3) account for 83% of Metsä Board's fossil greenhouse gas emissions. Scope 3 emissions are calculated for all GHG Protocol's emission categories identified as significant, including purchased goods and services, capital goods, fuel- and energy-related activities (not included in Scope 1 or Scope 2), transportation to Metsä Board's sites, waste generated in operations, transportation to customers, processing of sold products, end-of-life treatment of sold products, and investments. More detailed description of the greenhouse gas emissions from Metsä Board's own operations (Scope 1), purchased energy (Scope 2) and the value chain (Scope 3) can be found in Metsä Board's Sustainability Report 2022 on page 33.

Water use, discharges and side streams

Metsä Board does not source any water from areas of high water stress (WRI Aqueduct Water Risk Atlas). Metsä Board's water use in 2022 was 110 million cubic metres (115), of which 60.2 million cubic metres (59.6) was process water. Surface water accounted for almost 100% of water use. Small amounts of groundwater (0.06% of water use) were used, mainly for hygiene and laboratory purposes. Of all the water used by the company, roughly 96% is returned to the waterbodies after use. The target is to reduce the use of process water by 30% per tonne produced in 2018–2030. In 2022, the reduction was 12.2% (12.6) compared to 2018. To reduce its water use, Metsä Board has defined mill-specific measures to increase the efficiency of water recycling and to reduce raw water intake. The Husum integrated mill accounts for roughly 40% of the company's water use. Therefore, the renewal of the Husum pulp mill will significantly reduce Metsä Board's water use by 2030. Measures related to the reduction of water use in 2022 are explained in the section Environment - Climate and energy.

Metsä Board uses the best available technology in its production and continuously monitors that all its mills operate in compliance with the environmental permits issued to them. In 2022, some exceedings of permit limit values for wastewater discharges were recorded at the production sites. These were reported to the authorities as required and corrective actions were taken at the mills.

99.9% (99.8%) of the production side streams were utilised as materials or energy. The side streams consist of process waste generated in production and by-products such as ash for fertiliser use.

Environmental responsibilities and obligations

Metsä Board has environmental liabilities related to former operations at sites that have since been closed, sold or leased, as well as at decommissioned landfill sites. Financial provisions for the cost of land rehabilitation work have been made where it has been possible to measure the company's liability for land contamination. Metsä Board's environmental liabilities in 2022 totalled EUR 2.0 million (2.7) and its environmental expenses totalled EUR 11.7 million (13.3). The environmental expenses consist mainly of using and maintaining environmental protection equipment, waste management and environmental insurance expenses, and the depreciation of capitalised environmental expenses.

Social responsibility

Metsä Board's operations related to social and personnel matters follow the following policies, principles and management systems:

- Metsä Group's Code of Conduct
- Metsä Group's Supplier Code of Conduct
- Equality Policy
- HR Policy
- Occupational Safety and Well-being instructions
- ISO 45001
- Metsä Group Modern Slavery Act Transparency Statement
- UN Global Compact

Human rights

Metsä Board respects internationally recognised human rights in all its operations, in accordance with the UN Universal Declaration of Human Rights and the International Labour Organisation's (ILO) Fundamental Principles and Rights at Work. The company complies with legal reporting obligations, such as the UK Modern Slavery Act, and does not tolerate child or forced labour. The company is committed to operating in accordance with the UN Guiding Principles on Business and Human Rights and expects its business partners to do the same. Metsä Board supports the UN Global Compact initiative and its principles on human rights, labour, the environment and anti-corruption.

Metsä Board does not tolerate human rights abuses in any form and is committed to ensuring that its operations do not have negative human rights impacts. Human rights issues are addressed, among others, which all employees are required to complete on a regular basis. Such trainings include the Code of Conduct, sustainability, as well as diversity, equality and inclusion.

In the company's own operations, investments in occupational safety as well as the development of diversity, equality and inclusion were key measures affecting the realisation of human rights in 2022.

The Supplier Code of Conduct sets out requirements for suppliers to fulfil their human rights responsibilities. The company mapped potential human rights risks related to its supply chain or customers as part of Know Your Business Partner background checks. In 2022, the company was not aware of any human rights violations related to its operations or supply chain.

Metsä Board is committed to developing an equal culture where personal characteristics such as gender, age, ethnic background, sexual orientation or disability do not affect a person's ability to succeed in the workplace. Metsä Board promotes diversity, equality and inclusion of its employees through the Metsä for All vision, launched in 2021, and through the equality targets. The targets support, among other things, gender equality in the work community and diversity in recruitment. Key performance indicators are reported in the table Non-financial key figures.

Personnel and safety at work

At the end of 2022, the number of full-time equivalent (FTE) employees was 2,248 (31 December 2021: 2,389), of whom 1,226 (1,416) were employed in Finland. In January–December, Metsä Board employed an average of 2,352 people (1–12/2021: 2,461). The changes in the number of employees were mainly due to the sale of Oy Hangö Stevedoring Ab to Euroports Oy in the first quarter of 2022. Personnel expenses for

January–December totalled EUR 217.4 million (216.0). Metsä Board aims to ensure the availability and retention of skilled personnel by investing in employer image, development programmes and succession planning. Future retirements are prepared for via retirement forecasts and resource plans based on those. The company also organises apprenticeships training in Finland, aiming to recruit future personnel, and the mill units invest in on-the-job learning and the sharing of know-how. The risks related to staff availability and retention are anticipated through early support discussions and solutions between supervisors and employees, anticipating possible working capacity risks, and targeting guidance and support to risk groups. The company conducts a personnel survey, measuring job satisfaction, and an ethics barometer, measuring the personnel's view on the realisation of the Code of Conduct in practice, in alternate years. The result of the ethics barometer, an ethics index of 85% (2020: 85), shows that there is a high level of awareness of ethical requirements, personnel feel the issue is important and that the company is acting ethically and correctly. There is room for improvement in the equal treatment of personnel and in the culture of having the courage to report and address unethical behaviour.

Metsä Board's aims for an accident-free working environment. In developing occupational safety, the focus is on personal risk assessment, improving safety at work and introducing common safety-at-work standards. The measures contributed to a positive development of work safety at Metsä Board's mills in 2022, but the accident frequency rate is still high compared to the zero target. In 2022, the Total Recordable Injury Frequency (TRIF) was 6.7 (9.8) while the Lost-time accident frequency (LTA1F) was 5.4 (7.0). The most common causes of accidents were injuries to hands. Accidents are prevented through common safety-at-work standards, proactive measures – such as risk assessment, safety observations, safety walkthroughs and safety training – and investments improving safety. All Metsä Board mills and the company's head office apply the 5S method, which aims to increase productivity, safety and wellbeing at work.

Due to the corona pandemic, remote working was extended until summer 2022 for those jobs where possible. From August 2022, a hybrid model was introduced, whereby remote working can take place part of the week, depending on the nature of the work.

Anti-corruption, anti-bribery and corporate culture

Metsä Board's operations related to anti-corruption, anti-bribery and corporate culture follow the following policies, principles and management systems:

- Metsä Group's Code of Conduct
- Metsä Group's Supplier Code of Conduct
- UN Global Compact

Metsä Board expects its personnel to comply with applicable legislation, act with integrity and make ethically sustainable decisions. The Code of Conduct and the related training programme aim to strengthen the culture of doing the right thing, to help personnel identify ethically challenging situations and to encourage them reporting any shortcomings they observe. The company's personnel are required to attend training on the Code of Conduct every three years. By the end of 2022, 70% of the company's personnel had completed the online training on the Code of Conduct published in November 2022. The previous version of the corresponding online training was completed by 100% (99) of the personnel. The Code of

Conduct also includes a commitment to anti-corruption and anti-bribery. In the ethics barometer conducted in 2022 surveying the implementation of the Code of Conduct in practice, the risk of financial misconduct did not emerge.

Compliance and Ethics channel

Metsä Group has a joint Compliance and Ethics Channel through which personnel and stakeholder representatives can anonymously report any shortcomings they detect. The reporting of such shortcomings is encouraged, for example, in the Code of Conduct online training. All breaches and violations, as well as suspected breaches and violations, brought to the attention of the company are investigated. The Compliance Committee is responsible for guiding and implementing the investigation. In 2022, Metsä Board received a total of 6 (10) cases that led to an investigation. The cases are categorised as fraud or other criminal activity, corruption and bribery, competition law, conflicts of interest, human resources issues, discrimination, privacy and data security, work safety, environment, violations of the Supplier Code of Conduct and other cases. None of the cases resulted in legal proceedings, administrative investigations or fines, nor did they concern corruption, bribery, human rights violations, child or forced labour.

Supply chain

Sustainability of wood procurement is ensured through a process described in the section Environment. The sourcing of other raw materials and services is centralised in Metsä Group, where a Group-wide purchasing process ensures that partners in the Group's supply chain act responsibly. This aims to minimise risks in the supply chain, such as those related to the environment, health, corruption, child labour and human rights violations. Metsä Board's minimum requirement in supply agreements is that suppliers commit to Metsä Group's Supplier Code of Conduct or equivalent supplier-specific principles. In addition, the supply agreements may contain other sustainability requirements. A risk analysis is carried out as a part of the supplier selection process. It considers the suppliers' country and category risks as well as their compliance with the law. Metsä Board conducts third-party due diligence in the Know Your Business Partner background check, which investigates a supplier's background for trade sanctions, money laundering, corruption, human rights violations and other key risks. Metsä Board also has a similar process in place for customers. In addition, the key suppliers and potentially risky suppliers are subject to a sustainability assessment questionnaire. The results of these can be found in the table Non-financial key figures. Metsä Group and external parties audit some of Metsä Board's suppliers each year. Based on the assessments and audit results, suppliers are informed of deviations and recommendations, and suppliers who are expected to improve their sustainability management are followed up. In 2022, Metsä Group conducted 2 (0) audits and external party 14 (17) at the premises of Metsä Board's suppliers. In 2022, Metsä Board continued to improve the traceability of raw materials, such as process, base and coating chemicals, and packaging materials. The aim is to make information on the country of raw material production a more integral part of risk analyses to better target supplier background checks and audits to suppliers in high-risk countries. The identification of risk countries is based on the CPI (corruption perception index), which measures the level of corruption in the public sector in different countries.

The EU Taxonomy

General

The Taxonomy is a classification system for the financial market based on Regulation (EU) 2020/852, valid as of the beginning of 2022, which lists economic activities that qualify as sustainable in terms of the climate and the environment. The goal of the Taxonomy is to channel money to sustainable investments so that the EU can achieve the ambitious emissions reduction targets it has set for itself.

According to the European Commission, the Taxonomy is under continuous development. The Commission has prioritised the establishment of criteria for economic activities that offer the greatest potential contribution to the climate and the environment. Metsä Board's main business operations, the paperboard and market pulp businesses, are not currently covered by the Taxonomy. The company's Taxonomy-eligible and Taxonomy-aligned economic activities, especially in sales and operating expenses, account for only a minor share. Metsä Board is currently unaware of the schedule and extent to which the Taxonomy's scope may come to cover the company's main economic activities.

Metsä Board's key objectives include the mitigation of global warming and adapting business operations to a low-carbon future. The company aims for entirely fossil free production and products by the end of 2030. In accordance with the principles of the circular economy, Metsä Board focuses in sustainable forest use and resource-efficient processes. In addition, it focuses on minimising waste and emissions and keeping materials in circulation for a long time. Metsä Board's products offer an alternative to products made from fossil-based raw materials.

Taxonomy reporting

The Taxonomy defines six sustainable environmental objectives against which different economic activities are assessed. These environmental objectives are: (a) climate change mitigation; (b) climate change adaptation; (c) the sustainable use and protection of water and marine resources; (d) the transition to a circular economy; (e) pollution prevention and control; and (f) the protection and restoration of biodiversity and ecosystems. For the 2022 financial period, Metsä Board will disclose information on its Taxonomy-eligible and Taxonomy-aligned business operations in terms of the climate objectives, that is, climate change mitigation and climate change adaptation. Business disclosures include the share of sales, capital expenditure and operating expenses.

The Taxonomy-aligned disclosures indicate how the economic activity in question supports the confirmed environmental objectives. An economic activity is considered Taxonomy-aligned if it contributes substantially to one of the defined environmental objectives and causes no significant harm to the other objectives. In addition, operations must meet minimum social safeguards.

Metsä Board's reporting principles

In its Taxonomy-eligible sales, Metsä Board includes the product and service sales included in Metsä Board's reported sales. The company's Taxonomy-aligned sales include the sale of electricity produced with bioenergy at the Husum pulp mill under category 4.20 Cogeneration of heat/cool and power from bioenergy. Taxonomy-eligible sales under category

4.20 also include the sale of district heat produced at the Simpele and Kyro power plants to neighbouring areas.

Metsä Board includes any additions to tangible and intangible fixed assets in Taxonomy-eligible capital expenditure, including any right-of-use assets recognised based on long-term lease agreements. Taxonomy-aligned capital expenditure includes investments in the renewal of the Husum pulp mill's recovery boiler and turbine under category 4.20 Cogeneration of heat/cool and power from bioenergy. Taxonomy-eligible capital expenditure also includes maintenance investments in the Simpele and Kyro power plants under category 4.20, as well as maintenance investments in the Kaskinen power plant and chemicals recovery facility under category 4.24 Production of heat/cool from bioenergy.

Metsä Board's Taxonomy-eligible operating expenses include research and development costs recognised as expenses and the maintenance costs of production units and property, supplemented by the costs of waste management and short-term lease agreements. The reported expenditure includes both external service costs and the wages, including indirect employee costs, of the company's own personnel responsible for

the listed activities. Taxonomy-aligned operating expenses include operating expenses for the recovery of chemicals and heat at the Husum pulp mill under category 4.20 Cogeneration of heat/cool and power from bioenergy. Taxonomy-eligible operating expenses also include operating costs for the Simpele and Kyro power plants under category 4.20 and operating costs for the Kaskinen power plant and chemicals recovery facility under category 4.24.

To avoid double reporting, external sales have been included in the Taxonomy operations only once. In addition, measures have been adopted to ensure that capital expenditure and operating expenses are kept separate for each operation.

In Metsä Board's opinion, the company meets the Taxonomy's minimum social safeguards, which cover human rights, bribery and corruption, fair competition and taxation. The company has reviewed each of these from two perspectives: the presence of relevant processes and the addressing of infringements. For example, human rights due diligence is described in greater detail under Social affairs and human rights and Anti-corruption and anti-bribery activities and corporate culture.

Proportion of sales from products or services associated with Taxonomy-aligned economic activities

Economic activities	Codes	Absolute sales EUR million	Proportion of sales %	Substantial contribution criteria		DNSH criteria							Minimum safeguards	Taxonomy-aligned proportion of sales 2022 %	Enabling activity / transitional activity E/T
				Climate change mitigation %	Climate change adaptation %	Climate change mitigation Y/N	Climate change adaptation Y/N	Water and marine resources Y/N	Circular economy Y/N	Pollution Y/N	Biodiversity and ecosystems Y/N				
A. TAXONOMY-ELIGIBLE ACTIVITIES															
A.1 Environmentally sustainable activities (Taxonomy-aligned)															
Cogeneration of heat/cool and power from bioenergy	4.20.	1.0	0%	100%			Y	Y	-	Y	Y	Y	0%		
Sales of environmentally sustainable activities (Taxonomy-aligned) (A.1)		1.0	0%	0%	0%								0%	0%	
A.2 Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)															
Cogeneration of heat/cool and power from bioenergy	4.20.	1.8	0%												
Sales of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		1.8	0%												
Total (A.1+A.2)		2.9	0%										0%	0%	
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES															
Sales of Taxonomy-non-eligible activities (B)		2,476.7	100%												
Total (A+B)		2,479.6	100%												

Proportion of CapEx from products or services associated with Taxonomy-aligned economic activities

Economic activities	Codes	Absolute CapEx	Proportion of CapEx	Substantial contribution criteria		DNSH criteria							Taxonomy-aligned proportion of CapEx 2022	Enabling activity / transitional activity
				Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Pollution	Biodiversity and ecosystems	Minimum safeguards		
		EUR million	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E/T
A. TAXONOMY-ELIGIBLE ACTIVITIES														
A.1 Environmentally sustainable activities (Taxonomy-aligned)														
Cogeneration of heat/cool and power from bioenergy	4.20.	1178	39%	100%			Y	Y	-	Y	Y	Y	39%	
CapEx of environmentally sustainable activities (Taxonomy-aligned) (A.1)		1178	39%	39%	0%								39%	0%
A.2 Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)														
Cogeneration of heat/cool and power from bioenergy	4.20.	1.0	0%											
Production of heat/cool from bioenergy	4.24.	1.9	1%											
CapEx of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		2.9	1%											
Total (A.1+A.2)		120.7	40%										39%	0%
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES														
CapEx of Taxonomy-non-eligible activities (B)		183.4	60%											
Total (A+B)		304.1	100%											

Proportion of OpEx from products or services associated with Taxonomy-aligned economic activities

Economic activities	Codes	Absolute OpEx EUR million	Proportion of OpEx %	Substantial contribution criteria				DNSH criteria					Minimum safeguards Y/N	Taxonomy-aligned proportion of OpEx 2022 %	Enabling activity / transitional activity E/T
				Climate change mitigation %	Climate change adaptation %	Climate change mitigation Y/N	Climate change adaptation Y/N	Water and marine resources Y/N	Circular economy Y/N	Pollution Y/N	Biodiversity and ecosystems Y/N				
A. TAXONOMY-ELIGIBLE ACTIVITIES															
A.1 Environmentally sustainable activities (Taxonomy-aligned)															
Cogeneration of heat/cool and power from bioenergy	4.20.	4.2	4%	100%			Y	Y	-	Y	Y	Y	4%		
OpEx of environmentally sustainable activities (Taxonomy-aligned) (A.1)		4.2	4%	4%	0%								4%	0%	
A.2 Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)															
Cogeneration of heat/cool and power from bioenergy	4.20.	2.2	2%												
Production of heat/cool from bioenergy	4.24.	1.8	2%												
OpEx of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		4.0	4%												
Total (A.1+A.2)		8.2	8%										4%	0%	
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES															
OpEx of Taxonomy-non-eligible activities (B)		99.3	92%												
Total (A+B)		107.4	100%												

Most significant risks and uncertainties

Metsä Board's risk management is systematic and proactive, and it assesses and manages business-related risks, threats and opportunities. Metsä Board's Board of Directors is responsible for the company's risk management and approves its risk management policy. Metsä Board systematically assesses its strategic, operational and financial risks. Key risks are accounted for in the planning processes and they are prepared for with management measures. In addition, the Corporate Management Team reviews the most significant risks as part of its management-team work.

Risks that exceed the Metsä Board's risk-bearing capacity have been transferred with insurance, derivatives and other contracts to insurance companies, banks and other counterparties. Significant damage risks are covered with the Group's property and interruption, liability, transport damage and credit insurance policies.

Identified risks and the means by which they are managed are reported to the company's Board of Directors and the Board of Directors' Audit Committee at least twice a year. The following risks and uncertainties with a potential impact on Metsä Board's business operations and profitability were identified in the risk assessments carried out in 2022.

Market risks

Development of the world economy

The global economy is marked by uncertainty, and the growth outlook has weakened due to high inflation, tighter monetary policy and capacity issues in global production and supply chains. This situation is caused by many factors, most importantly by Russia's war against Ukraine and its consequences.

Russia's war of aggression in Ukraine has increased global geopolitical tensions, eroded consumers' and companies' confidence in economic development, and accelerated inflation. Especially in Europe, the war and abandonment of Russian energy has caused an energy crisis, which has significantly affected the availability and prices of energy. The impacts of sanctions imposed on Russia and the related counter sanctions as well as the risks arising from the crisis target international production and supply chains, costs and availability of production inputs, the energy infrastructure and cybersecurity.

The war in Ukraine is not expected to end in the short term. In addition, central banks are striving to curb inflation by raising interest rates. These factors may have negative impacts on the economy in the form of weaker growth prospects and a higher risk of recession due to higher interest

rates, a decrease in real income caused by high inflation, a further decrease in households' purchasing power and an extended energy crisis in Europe. All of these factors may have a negative impact on the demand for Metsä Board's products, business continuity or the company's profitability.

Changes in the operating environment

Metsä Board operates in an industry where the balance between supply and demand, and any changes to it, impact the demand for and prices of end products. New operators entering the market, alternative products or changes in consumer behaviour may have a negative impact on the demand for Metsä Board's paperboards. An increase in competitors' capacity or the expansion of product ranges may lower the price level of end products and negatively affect Metsä Board's profitability. If paperboard imports from Asia and the Americas to Europe increase faster than demand, this may lead to an imbalance in the market situation. Any significant changes in exchange rates may also influence products' market balance and companies' competitiveness.

Changes in regulation, such as the EU's climate and environmental policy and tighter new requirements to limit carbon dioxide, sulphur or other emissions, may weaken Metsä Board's profitability or hamper business continuity. The acceptability of single-use food and food service packaging involves regulatory risks.

Significance of the Chinese market

China is a significant market area especially for Metsä Fibre. China's economic growth has slowed down in recent years due to the country's strict coronavirus policy, problems in the real estate market and tighter business regulation. Increased geopolitical tensions may also influence China's future economic growth. Problems in China's industrial sector may increase the problems and costs of global supply chains. The relations between the EU and China are burdened by bilateral sanctions and differing views on multiple issues. Should the growth of the Chinese economy slow down further or the relations between the EU and China deteriorate, this could affect the demand for market pulp or paperboards on the Chinese market and consequently affect the company's profitability.

International trade restrictions and geopolitical risks

Potential changes in the industrial and trade policies of leading industrialised countries, the materialisation of geopolitical risks or an escalation of geopolitical crises may lead to more extensive trade restriction measures or the use of international sanctions. The possible consequences of these include a further slowdown in the recovery and growth of the global economy and even a curtailment of global trade flows. Any sanctions and restrictions on international trade may affect the demand for Metsä Board's products and the company's profitability.

Pulp market situation

Structural changes in customers' pulp use, increasing competition and new production capacity in the global pulp market may have a negative impact on pulp delivery volumes and market prices and thereby on Metsä Board's profitability. The market price of pulp strengthening (weakening) by 10% would have a positive (negative) impact of roughly EUR 30 million on the company's operating result.

Coronavirus pandemic

The coronavirus pandemic is easing, but may still cause uncertainty in the global economy and Metsä Board's business environment. A prolonged pandemic could reduce the demand for Metsä Board's products and cause disruptions in the company's production or supply chains.

Operational risks

Cost and availability risks of production inputs

Significant or unforeseen changes in the cost of Metsä Board's most important production inputs – wood, energy and chemicals – and any problems with their availability, may reduce profitability, threaten business continuity and put the implementation and life-cycle profitability of planned development investments at risk.

The discontinuation of wood supply from Russia may result in production curtailments at mills, especially due to the availability of birch, affecting the sales of the company's products and profitability. An extended energy crisis and limited availability of natural gas, volatile electricity market prices or changes in the prices of emissions allowances may have a negative impact on profitability.

In addition, the availability of transport capacity and a steep increase in market prices may negatively affect the company's profitability. Changes in exchange rates may also have an effect on the costs of some production inputs. The Group aims to hedge against these risks by making long-term supply agreements and related derivatives contracts.

Sustainability

Promoting sustainability supports Metsä Board's business and its development, but risks also arise from climate change and biodiversity loss in particular. At Metsä Board, these risks involve especially forests as well as the use of energy and water, and if materialised, the risks could have a negative impact on Metsä Board's business. Climate risks are divided into 1) transition risks, i.e., the risks arising from the transition to a low-carbon economy and 2) physical risks, which involve changes in temperatures and precipitation, and which will arise if climate change is not mitigated.

The most important transition risks include increasing regulation, as well as market and reputation risks, if the company fails to effectively respond to the changed market environment. The regulation aiming to combat climate change and reduce greenhouse gas emissions may result in demands for new technology and impact the pricing of energy and greenhouse gas emissions, thereby increasing costs. In addition, safeguarding carbon sinks and the biodiversity of forest nature with increasing regulations causes risks for using forests. The supply and demand of products in a low-carbon economy may also differ from the current situation.

Physical climate risks can be further divided into acute weather phenomena and more permanent changes. Extreme weather phenomena – such as storms, drought and floods – may cause disruptions in production or impede the transport of raw materials and products. In the long term, both an increase in the frequency of droughts and increased precipitation and floods may weaken the availability of the process water needed by mills and result in production suspensions. The risk is mitigated by the fact that all Metsä Board mills are located in northern areas with ample water. As the

climate becomes warmer, the most significant physical risks influencing forests and the availability of wood raw material will be the weakening of harvesting conditions due to shorter winters and increasing insect damage.

The mitigation of climate change and the transition to a low-carbon economy are strongly visible in Metsä Board's sustainability goals. Transitioning to fully fossil free energy in production, abandoning fossil-based raw materials and using energy and water more efficiently are at the core of these objectives. The measures related to the objectives help Metsä Board to manage climate risks. At the same time, they open new opportunities for Metsä Board in the changed operating environment and meet the needs of the circular economy.

Forest protection must be increased to safeguard forest biodiversity, which, in turn, poses risks to wood supply. All wood sourced by Metsä Group comes from sustainably managed forests, and this is verified by certification or controlled in other ways. Metsä Group also implements its ecological sustainability programme in commercial forests jointly with forest owners. The company also has a nature programme for non-commercial forests, which aims to safeguard biodiversity and improve the state of waters in Finland through restoration projects funded by Metsä Group.

Increasing EU regulation poses risks to the commercial use of forests in Metsä Group's wood supply. There are many different vegetation zones in the EU area, and each zone has its own characteristic forests. The forests of each zone, as well as the forest management practices best suited to them, differ from one another. However, EU-based regulation concerning forests in the EU area and their use has become clearly more detailed, treating different areas in a similar way. This trend increases the risk for poorly suited regulation also applying to forests from which Metsä Group obtains raw material.

Concentration of operations in a limited geographical area

Seven of Metsä Board's eight production units are located in Finland, and one of them is located in Sweden. Finland has a history of labour disputes in both the forest industry and the distribution chain of forest industry products. These may have a negative impact on production volumes and customer deliveries and weaken the company's competitiveness and profitability. Labour disputes in Sweden may also damage Metsä Board's production and customer deliveries and have a negative impact on the company's business operations.

Continuity risks

The continuity of mills' production may be impacted by, for example, large-scale fires, significant equipment malfunctions, serious accidents, extreme weather phenomena and environmental damage. Employees falling ill due to infectious diseases, cyberattacks and malware and ensuing long-term malfunctions in IT systems, labour disputes, availability issues concerning the most important raw materials and disruptions in the logistics chain may suspend the entire business or parts thereof.

Interruptions in production or the supply chain may influence the continuity of customer service and delivery reliability. If such interruptions continue for a long period of time, the resulting financial losses may be very substantial and result in the permanent loss of customers. The

company has prepared continuity and recovery plans in preparation for the realisation of these risks.

Business development

The development and growth of Metsä Board's business requires strategic choices that involve risks. The uncertainties in question involve the selection and timing of growth investments, for example, as well as the development of sales and the customer portfolio. The growth of the paperboard business and the introduction of new production to the market are dependent on successful sales. The commercialisation of new products involves uncertainties that, should they be realised, could have a negative impact on the demand for Metsä Board's products and the company's profitability. Increasing sales on a global scale also involves cost and exchange rate risks.

Business is also being developed by modernising production technology, running efficiency programmes, conducting product development, and harmonising business processes. If the costs of development projects and investments are significantly exceeded, their completion is delayed, or their productive or commercial objectives are not met, this could negatively affect the company's profitability.

Business ethics

Business ethics in general, as well as the prevention of human rights violations, conflicts of interest, misuses, corruption, bribery and money laundering, have been identified as requiring continuous development. The company carries out an ethics barometer aimed at the entire personnel every other year. The anonymous Compliance and Ethics Channel and the functioning of the related investigation process are also key tools in the identification and management of compliance-related risks. As part of its ongoing sustainability efforts, the company is developing processes and controls to help identify and more efficiently manage risks related to the sustainability of the supply chain, including trade sanctions, conflicts of interest, irregularities, corruption, bribery, money laundering, taxation and human rights.

Liability risks

Metsä Board's business involves liability risks, such as contractual, environmental and product liability risks. Liability risks are managed by way of efficient business processes, contract training, management practices, quality control and transparent operations. Some of the operational liability risks have been hedged with insurance policies.

Corporate security risks

Risks to corporate security include shortcomings and neglect in personal safety and security and safety at work and in the management of financial misconduct, any negative information manipulation and cyber threats, threats affecting the supply chains, and the adequacy of internal control. Operating processes related to corporate security and the guidelines, training and internal control related to the management of threat factors are developed continuously, and exercises on the management of crisis situations are organised on a regular basis.

Personnel availability and retention

Metsä Board pays attention to ensuring the availability and retention of competent personnel by means of various personnel development programmes and successor plans, and by investing in its employer image. Metsä Board also prepares for retirements and other personnel risks through the promotion of multiple skills and work ability as well as through job rotation.

■ Financial risks

Financial and exchange rate risks

As a result of increasing regulation in the financial market, the operations of credit and bond markets may become more difficult, which may impact the company's ability to acquire long-term debt financing at a competitive price. The financial risks are managed in accordance with the treasury policy approved by Metsä Board's Board of Directors. The purpose is to hedge against considerable financial risks, balance cash flow and give the business enough time to adjust to changing conditions.

Metsä Board sells its products in several countries and is therefore exposed to fluctuations in exchange rates. The US dollar strengthening by 10% against the euro would have a positive impact of approximately EUR 100 million on Metsä Board's annual operating result. Correspondingly, the Swedish krona strengthening by 10% would have a negative impact of approximately EUR 50 million. The British pound strengthening by 10% would have a positive impact of approximately EUR 10 million. The impact of weakened exchange rates would be the opposite. The sensitivities do not include the impact of hedging.

Credit risks

The management of credit risks related to commercial operations is the responsibility of Metsä Board's executive management and Metsä Group's centralised credit control. Metsä Board's management determines the limits on credit extended to customers and the applicable terms of payment in cooperation with the centralised credit control. Nearly all credit risks are transferred by means of credit insurance contracts. Excluding Russia, Metsä Board's customer credit risk was at a normal level in 2022. The main principles of credit control are defined in the credit guidelines of the risk management policy approved by the company's Board of Directors.

Metsä Board's financial risks and their management are described in more detail in Note 5.6 to the 2022 consolidated financial statements (Management of financial risks).

■ Metsä Board's shares and trading

Metsä Board has two series of shares. Each series A share entitles its holder to twenty (20) votes at a General Meeting of Shareholders, and each series B share entitles the holder to one (1) vote. All shares carry the same right to receive a dividend.

The year end closing price of Metsä Board's B share on the Nasdaq Helsinki was EUR 8.77. The share's highest and lowest prices were EUR 10.49 and EUR 7.09, respectively. Correspondingly, the closing price of the A share was EUR 10.15; the share's highest and lowest prices were EUR 10.50 and EUR 7.66, respectively.

In January–December, the average daily trading volumes of the B and A shares on the Nasdaq Helsinki were around 347,200 shares and around 3,400 shares respectively. The total trading volume of the B share was EUR 767 million, and the total trading volume of the A share was EUR 8 million.

At the end of 2022, the market value of all Metsä Board shares was EUR 3.2 billion, of which the market value of the B shares and the A shares accounted for EUR 2.8 billion and EUR 0.3 billion respectively.

On 27 October 2022, the Board of Directors of Metsä Board decided to launch a share buyback of company's own shares. The acquisition of the company's own shares started on 28 October 2022 and ended on 11 November 2022. During this period, Metsä Board acquired 1,000,000 B shares for an average price of EUR 7.8225 per share. The own shares were acquired for payment of the Board fees or to implement the company's share-based incentive systems.

On 30 December 2022, Metsäliitto Cooperative announced that its ownership in Metsä Board had exceeded the 50% threshold, and that its holding in Metsä Board was 50.16% of shares and 68.24% of votes. As Metsä Board is an entity controlled by Metsäliitto Cooperative, Metsäliitto Cooperative's ownership also includes the 1,000,000 own shares held by Metsä Board.

Foreign and nominee-registered investors held approximately 14% (14) of all shares.

■ Governance

Metsä Board's statutory administrative bodies are the Annual General Meeting, the Board of Directors and the CEO. The Board of Directors has general authority and, accounting for the scope and quality of the company's operations, it is responsible for matters that are strategic, far-reaching and unusual in nature, and therefore not part of the company's day-to-day business operations. The company's operational management is handled by the CEO, supported by the Corporate Management Team, the members of which are not members of the Board of Directors. The tasks and responsibilities of the different corporate bodies are determined in accordance with the Finnish Limited Liability Companies Act.

Metsä Board's Board of Directors has nine members, three of whom are women. A majority of Board members (six of nine) are independent of both the company and its biggest shareholders. Three members of the Board of Directors are not independent of Metsäliitto Cooperative. During the 2022 financial period, the Board of Directors held 13 meetings, at which the attendance of Board members was 97% (99 in 2021).

■ Resolutions of 2022 Annual General Meeting and the Board of Directors' authority to issue shares

The 2022 Annual General Meeting was held on 24 March 2022 in accordance with exceptional procedures. The General Meeting decided to distribute a dividend of EUR 0.41 per share. The dividend payment date was 7 April 2022.

The general meeting resolved that the annual remuneration of the members of the Board of Directors be increased such that the Chair will be paid EUR 99,000, the Vice Chair EUR 85,000 and ordinary members EUR 67,000 per year. In addition, it was decided to keep the meeting fees unchanged at EUR 800 for each attended meeting of the Board of Directors and its Committees. The general meeting resolved that approximately one half of the remuneration is paid in the company's B-series shares to be acquired from public trading. The transfer of such shares is restricted for a period of two years. Further, the Chair of the Audit Committee is paid an additional monthly remuneration of EUR 900.

The General Meeting resolved to approve the Remuneration Report in an advisory vote.

The general meeting fixed the number of Board members to nine (9) members and elected the following persons as members of the Board of Directors: Hannu Anttila, M.Sc (Economics), Raija-Leena Hankonen-Ny-bom M.Sc (Economics), Erja Hyrsky M.Sc (Economics), Ilkka Hämälä, M.Sc. (Technology), Mari Kiviniemi M.Soc.Sc. (Econ.), Jussi Linnaranta, M.Sc (Agriculture), Jukka Moisio M.Sc (Economics), Timo Saukkonen M.Sc (Agriculture) and Veli Sundbäck, LL.M. The term of office of the Board members continues until the end of the next Annual General Meeting.

The Annual General Meeting resolved to authorise the Board to decide on a share issue and the issue of special rights entitling to shares as defined in 1§ of Chapter 10 of the Companies Act. The authorisation applies to B-shares. By virtue of the authorisation the Board is entitled to issue up to 35,000,000 new B-series shares, including shares to be issued pursuant to rights entitling to shares. The number of shares corresponds to approximately 10% of all current shares. This authorisation is effective until 30 June 2023.

The Annual General Meeting resolved to authorise the Board to decide on the acquisition of the company's own shares. The number of shares to be acquired based on the authorisation shall not exceed 1,000,000 B-shares, which corresponds to approximately 0.3% of all current shares. This authorisation is effective until 30 June 2023.

■ Near-term outlook

The decline in global economic growth and consumers' purchasing power is causing uncertainty in the market. The visibility of paperboard sales development is weak.

Metsä Board's paperboard delivery volumes in January–March are expected to remain at roughly the same level as in October–December (418,000 tonnes). The average prices for folding boxboard are expected to increase.

The demand outlook for market pulp is uncertain due to global economic developments. In the first quarter, market pulp prices are slightly lower than in the previous quarter. Global supply of long-fibre pulp will be reduced due to the limited availability of raw material in North America. Demand for sawmill products is expected to pick up in the second quarter.

Cost pressure will continue. Following the increase in wood prices and harvesting and transport costs last year, wood costs are expected to increase in the beginning of the year.

With the start-up of the new recovery boiler and turbine in Husum, depreciation in January–March is about EUR 10 million higher than in the previous quarter.

No major annual maintenance shutdowns have been planned at the mills in the first quarter.

Exchange rate fluctuations in January–March 2023, including the impact of hedges, will have a positive impact on the operating result compared to October–December 2022, and a notably positive impact on the operating result compared to January–March 2022.

■ Board of Directors' proposal for dividend

The distributable funds of the parent company on 31 December 2022 were EUR 609.3 million, of which the retained earnings for the financial year are EUR 398.6 million.

The Board of Directors proposes to the Annual General Meeting to be held on 23 March 2023 that a dividend of EUR 0.58 per share be distributed for the 2022 financial period.

The proposed dividend corresponds to 50% of the earnings per share for 2022. The amount of dividend totals approximately EUR 206 million.

The dividend will be paid to shareholders who are registered in the company's shareholders register held by Euroclear Finland Oy on the dividend payment record date of 27 March 2023. The Board of Directors proposes 5 April 2023 as the dividend payment date.

Consolidated statement of comprehensive income

EUR million	Note	1-12/2022	1-12/2021
Sales	2.1, 2.2, 7.3	2,479.6	2,084.1
Change in stocks of finished goods and work in progress		70.1	11.9
Other operating income	2.3, 7.3	79.6	57.0
Materials and services	2.4, 7.3	-1,824.3	-1,461.0
Employee costs	3	-217.4	-216.0
Share of result of associated company	7.2, 7.3	163.1	114.4
Depreciation, amortisation and impairment charges	4.1, 4.2	-83.1	-90.2
Other operating expenses	2.4	-136.1	-124.4
Operating result		531.5	375.9
Share of profit from associated companies and joint ventures	7.2	0.0	0.0
Net exchange gains/losses	5.2	-5.0	-2.3
Other financial income	5.2, 7.3	3.0	0.2
Interest and other financial expenses	5.2, 7.3	-4.7	-7.9
Result before tax		524.9	365.8
Income taxes	6	-63.5	-51.8
Result for the period		461.3	314.0
Other comprehensive income			
Items that will not be reclassified to profit or loss	5.1		
Actuarial gains/losses on defined benefit pension plans	3.4	-4.7	3.0
Financial assets at fair value through other comprehensive income	4.3	178.5	-5.8
Share of profit from other comprehensive income of associated company		3.0	-0.1
Income tax relating to items that will not be reclassified		-33.9	-0.8
Total		142.9	-3.7
Items that may be reclassified to profit or loss	5.1		
Cash flow hedges		-3.1	-11.0
Translation differences		-56.3	-4.8
Share of profit from other comprehensive income of associated company		28.1	-3.8
Income tax relating to items that may be reclassified		0.6	2.2
Total		-30.6	-17.4
Other comprehensive income, net of tax		112.2	-21.1
Total comprehensive income for the period		573.6	292.8
Result for the period attributable to			
Shareholders of parent company		409.9	292.1
Non-controlling interest		51.4	21.9
		461.3	314.0
Total comprehensive income for the period attributable to			
Shareholders of parent company		535.7	272.4
Non-controlling interest		37.8	20.4
		573.6	292.8
Adjusted average number of shares, thousands		355,359	355,513
Basic and diluted earnings per share for result for the period attributable to the shareholders of parent company, EUR		1.15	0.82

The notes are an integral part of these financial statements.

Consolidated balance sheet

EUR million	Note	31 Dec 2022	31 Dec 2021
ASSETS			
Non-current assets			
Goodwill	4.1	12.2	12.4
Other intangible assets	4.1	5.9	6.2
Tangible assets	4.2	1,107.9	935.0
Investments in associated companies and joint ventures	7.2	614.2	479.0
Other investments	4.3, 5.7	345.4	181.0
Other non-current financial assets	5.3	6.0	15.3
Derivative financial instruments	5.7	2.9	
Deferred tax receivables	6	9.4	8.4
		2,103.9	1,637.2
Current assets			
Inventories	4.4	506.7	382.6
Accounts receivable and other receivables	4.5, 7.3	354.5	331.5
Current income tax receivables		41.4	1.0
Derivative financial instruments	5.7	40.5	34.0
Cash and cash equivalent	5.4, 7.3	356.2	524.2
		1,299.3	1,273.4
Assets classified as held for sale	7.2		11.0
Total assets		3,403.2	2,921.5
SHAREHOLDERS' EQUITY AND LIABILITIES			
Equity attributable to shareholders of parent company			
Share capital	5.1	557.9	557.9
Translation differences		-64.0	-27.2
Fair value and other reserves		283.9	118.3
Reserve for invested unrestricted equity		208.9	208.9
Treasury shares		-7.8	
Retained earnings		1,103.2	841.5
		2,082.0	1,699.4
Non-controlling interests		173.2	146.2
Total shareholders' equity		2,255.2	1,845.6
Non-current liabilities			
Deferred tax liabilities	6.	149.5	96.2
Post employment benefit obligations	3.4	10.4	13.7
Provisions	4.8	2.0	2.0
Borrowings	5.5, 5.6, 5.7	434.4	437.0
Other liabilities	4.6	3.9	1.5
Derivative financial instruments	5.7		1.7
		600.2	552.1
Current liabilities			
Provisions	4.8	4.9	1.0
Current borrowings	5.5, 5.6, 5.7	18.6	10.0
Accounts payable and other liabilities	4.7, 7.3	482.7	467.5
Current income tax liabilities		11.6	19.9
Derivative financial instruments	5.7	30.2	18.6
		547.9	517.0
Liabilities classified as held for sale	7.2		6.8
Total liabilities		1,148.1	1,076.0
Total shareholders' equity and liabilities		3,403.2	2,921.5

The notes are an integral part of these financial statements.

Statement of changes in shareholders' equity

Equity attributable to shareholders of parent company

EUR million	Note	Share capital	Translation differences	Fair value and other reserves	Reserve for invested restricted equity	Treasury shares	Retained earnings	Total	Non-controlling interest	Total shareholders' equity
Shareholders' equity, 1 Jan 2022		557.9	-27.2	118.3	208.9		841.5	1,699.4	146.2	1,845.6
Result for the period							409.9	409.9	51.4	461.3
Other comprehensive income net of tax total	5.1		-36.9	165.6			-2.9	125.8	-13.6	112.2
Comprehensive income total			-36.9	165.6			407.0	535.7	37.8	573.6
Related party transactions										
Dividends	5.1						-145.8	-145.8	-10.8	-156.6
Acquisition of treasury shares	5.1					-7.8		-7.8		-7.8
Share based payments	3.3						0.5	0.5		0.5
Shareholders' equity, 31 Dec 2022		557.9	-64.0	283.9	208.9	-7.8	1,103.2	2,082.0	173.2	2,255.2
Shareholders' equity, 1 Jan 2021		557.9	-24.9	136.6	265.8		448.4	1,383.8		1,383.8
Result for the period							292.1	292.1	21.9	314.0
Other comprehensive income net of tax total	5.1		-2.3	-18.3			1.0	-19.7	-1.5	-21.1
Comprehensive income total			-2.3	-18.3			293.1	272.4	20.4	292.8
Transactions with non-controlling interest							134.4	134.4	125.7	260.2
Related party transactions										
Dividends and capital distribution	5.1				-56.9		-35.6	-92.4		-92.4
Share based payments	3.3						1.1	1.1		1.1
Shareholders' equity, 31 Dec 2021		557.9	-27.2	118.3	208.9		841.5	1,699.4	146.2	1,845.6

The notes are an integral part of these financial statements.

Consolidated cash flow statement

EUR million	Note	1-12/2022	1-12/2021
Cash flow from operating activities			
Result for the period		461.3	314.0
Adjustments to the result, total		-63.0	11.8
Interest received		2.4	0.1
Interest paid		-3.6	-11.2
Dividends received		59.1	0.0
Other financial items, net		-6.4	-3.6
Income tax paid		-66.5	-31.1
Change in working capital		-151.4	49.5
Net cash flow from operations		232.0	329.6
Cash flow from investing activities			
Acquisition of other shares		-13.6	
Capital expenditure		-274.2	-213.7
Proceeds from disposal of shares in subsidiaries, net of cash	7.2	24.5	
Proceeds from disposal of other shares		16.9	0.2
Proceeds from sale of tangible and intangible assets		41.1	30.4
Change in non-current receivables, net		-0.1	0.2
Net cash flow from investing		-205.3	-183.0
Cash flow from financing activities			
Changes in non-controlling interests			261.2
Proceeds from non-current interest bearing liabilities		60.9	
Payment of non-current interest bearing liabilities		-81.0	-7.2
Change in current liabilities	5.5	-0.5	-0.4
Change in non-current non-interest bearing liabilities, net		2.4	-0.4
Acquisition of treasury shares	5.1	-7.8	
Dividend paid and capital distribution		-157.1	-92.4
Net cash flow from financing		-183.1	160.7
Change in cash and cash equivalents			
		-156.5	307.3
Cash and cash equivalents at beginning of period		524.2	214.0
Translation adjustments		-11.6	3.0
Change in cash and cash equivalents		-156.5	307.3
Cash and cash equivalents at end of period	5.4	356.2	524.2
Adjustments to the result, total			
Taxes		63.5	51.7
Depreciation, amortisation and impairment charges		83.1	90.2
Share of result from associated companies and joint ventures		-163.1	-114.4
Gains and losses on sale of non-current assets		-59.5	-28.2
Finance costs, net		6.6	10.0
Post-employment benefit obligations and provisions		3.6	-0.7
Other adjustments		2.8	3.2
Adjustments to the result, total		-63.0	11.8
Change in working capital			
Inventories		-128.8	-19.3
Accounts receivables and other receivables		-27.6	-53.9
Accounts payable and other liabilities		5.1	122.7
Change in working capital		-151.4	49.5

The notes are an integral part of these financial statements.

Notes to the consolidated financial statements

1. Accounting principles

■ Metsä Board Group

Metsä Board Corporation and its subsidiaries comprise a forest industry group ("Metsä Board" or "the Group"). Metsä Board's business operations consist solely of folding boxboard, fresh fibre linerboard and market pulp businesses. Metsä Board reports on its financial performance in one reporting segment.

Metsä Board Corporation is Group's parent company, which is domiciled in Helsinki. The registered address of the company is Revontulenpuisto 2, 02100 Espoo Finland. The parent company is listed on Nasdaq Helsinki Ltd. At the end of 2022 Metsäliitto Cooperative owned 50.2 per cent of the shares, and the voting rights conferred by these shares were 68.2 per cent.

A copy of the annual report can be obtained from Metsä Board's website www.metsaboard.com or parent company's head office at Revontulenpuisto 2, 02100 Espoo Finland.

The Group consolidated financial statements were authorised for issue by the Board of Directors on 8 February 2023. According to Finnish Companies Act shareholders can accept or reject the financial statements in General Meeting of shareholders after date of publication. General Meeting of shareholders also have possibility to decide to change financial statements.

■ Accounting principles

Metsä Board Corporation's consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS) effective and approved by the EU at the date of the financial statements 31 December 2022. The notes to the consolidated financial statements also comply with the requirements of Finnish accounting and company legislation supplementing the IFRS regulations.

The consolidated financial statements are presented in millions of euros, unless otherwise noted.

The consolidated financial statements have been prepared based on original acquisition costs, excluding financial assets recognised at fair value, hedged items in fair value hedging, assets and obligations related to defined benefit plans and share-based payments measured at fair value.

■ The impact of Russia's military aggression

The impact of Russia's military aggression on business operations is discussed in the Board of Directors' report. Due to the discontinuation of Russian business operations, the Group recognised an impairment of EUR 0.3 million for owned and leased property. The Group also recognised a loss of EUR 0.7 million in other operating expenses mostly related to accumulated Russian ruble-denominated translation differences. Further information can be found in the notes: 2.4. Operating expenses, 4.2. Property, plant and equipment, 5.1. Equity, translation differences, and 5.2. Financial income and expenses.

■ Amendments to standards applied during the 2022 financial period

Amendments to IAS 16, Property, Plant and Equipment - Proceeds before Intended Use. According to the amendments, the revenue accumulated from the sales of products created by the use of an unfinished tangible asset must be recognised through profit and loss. The amendments have an impact on the determination of the acquisition cost of the Group's tangible assets. In the years 2022 and 2021, there were no material sales revenues of products arising from the use of a work-in-progress tangible asset.

Other standard changes do not have a significant impact on the group's financial statements.

■ New and amended standards to be applied during future financial periods

Amendments to IAS 12 Income taxes – Deferred tax related to assets and liabilities arising from a single transaction. The amendments narrow the scope of the initial recognition exemption (IRE) and specify that the exemption does not apply to, for example, leases and decommissioning obligations that give rise to equal and opposite temporary differences. The amendments have an impact on the notes presented.

Other standard changes do not have a significant impact on the group's financial statements.

■ Translations in foreign currency

The items included in the financial statements of Group companies are presented in the currency that is used in each company's primary operating environment. The consolidated financial statements are presented in euros, which is the parent company's functional and presentation currency.

Business transactions denominated in foreign currencies are recognised in the operating currency using the exchange rate on the transaction date. At the end of the financial period, open receivables and liabilities denominated in foreign currencies are translated into the functional currency using the exchange rate on the balance sheet date. Since March 2022, the rate used for the Russian ruble is the closing rate for EUR/RUB published by Refinitiv, which management considers to best represent the market rate for the time. Any gains or losses resulting from transactions in foreign currencies and from the translation of monetary items are recognised in financial income and expenses.

Information about currency hedging is provided in Note 5.6 Management of financial risks.

The income statements of Group companies whose functional currency is not the euro are translated into euros using the average exchange rates of the financial period, and their balance sheets are translated using the exchange rates on the balance sheet date. Changes in translation differences arising from the translation of Group companies' income statements and balance sheets and from the translation of net investments in foreign entities are recognised in the consolidated comprehensive income statement. In conjunction with divestments of Group companies, either by selling or by dissolving, translation differences accumulated by the time of the divestment are recognised in the income statement as part of the gain or loss from the divestment.

■ Earnings per share

Undiluted earnings per share are calculated using the weighted average number of shares during the reporting period, where the own shares held by the group have been deducted. In calculating earnings per share adjusted for the effect of dilution, the average number of shares is adjusted for the dilution effect of any equity instruments that have been issued. In calculating earnings per share, earnings are taken to be the reported earnings attributable to the parent company's shareholders.

■ Other accounting principles

Other accounting principles are presented as part of the relevant Notes.

■ Key estimates and judgements

The preparation of financial statements requires the use of the management's estimates, assumptions and judgement-based decisions that affect the amount of assets and liabilities, the presentation of contingent assets and liabilities in the financial statements, and the amount of income and expenses. Even though such estimates and assumptions are based on the management's best knowledge at the time they were made, it is possible that the actual values differ from those used in the financial statements. In terms of the financial statements, the key areas that involve the management's estimates and judgement-based decisions are presented in the following notes:

Key estimates and judgements	Note
Retirement benefit obligations	3.4 Retirement benefit obligations
Intangible assets and impairment testing	4.1 Intangible assets
Property, plant and equipment and leases	4.2 Tangible assets
Financial instruments measured at fair value	4.3 Other investments
Valuation of inventories	4.4 Inventories
Valuation of accounts receivable	4.5 Accounts receivable and other receivables
Provisions	4.8 Provisions
Income taxes	6. Income taxes
Contingent liabilities from legal disputes and claims	8.1 Contingent liabilities, assets and commitments

2. Profitability

2.1 Segment information

Accounting principles

The Corporate Management Team is the chief operational decision-maker monitoring business operations performance based on the operating segments.

Metsä Board's business operations consist solely of folding boxboard, fresh fibre linerboard and market pulp businesses. Metsä Board reports on its financial performance in one reporting segment.

Geographical sales are reported based on the location of the customer and assets and capital expenditure based on the location of the assets.

Geographical areas

EUR million	External sales by location of customer		Non-current assets		Capital expenditure	
	2022	2021	2022	2021	2022	2021
Germany	209.8	161.4	2.5	3.4	0.1	0.1
Italy	174.6	134.6	0.4	0.5	0.0	0.1
Sweden	108.6	100.5	679.0	551.9	196.6	164.2
Finland	99.5	132.6	1,405.1	1,057.5	103.8	55.1
Spain	112.0	79.6	0.1	0.2	0.0	
France	104.4	77.5	0.4	0.2	0.3	0.2
Poland	121.4	91.7	0.6	0.1	0.6	0.0
The Netherlands	30.5	28.7				
Belgium	32.1	23.0	0.3	1.1	0.0	0.0
Other EU	192.5	141.1				
EU total	1,185.4	970.6	2,088.3	1,614.9	301.4	219.8
Turkey	137.5	90.3	0.0	0.0		0.0
United Kingdom	117.3	102.9	5.3	12.2	2.5	0.0
Russia	41.9	116.5		0.1	0.2	0.0
Norway	8.1	3.3				
Other Europe and Middle East	41.9	41.2				
USA	514.5	401.4	0.6	1.0		0.1
Canada	29.6	25.2				
Asia	176.1	173.7	0.3	0.5	0.0	0.2
Other countries	227.3	159.0	0.0	0.0		0.0
Total	2,479.6	2,084.1	2,094.6	1,628.8	304.1	220.2

Non-current assets include all non-current assets with the exception of derivative financial instruments and deferred tax assets.

Personnel at year end

By country	2022	2021
Finland	1,226	1,416
Sweden	733	712
Belgium	57	64
Germany	46	49
USA	66	63
Singapore	10	12
Other countries	110	73
Total	2,248	2,389

Personnel average

By country	2022	2021
Finland	1,340	1,490
Sweden	744	711
Belgium	63	61
Germany	49	49
USA	66	61
Singapore	12	12
Other countries	80	76
Total	2,352	2,461

Information on most important customers

There were no customers with revenue exceeding 10 per cent of total Group revenue in 2022 and 2021.

2.2 Sales

Accounting principles

Performance obligations arising from the Group's sales contracts are mainly order-driven customer deliveries related to the sale of forest industry goods. Services mostly have an ancillary role in the Group's business operations, or they complement deliveries of goods.

The transaction price is the amount that the Group expects to receive in exchange for a fulfilled performance obligation. This amount, less sales-based value added taxes and sales taxes, is presented as the Group's sales. The prices received by the Group are divided into a fixed part and a variable part. The variable part consists of various discounts based on, among other things, payment terms and purchased quantities, and is allocated by the Group as deductions from sales revenue in line with estimates of the extent of the discount the customer is deemed to be entitled to. The Group's sales contracts mostly include obligations solely related to deliveries of goods, to which the allocation of the transaction price is uncomplicated. The terms of payment applied in the Group's sales invoicing vary to some degree geographically and in different business areas, but the term of payment provided is nonetheless always clearly less than a year, when the financing component does not need to be separated.

The Group recognises revenue from the sale of goods in the period during which the control of the delivered products passes to the customer, i.e. when the risks and benefits related to the sold products transfer to the customer. Services are recognised as income over time.

Control to products transfers at the point of time when the products have been delivered in accordance with the agreed term of delivery. The Incoterms 2010 delivery terms most commonly applied by the Group and the corresponding times of sales income recognition are:

- D terms: Delivery of goods to the buyer at the agreed destination at the agreed time
- C terms: Handing over the goods to be transported to the agreed destination by a carrier arranged for by the seller
- F terms: Handing over the goods to a carrier arranged for by the buyer

The Group sees geographical distribution of sales as describing best the nature, amount, timing and uncertainty of sales revenue. Sales by geographical regions is presented below based on the location of customers.

Geographical distribution of sales

EUR million	2022	2021
Germany	209.8	161.4
Italy	174.6	134.6
Sweden	108.6	100.5
Turkey	137.5	90.3
Finland	99.5	132.6
United Kingdom	117.3	102.9
Russia	41.9	116.5
Spain	112.0	79.6
France	104.4	77.5
Poland	121.4	91.7
Norway	8.1	3.3
The Netherlands	30.5	28.7
Belgium	32.1	23.0
Rest of EMEA	336.8	266.7
EMEA	1,634.5	1,409.3
USA	514.5	401.4
Canada	29.6	25.2
Rest of Americas	102.3	55.6
Americas	646.4	482.2
APAC	198.7	192.6
Total	2,479.6	2,084.1

2.3 Other operating income

EUR million	2022	2021
Gains on disposal	59.2	28.7
Rental income	1.1	1.2
Service revenue	6.1	4.5
Government grants and allowances	3.3	17.6
Scrap and waste sale	0.2	0.3
Other	9.7	4.8
Total	79.6	57.0

Gains on disposal

EUR million	2022	2021
Emission rights	29.0	21.3
Non-business related land area	6.5	7.0
Share ownership	2.8	
Oy Hangö Stevedoring Ab	19.2	
Other	1.6	0.4
Total	59.2	28.7

The government grants and compensation relate to the compensation for training, healthcare and research costs, insurance indemnities and energy aid. Government grants and allowances include the EUR 16.8 million insurance claim paid to Metsä Board's Husum pulp mill in 2021.

2.4 Operating expenses

EUR million	2022	2021
Materials and services		
Raw materials and consumables		
Purchases during the financial year	1,465.4	1,117.6
Change in inventories	-48.0	-10.0
External services		
Logistics cost	332.7	271.1
Other external services	74.3	82.4
Total	1,824.3	1,461.0
Depreciation, amortisation and impairment charges		
Depreciation, amortisation and impairment charges total	83.1	90.2
Employee costs		
Employee costs total	217.4	216.0
Other operating expenses		
Rents and other real estate expenses	17.6	17.4
Purchased services	52.7	43.1
Losses on sale of non-current assets	0.3	0.5
Other operating expenses	65.6	63.3
Total	136.1	124.4

Employee costs are reported in Note 3.1 and information on depreciation, amortisation and impairment charges in Notes 4.1 and 4.2.

Other operating expenses include e.g. energy costs, real estate costs, marketing and advertising costs and administrative costs. In 2022, other operating expenses include expenses of EUR 0.7 million related to the discontinuation of Russian business operations.

Research and development expenses excluding depreciations were EUR 6.1 (6.0) million.

Auditor fees

The fees of the group's auditor KPMG

EUR million	2022	2021
Audit	0.5	0.4
Auditors' opinions	0.0	0.0
Tax services		
Other services	0.0	
Total	0.5	0.4

In 2022 fees to other auditors than KPMG amounted to EUR 0.1 (0.4) million.

3. Remuneration

3.1 Employee costs

EUR million	2022	2021
Wages and salaries	137.3	136.9
Share-based payments	2.8	3.2
Pension costs		
Defined benefit plans	0.5	0.4
Defined contribution plans	22.7	17.1
Other social security costs	54.1	58.3
Social security costs total	77.3	75.9
Employee costs total	217.4	216.0

3.2 The management's salaries, remuneration and pension expenses

Key management includes members of the Board of Directors as well as Corporate Management Team.

The management's salaries, remuneration and pension expenses

EUR	2022	2021
Salaries and other remuneration	2,824,918.65	2,093,350.95
Share-based payments (long-term remuneration)	2,073,129.01	2,044,228.93
Pension costs		
Defined benefit plans	589,122.26	402,966.82
Defined contribution plans	278,099.65	307,833.93
Total	5,765,269.57	4,848,380.63

Remuneration paid to the members of the Board of Directors of the parent company and their shareholding

	Shareholding shares	2022 Remuneration EUR	2021 Remuneration EUR	2022 Pensions, Defined contribution EUR	2021 Pensions, Defined contribution EUR
Ilkka Härmälä, chairman	287,349	114,192	109,360	18,359	16,931
Jussi Linnaranta, Vice chairman	29,801	100,080	94,240	17,584	15,996
Hannu Anttila	147,575	81,936	76,600	14,400	13,005
Raija-Leena Hankonen-Nyblom (from 23 May 2021)	6,956	90,836	77,400	14,620	11,989
Erja Hyrsky (from 25 March 2021)	9,456	81,936	71,000	14,400	12,048
Mari Kiviniemi (from 24 March 2022)	3,633	75,536		12,143	
Kirsi Komi (until 24 March 2022)		4,800	76,600	777	11,864
Kai Korhonen (until 25 March 2021)			8,000		
Liisa Leino (until 25 March 2021)			5,600		873
Jukka Moisio	12,231	81,136	76,600	13,049	11,864
Timo Saukkonen	16,831	81,936	76,600	13,179	11,864
Veli Sundbäck	74,908	81,936	76,600		
Total	588,740	794,323	748,600	118,510	106,435

Metsä Board's Annual General Meeting 2022 decided, that about one half of the remuneration will be paid in cash while the other half is paid in company's B shares.

The remuneration of the Management Team consists of a fixed monthly salary and remuneration based on short-term and long-term remuneration schemes. The CEO is also covered by a defined benefit pension plan.

Salaries and remuneration paid to the CEO and other members of the Corporate Management Team

EUR	2022 CEO	2021 CEO	2022 Other Management Team	2021 Other Management Team
Salaries and remuneration				
Basic salary including fringe benefits ¹⁾	535,749	518,981	1,327,502	1,176,977
Short-term performance bonus ²⁾	327,155	135,341	634,513	202,052
Lump sum ³⁾		30,000		30,000
Long-term share-based incentive ⁴⁾	954,226	874,336	1,022,174	953,396
Deferred long-term share-based incentive ⁵⁾		7,902	96,730	208,595
Total	1,817,130	1,566,560	3,080,918	2,571,020
Pension Costs				
Supplemental defined benefit pension plan	589,122	402,967		
Defined contribution plans	72,225	94,026	205,875	213,808
Total	661,347	496,993	205,875	213,808
Salaries and remuneration as well as pension costs in total	2,478,477	2,063,553	3,286,792	2,784,828

¹⁾ Basic salary may include car and telephone benefits, extended health, travel and accident insurance cover, and minor other benefits in kind.

²⁾ The 2022 payment concerns performance in 2021; the 2021 payment concerns performance in 2020.

³⁾ Lump sum for a project related to the sale of a 30% stake in the Husum pulp mill to Norra Skog.

⁴⁾ 2022: earning period 2019–2021; 2021: earning period 2018–2020.

⁵⁾ In 2022 Delayed long-term rewards were paid in accordance with the terms and conditions and the decision of the Board of Directors

The monthly salary of CEO Mika Joukio is EUR 42,628. The salary includes car and phone benefits and extended insurance cover for travel and accidents. In 2020 and 2021, the reward option for the CEO's short-term compensation plan was at the target level of 30 per cent and at the maximum level of 75 per cent of the fixed annual salary.

In 2020 and 2021, the reward option for the short-term compensation plan for members of the Management Team was at the target level of 20 or 25 per cent and at the maximum level of 50 or 62.5 per cent of the fixed annual salary.

The Board of Directors decides on the criteria of the short-term remuneration system. Remuneration is based on defined financial criteria and targets supporting strategy.

Share based incentive schemes and the shareholding programme for Corporate Management Team are presented in Note 3.3.

The CEO's mutual term of notice is six months. In case the CEO contract is terminated by the Board of Directors, the CEO is entitled to receive discharge compensation equal to his 12-month salary.

The period of notice for other members of Corporate Management Team is six months. Corporate Management Team members are entitled

to additional mainly severance compensation of six month salary in case of employment termination on grounds not related to the affected Management Team member.

The CEO is covered by statutory employee pension scheme. This offers pension benefits based on term of service and remuneration earned as prescribed in applicable legislation. Through supplementary pension arrangements, the CEO is entitled to retire at the age of 62 years. His pension will be equal to 60 per cent of his salary at the time of retirement calculated in accordance with Finnish pension legislation and based on the calculation period of five years immediately preceding retirement. In case the CEO's contract is terminated prior to retirement, the pension earned by the CEO becomes vested.

The Corporate Management Team members have no pension arrangements differing from statutory pensions. The Group has no off balance sheet pension liabilities on behalf of management.

Key management had no loans outstanding from the company or its subsidiaries and there were no guarantees given on behalf of key management.

■ 3.3 Share-based payments

Accounting principles

Share-based incentive programmes in which the payments are made with equity instruments and cash have been established for the company's top executives. The Group's share-based incentive schemes have been treated in full as arrangements settled in shares. The incentives granted are measured at fair value on the grant date, and recognised as expenses in the income statement and equity evenly over the vesting period.

The effect on profit of the incentive programmes is presented under employee costs.

During the review period, Metsä Board had four active share-based incentive schemes: Share incentive scheme 2014, which company Board of Directors decided to adopt on 6 February 2014, Performance based share incentive scheme 2017–2021 of which the company Board of Directors decided to adopt on 10 January 2017 and Performance based share incentive scheme 2020–2024 which the company Board of Directors decided to adopt on 12 December 2019, as part of company's incentive and key personnel retention programme.

The effect on consolidated income statement of share-based incentive schemes amounted to EUR 2,817,955 in 2022 (2021: EUR 3,193,961).

Share incentive scheme 2014, Performance based share incentive scheme 2017–2021 and Performance based share incentive scheme 2020–2024

The schemes offer the participants the possibility to be awarded Metsä Board Corporation's B shares for achieving set goals for three-year periods. Incentive periods are the calendar years 2014–2016, 2015–2017, 2016–2018, 2017–2019, 2018–2020, 2019–2021, 2020–2022, 2021–2023 and 2022–2024. The bonus awarded under the share incentive scheme 2014 and performance based share incentive plan 2017–2021 is

determined by achievement of the set goals and paid in March following the incentive period. In addition to shares, the bonus includes a cash component, which is used to cover taxes and tax-like charges incurred by plan participants due to the bonus. The number of shares allocated under the performance based incentive scheme 2020–2024 includes both the share and the cash portion. Accordingly, the reward is paid partly in shares and partly in cash and the cash portion is intended to cover taxes and tax-like payments. The bonus is not paid if the person's employment ends before the end of the earning period. In addition, the scheme includes a two-year commitment period. If the key employee's employment ends during the commitment period, the key person must, as a rule, return the delivered shares to the Company free of charge.

Based on the fulfillment of the criteria for the earning period 2019–2021, 182,280 Metsä Board Oyj B shares and a cash contribution were paid to cover taxes and tax-like payments arising from the reward at the time of the transfer of the shares. During the period, 8,707 shares were returned.

The company changed the terms of the scheme during 2016 so that for incentive periods 2014–2016 and 2015–2017 a cap was set for total employee compensation, including the share incentive paid, based on each plan participant's salary. The part of earned incentive exceeding the cap is deferred and paid in full in cash in coming years when allowed by the cap. Starting from vesting period 2016–2018, a salary based cap was set with the effect of cutting the part of share incentive exceeding the cap and resulting in the forfeiture of the excess part of the incentive. During 2022, the last deferred compensations were paid to those entitled.

Committing-based share incentive scheme 2020–2024

The scheme offers key employees in the target group the opportunity to receive Metsä Board Corporation's B-series shares, provided that the participant's employment relationship remains in force and continues in force until the end of the restriction period. The scheme has restriction periods of 12 to 36 months. As a rule, rewards are not paid if the participant's employment relationship ends during the restriction period.

Key characteristics of Performance based share incentive scheme 2017–2022 are summarised in the table below:

31 Dec 2022	Performance based share incentive scheme 2017–2021			Total
	2017–2019	2018–2020	2019–2021	
Key characteristics				
Shares allocated to the scheme, shares		275,278	280,694	555,972
Grant date(s)		9.4.2018, 25.9.2018	2.4.2019, 13.6.2019, 12.8.2019	
Criteria		Equity ratio, ROCE ja EBIT	Equity ratio, ROCE ja EBIT	
Personnel (31 December 2022)				23
Factors used to determine fair value (EUR) ¹⁾				
Share price at grant date		8.64	5.82	
Share fair value at grant date		7.84	5.20	
Annual dividend assumption in fair value measurement		0.27	0.31	
Share price at payment date / balance sheet date		9.43	8.86	
Fair value on balance sheet date		-	1,885,138	1,885,138
Effect on result and financial position (EUR)				
Expense in 2022, share-based payments settled as equity		467,242	381,372	848,614
Share-based payments settled in cash, unpaid part, estimate		-	-	0
Number of shares 1 January 2022 ²⁾				
Outstanding at the beginning of the period		132,229	280,694	412,923
Changes during the year				
Shares granted		0	1,458	1,458
Shares forfeited		0	9,124	9,124
Shares exercised		132,229	0	132,229
Shares expired		0	99,455	99,455
Number of shares 31 December 2022				
Outstanding at the end of the period		0	173,573	173,573

¹⁾ The fair value of the share settled component at the grant date was the share price of Metsä Board Corporation's B share less any dividends estimated by analyst consensus to be paid before the payment of the incentive. The fair value of the share based payment is recognised to the number of shares based on the best available estimate of the total incentive to which the participants are expected to be entitled.

²⁾ The amounts in the table represent net amounts, i.e. the number of shares to be given based on the share based payment schemes. In addition, the payment will include a cash settled component used to cover taxes and tax-like charges.

Key characteristics of Performance based share incentive scheme 2020–2024 are summarised in the table below:

31 Dec 2022	Performance based share incentive scheme 2020–2024			Committing based share incentive plan	Total
	2020–2022	2021–2023	2022–2024	2022–2024	
Key characteristics					
Shares allocated to the scheme, shares	590,788	453,650	437,545	20,838	1,502,821
Grant date(s)	27.1.2020, 18.6.2021	27.1.2021, 18.6.2021	31.1.2022, 8.11.2022		
Criteria	Equity ratio, ROCE ja EBIT	Equity ratio, ROCE ja EBIT	Equity ratio, ROCE ja EBIT		
Personnel (31 December 2022)					29
Factors used to determine fair value (EUR) ¹⁾					
Share price at grant date	5.46	8.93	9.44	7.74	
Share fair value at grant date	4.66	8.15	8.21	6.68	
Annual dividend assumption in fair value measurement	0.27	0.27	0.41	0.53	
Share price at payment date / balance sheet date	8.77	8.77	8.77	8.77	
Fair value on balance sheet date	2,518,231	3,455,866	3,501,355	139,198	9,614,650
Effect on result and financial position (EUR)					
Expense in 2022, share-based payments settled as equity	613,037	704,746	635,046	16,512	1,969,340
Share-based payments settled in cash, unpaid part, estimate	2,440,615	1,814,267	1,845,466	98,210	6,198,558
Number of shares 1 January 2022 ²⁾					
Outstanding at the beginning of the period	588,566	429,281	0	0	1,017,847
Changes during the year					
Shares granted	5,974	13,648	454,779	20,838	495,239
Shares forfeited	30,486	28,949	33,680	0	93,115
Shares exercised	0	0	0	0	0
Shares expired	0	0	0	0	0
Number of shares 31 December 2022					
Outstanding at the end of the period	564,054	413,980	421,099	20,838	1,419,971

¹⁾ The fair value of the share settled component at the grant date was the share price of Metsä Board Corporation's B share less any dividends estimated by analyst consensus to be paid before the payment of the incentive. The fair value of the share based payment is recognised to the number of shares based on the best available estimate of the total incentive to which the participants are expected to be entitled.

²⁾ The amounts in the table represent brutto amounts, i.e. the number of shares to be given based on the share based payment schemes. In addition, the payment will include a cash settled component used to cover taxes and tax-like charges.

3.4 Retirement benefit obligations

Accounting principles

The Group's arrangements concerning benefits following the termination of employment are either defined benefit pension plans or defined contribution pension plans. A defined contribution plan is a pension arrangement in which fixed contributions are made to a separate unit, and the Group does not have legal or constructive obligations to make additional contributions if the fund has insufficient funds to pay all benefits to all employees in accordance with its obligations in the future. All arrangements that do not meet these requirements are considered to be defined benefit plans. A defined benefit plan defines the pension benefit that the employee will receive upon retiring, the amount of which depends on factors including the employee's age, years of service and salary level, for example.

With defined benefit plans, the current value of the obligations on the end date of the reporting period, less the fair value of the assets included in the arrangement, is recognised on the balance sheet as a liability. The amount of the obligation arising from the plan is based on annual calculations by independent actuaries using the projected unit credit method. The current value of the obligation is determined using the interest rate equalling the interest rate of high-quality bonds issued by the companies as the discount rate for the estimated future cash flows. The bonds used in determining the interest rate have been issued in the same currency as the benefits to be paid, and their maturity is approximately the same as that of the corresponding pension obligation.

Actuarial gains and losses from experience verifications and changes in actuarial assumptions are recognised through items of other comprehensive income as a reimbursement or charge in equity for the period during which they have been incurred. Past service costs are recognised immediately through profit and loss.

Apart from contributions related to pension insurance, the Group does not have any other payment obligations in defined contribution plans. Obligation-based payments are allocated as expenses in accordance with accrual accounting.

Key estimates and judgements

The determination of the current value of pension obligations arising from defined benefit plans and the items to be recognised as expenses during the financial period is based on the use of actuarial assumptions, which involves management judgement. The assumptions include, among other things, the discount rate, the assumed increase in the salary level and the assumed life expectancy. The actuarial assumptions used may differ significantly from the actual results, due to changes in economic conditions or the employment relationships of the people covered by the arrangements. Significant differences between the assumptions and actual results may affect the amount of the pension obligation and the value of items to be recognised as expenses.

Post-employment benefits

EUR million	2022	2021
Liabilities recognised in balance sheet		
Defined benefit pension plans	10.3	13.4
Defined contribution pension plans	0.1	0.3
Total	10.4	13.7
Surplus of funded plans in assets	-3.4	-12.2

Defined benefit pension plans

The most significant defined benefit pension plans are in Germany and United Kingdom.

Group's German defined benefit pension plans grant old-age pensions, disability pensions and family pensions exceeding the statutory pension level to eligible officials and senior management. The retirement age is usually 65 years, and the amount of pension depends on the length of service. Officials and senior management are required to have a service history of 25–30 years to receive a full pension. Some of the pension arrangements are closed. The defined benefit plans in Germany are unfunded.

The defined benefits plans in United Kingdom guarantee participants of the plan a pension, the amount of which is based on the length of service and the salary in the most recent working years. The arrangement is closed to new members. The UK pension scheme operates under an independent foundation separate from the Group.

The Group also has defined benefit plans in Finland, Belgium and Italy.

Amounts in balance sheet

EUR million	2022	2021
Present value of funded obligations	36.3	53.2
Fair value of plan assets	-37.3	-62.8
Deficit (+) / surplus (-)	-0.9	-9.6
Present value of unfunded obligations	7.8	10.8
Deficit (+) / surplus (-) of defined benefit pension plans, total	6.9	1.2
Defined benefit-based pension liabilities on the balance sheet, net	10.3	13.4
Defined benefit-based pension assets on the balance sheet, net	-3.4	-12.2

Change in defined benefit pension obligations in 2022

EUR million	Present value of obligation	Fair value of plan assets	Total
1 Jan 2022	64.0	-62.8	1.2
Current service cost	0.5		0.5
Administrative costs			
Interest expense (+) or interest income (-)	0.9	-1.0	-0.1
Past service cost			
Total amount recognised in profit and loss	1.4	-1.0	0.4
Remeasurements in other comprehensive income			
Return on plan assets, excluding amounts included in interest income or expense		22.1	22.1
Gains (-) and losses (+) from change in demographic assumptions	0.0		0.0
Gains (-) and losses (+) from change in financial assumptions	-15.6		-15.6
Experience gains (-) and losses (+)	-0.9		-0.9
Total remeasurements in other comprehensive income	-16.5	22.1	5.7
Translation differences	-2.1	2.7	0.6
Contributions			
Employers		-0.3	-0.3
Plan participants	0.0	0.0	0.0
Payments from plans			
Benefit payments	-2.7	2.1	-0.6
Settlements		-0.1	-0.1
31 Dec 2022	44.1	-37.3	6.8

Change in defined benefit pension obligations in 2021

EUR million	Present value of obligation	Fair value of plan assets	Total
1 Jan 2021	70.4	-64.8	5.6
Current service cost	0.4		0.4
Administrative costs			
Interest expense (+) or interest income (-)	0.6	-0.6	0.0
Past service cost	-0.4		-0.4
Total amount recognised in profit and loss	0.6	-0.6	0.0
Remeasurements in other comprehensive income			
Return on plan assets, excluding amounts included in interest income or expense		-2.4	-2.4
Gains (-) and losses (+) from change in demographic assumptions	-0.1		-0.1
Gains (-) and losses (+) from change in financial assumptions	-1.9		-1.9
Experience gains (-) and losses (+)	1.2		1.2
Total remeasurements in other comprehensive income	-0.7	-2.4	-3.1
Translation differences	3.1	-3.6	-0.5
Contributions			
Employers		-0.3	-0.3
Plan participants	0.0	0.0	0.0
Payments from plans			
Benefit payments	-8.7	8.1	-0.6
Settlements	-0.8	0.9	0.1
31 Dec 2021	64.0	-62.8	1.2

Defined benefit pension obligation and plan assets by country in 2022

EUR million	Germany	United Kingdom	Finland	Other countries	Total
Present value of obligation	7.1	24.3	9.2	3.5	44.1
Fair value of plan assets		-27.7	-7.3	-2.2	-37.3
Total	7.1	-3.4	1.9	1.2	6.9

Defined benefit pension obligation and plan assets by country in 2021

EUR million	Germany	United Kingdom	Finland	Other countries	Total
Present value of obligation	9.9	39.0	11.2	3.9	64.0
Fair value of plan assets		-51.2	-9.7	-1.9	-62.8
Total	9.9	-12.2	1.5	2.0	1.2

Significant actuarial assumptions 2022

	Germany	United Kingdom	Finland	Belgium
Discount rate, %	3.73	4.90	3.72	3.10
Salary growth rate, %	3.00	2.60	0.00	1.00
Pension growth rate, %	2.00	3.10	2.84	2.30

Significant actuarial assumptions 2021

	Germany	United Kingdom	Finland	Belgium
Discount rate, %	0.74	1.85	0.82	0.70
Salary growth rate, %	3.00	2.80	0.00	1.00
Pension growth rate, %	1.75	3.35	2.36	2.00

Sensitivity of benefit obligation to changes in essential weighted assumptions 2022

	Change of assumption	Impact on benefit obligation	
		Increase	Decrease
Discount rate	0.5%-points	4.5% decrease	4.9% increase
Salary growth rate	0.5%-points	0.5% increase	0.4% decrease
Pension growth rate	0.5%-points	4.2% increase	3.9% decrease
		One year increase in assumption	One year decrease in assumption
Life expectancy		2.9% increase	2.9% decrease

The aforementioned sensitivity analyses are based on a situation where all other assumptions remain unchanged when one assumption changes. The sensitivity of a defined benefit obligation to changes in significant actuarial assumptions has been calculated using the same method as is used in calculating the pension obligation recognised in the balance sheet.

Plan assets are comprised as follows:

	2022 EUR million	2022 %	2021 EUR million	2021 %
Qualifying insurance policies	2.2	6%	1.9	3%
Cash and cash equivalents	0.4	21%	0.8	2%
Investment funds	2.1	6%	50.4	80%
Funds held by Insurance company	32.5	87%	9.7	15%
Total	37.3	100%	62.8	100%

The most considerable risks related to Defined benefit plans are as follows:

Changes in the return on bonds

Liabilities arising from the arrangements have been calculated using a discount rate based on the return on high-quality corporate bonds. A decline in the discount rate increases the arrangements' liabilities.

Inflation risk

The plan's benefit obligations are linked to inflation and a higher inflation will lead to increased obligation.

Life expectancy

The majority of the arrangement obligations arises from generating lifetime benefits for members, so the expected increase in life expectancy will increase the arrangement obligations.

The contribution made to post-employment defined benefit plans is expected to be EUR 1.4 million in 2023. The weighted average duration of the defined benefit obligation is 11.5 years (14.4).

4. Capital employed

4.1 Intangible assets

Accounting principles

Goodwill

Goodwill arising from the merging of business operations is recognised as the amount by which the sum of the consideration paid, the non-controlling interests' share in the object of the acquisition and the previous holding exceed the fair value of the acquired net assets.

Goodwill is not amortised. Instead, it is tested for impairment annually and always when there is an indication of a decrease in value. Goodwill is therefore allocated to cash-generating units for impairment testing. Goodwill is recognised at original acquisition cost less accumulated impairment losses.

Other intangible assets

Intangible assets are initially recognised at their original acquisition cost on the balance sheet if the acquisition cost can be determined reliably and it is probable that the expected financial benefit from the asset will be to the benefit of the Group.

Intangible assets with limited useful lives are recognised as expenses over their known or estimated useful lives, using the straight-line depreciation method.

The residual value of an asset, the useful life and depreciation method are reviewed at least annually, at the end of each financial period, and adjustments are made when necessary to reflect changes in the expected financial benefit of the asset.

Research and development costs

Research costs are recognised as expenses at the time they are incurred. Development costs are capitalised and amortised over their useful lives if the research project is likely to generate financial benefits and the costs can be measured reliably. Metsä Board has not capitalised development costs.

Computer software

Costs arising from developing and building of significant new computer software are recognised as intangible assets on the balance sheet and depreciated on a straight-line basis over its estimated useful life, which is not to exceed seven years. Maintenance and operating costs related to computer software are recorded as expenses in the reporting period during which they have been incurred.

Configuration and customisation costs in the deployment of cloud services are recognised as expenses if they do not result in intangible assets. If the services received by the group are separable, the costs are recognised as expenses when the supplier modifies the application. If the services received by the group are not separable, the costs are recognised as expenses when the supplier provides access to the application during the term of the agreement.

Patents, licences and trademarks

The cost of patents, licences and trademarks with finite useful lives are capitalised on the balance sheet under intangible assets and depreciated on a straight-line basis over their useful lives of 5–10 years.

Emission allowances

The Group has received emission allowances in accordance with the European Union Emissions Trading System. Allowances are treated as intangible assets and are measured at acquisition cost. The acquisition cost of emission allowances received without consideration is zero. Emission allowances are used simultaneously with the carbon dioxide emissions generated during their validity period. Earnings from emission allowances sold are recognised in other operating income. If the emission allowances received without consideration are

not sufficient to cover the amount of the actual emissions, the Group purchases additional allowances from the market.

The allowances purchased are recognised in intangible rights at the fair value on the acquisition date. The provision to fulfil the obligation to return the emission allowances is recognised at fair value on the closing date of the reporting period if the emission allowances received without consideration and purchased are not sufficient to cover the amount of the actual emissions.

EUR million	Goodwill	Other intangible assets	Construction in progress	Total
Acquisition cost, 1 Jan 2022	12.4	124.2	1.0	137.6
Translation differences		-0.5		-0.5
Increases		0.9	0.1	1.1
Acquired business		1.3		1.3
Decreases	-25.1	-67.8		-92.9
Transfers between asset categories		1.0	-1.0	
Acquisition cost, 31 Dec 2022	-12.8	59.2	0.1	46.6
Accumulated amortisation and impairment charges, 1 Jan 2022		-119.1		-119.1
Translation differences		0.4		0.4
Accumulated amortisation on decreases and transfers	25.0	66.4		91.4
Amortisation for the period		-1.2		-1.2
Impairment charges for the period				
Accumulated amortisation and impairment charges, 31 Dec 2022	25.0	-53.4		-28.5
Book value, 1 Jan 2022	12.4	5.1	1.0	18.5
Book value, 31 Dec 2022	12.2	5.8	0.1	18.1

EUR million	Goodwill	Other intangible assets	Construction in progress	Total
Acquisition cost, 1 Jan 2021	12.4	123.4	0.6	136.4
Translation differences		-0.1		-0.1
Increases		0.5	1.0	1.5
Decreases		-0.2		-0.2
Transfers between asset categories		0.6	-0.6	
Acquisition cost, 31 Dec 2021	12.4	124.2	1.0	137.6
Accumulated amortisation and impairment charges, 1 Jan 2021		-117.4		-117.4
Translation differences		0.1		0.1
Accumulated amortisation on decreases and transfers		0.2		0.2
Amortisation for the period		-2.0		-2.0
Accumulated amortisation and impairment charges, 31 Dec 2021		-119.1		-119.1
Book value, 1 Jan 2021	12.4	6.1	0.6	19.1
Book value, 31 Dec 2021	12.4	5.1	1.0	18.5

Other intangible assets include among other things computer software, patents and licenses. Metsä Board has not capitalised development expenditure. Acquired businesses in 2022 include the intangible assets of Hämeenkyrön Voima Oy. Further information is available in Note 7.2.

In 2022 the Group received 597 thousand tonnes of emission allowances free of charge (501). In addition the Group has sold 554 thousand tonnes to the market (310). At balance closing date the group had emission allowances of 1,000 thousand tonnes (1,011). At the end of 2021, it also had 47 thousand tonnes of free allowances for 2021, which had not yet been entered in the emissions trading register on 31 December 2021 due to a delay in the allocation. Emissions during the reporting period fell below the

amount of emission allowances received free of charge and consequently emissions during the year did not have an impact on income statement or balance sheet.

In 2022, capital gains from the sale of emission allowances recognised in other operating income totalled EUR 29.0 million (21.3). On the balance sheet date, the fair market value of an emission right was EUR 80.76 per tonne (79.61) and total value of owned rights EUR 80.8 million (84.2).

Impairment testing

Depreciation is not recognised for assets with indefinite useful lives. Instead, such assets are tested for impairment annually. Assets that are subject to depreciation are always tested for impairment when events or changes in conditions indicate that it is possible that the monetary amount corresponding to the book value of the assets might not be recoverable.

Cash-generating units are reporting segments or smaller units for which a utility value can be defined.

The recoverable amount is the higher of the fair value of an asset less the cost of sale, and its value in use. Value in use is the estimated future net cash flows, discounted to their present value, expected to be derived from said asset or cash-generating unit.

An impairment loss is recognised if the carrying amount of the asset is higher than its recoverable amount. If the impairment loss concerns a cash-generating unit, it is first allocated to decrease the goodwill of the cash-generating unit, and thereafter to decrease the other

assets of the unit on pro-rata basis. In connection with the recognition of the impairment loss, the useful life of the depreciated asset is re-evaluated. An impairment loss recognised for an asset other than goodwill is reversed if a change has taken place in the estimates used to determine the recoverable amount of the asset. However, the maximum reversal of an impairment loss amounts to no more than the carrying amount of the asset if no impairment loss had been recognised. An impairment loss recognised on goodwill is not reversed under any circumstances.

Key estimates and judgements

Future cash flows

The recoverable amounts of cash-generating units are based on calculations of value in use. The management's key estimates in the calculations concern the product price developments, delivery volumes, the development of costs related to key raw material costs and other costs, as well as the discount rate and long-term growth rate.

Impairment testing 2022

Metsä Board carries out impairment testing once a year, during the fourth quarter, based on the situation on 30 September, or more frequently if signs of a possible impairment are detected.

The group did not recognise impairments based impairment testing in 2022. In the testing carried out in 2022, a somewhat potential change in any individual key assumption would not lead to the recognition of an impairment.

The group's key impairment testing and key assumptions in the situation on 30 September 2022:

Cash-generating unit	Goodwill EUR million	Brand EUR million	Discount rate after taxes on 30 September 2022	Discount rate after taxes on 30 September 2021	Long-term growth rate on 30 September 2022	Long-term growth rate on 30 September 2021
Paperboard industry						
Folding boxboard ¹⁾	29.1	2.5	7.21%	5.78%	2.0%	2.0%
Liner ¹⁾	28.3	3.0	7.21%	5.78%	2.0%	2.0%
Market pulp ¹⁾			7.21%	5.78%	2.0%	2.0%

¹⁾ Metsä Board's share of Metsä Fibre's recoverable cash flow, the book value and the goodwill included in the balance sheet item "Investments in associates and joint ventures" (45.2 million EUR) and other intangible assets with unlimited economic life (EUR 5.6 million), are allocated to cash flow generating units in proportion to their pulp purchases.

The recoverable amounts of the cash-generating units being tested are based on five-year forecasts and the resulting, steadily growing cash flows. The initial value used for the key assumptions of the cash flows – prices and variable costs – after the forecast period is the average of the five-year forecast period. The value used for delivery volumes and fixed costs is the value of the forecast period's fifth year. The key testing assumptions are management estimates and forecasts obtained from external sources of information.

The discount rate used is the weighted average cost of capital (WACC). When calculating the WACC, the cost of debt takes into account the market-based view of the credit risk premium.

4.2 Tangible assets

Accounting principles

Property, plant and equipment are measured at acquisition cost less accumulated depreciation and impairment losses.

The acquisition cost includes costs that are directly incurred in the acquisition of an item of property, plant or equipment. Qualifying external borrowing costs resulting directly from the acquisition, construction or manufacture of an item of property, plant or equipment are capitalised as part of the acquisition cost of property, plant and equipment.

If a piece of property, plant or equipment consists of several components with differing useful lives, each component is handled as a separate item. In that case, the expenses related to replacing the component are capitalised, and any book value remaining at the time of replacement is derecognised on the balance sheet.

Spare parts, spare equipment and maintenance supplies are recognised in property, plant and equipment when they fulfill the criteria for recognition of property, plant and equipment. Otherwise, such commodities are classified as inventories.

Significant investments in refurbishments and improvements are capitalised on the balance sheet and depreciated over the remaining useful life of the main asset related to such investments.

Repair and maintenance costs are recognised as expenses when they are incurred.

Property, plant and equipment is depreciated on a straight-line basis over the estimated useful lives. Depreciation is not recognised for owned land and water.

Estimated useful lives

Buildings and constructions	20–40 years
Machinery and equipment	
Heavy power plant machinery	20–40 years
Other heavy machinery	15–20 years
Lightweight machinery and equipment	5–15 years
Other tangible assets	5–20 years

The residual value of an asset, the financial useful life and depreciation method are reviewed at least annually, at the end of each financial period, and adjustments are made when necessary to reflect changes in the expected financial benefit of the asset.

Gains and losses arising from the sale and decommissioning of items of property, plant and equipment are recognised in other operating income and expenses. Sales gains or losses are calculated as the difference between the sales price and the remaining acquisition cost.

Government grants related to the acquisition of assets are presented as adjustments of the acquisition cost on the balance sheet and recognised as income in the form of lower depreciation during the useful life of the asset.

Leases

The Group has leased various land areas, properties, equipment and vehicles. When the leased asset is available for the Group's use, a fixed asset item and a corresponding liability of the lease is recognised. Paid rents are divided into liabilities and finance costs. The finance cost is included in profit or loss over the lease term in such a way that the interest rate of the remaining debt balance is the same during each period. The leased fixed asset is subject to straight-line depreciations over the asset's economic life or the lease term, depending on which of them is shorter.

Assets and liabilities arising from leases are initially measured at the present value. Lease liabilities include fixed payments, less any lease incentives receivable; amounts expected to be payable by the lessee under residual value guarantees; the exercise price of a purchase option if the lessee is reasonably certain to exercise that option; and payments of penalties for terminating the lease, if the lease term reflects the lessee exercising an option to terminate the lease. The lease payments are discounted using the interest rate implicit in the lease, if that rate can be readily determined, or the Group's incremental borrowing rate. The leased fixed assets are measured at cost, which includes the amount of the initial measurement of the lease liability; any lease payments made at or before the commencement date, less any lease incentives received; any initial direct costs incurred; and any costs incurred by restoring the site on which it is located.

Some of the leases include options to extend or terminate, which are largely available only for the Group, not the lessor.

Payments related to short-term leases or leases where the value of the underlying asset is low are recognised as costs on a straight-line basis. A lease with a lease term of 12 months or less is considered a short-term lease. Assets of a low value include mainly ICT and office equipment.

Key estimates and judgments

Estimates concerning the residual value and useful life of property, plant and equipment, as well as the selection of the depreciation method, require significant management judgement.

Leases

When determining the lease term, the management accounts for all relevant facts and circumstances that create an economic incentive to exercise the option to extend the lease, or not to exercise the option to terminate the lease. Options to extend the lease (or the time subsequent to an option to terminate) are accounted for in the lease term only if the extension of the lease (or the decision not to terminate the lease) is reasonably certain. The possible future cash flows of EUR 2.0 million have not been included in the lease liability because the extension of the lease (or the decision not to terminate it) is not reasonably certain. The Group will conduct a reassessment upon the occurrence of either a significant event or a significant change in circumstances that is within the control of the lessee and affects the assessment.

EUR million	Land and water areas		Buildings and constructions		Machinery and equipment	
	Owned	Leased	Owned	Leased	Owned	Leased
	Acquisition cost, 1 Jan. 2022	15.7	2.0	401.2	10.2	2,563.2
Translation differences	-0.1		-12.5	0.0	-113.1	-0.6
Additions	0.0	0.7	72.1	3.3	68.7	4.1
Acquired business			6.6		5.0	18.0
Decrease	-3.2	-0.2	2.1	-1.3	8.9	-19.6
Transfers between items	0.0		3.0		249.7	
Acquisition cost, 31 Dec. 2022	12.4	2.4	472.4	12.2	2,782.3	17.5
Accumulated depreciation and impairment charges 1 Jan. 2022	-0.5	-0.5	-280.0	-5.4	-2,093.5	-6.2
Translation differences	0.0		7.5	-0.1	82.6	0.2
Accumulated depreciation on deductions and transfers			-0.6	1.4	11.1	2.1
Depreciation for the period		-0.2	-8.5	-3.4	-63.5	-4.4
Impairments				-0.8	-0.1	0.0
Accumulated depreciation and impairment charges 31 Dec. 2022	-0.4	-0.7	-281.7	-8.4	-2,063.3	-8.3
Book value, 1 Jan. 2022	15.2	1.4	121.3	4.8	469.7	9.5
Book value, 31 Dec. 2022	12.0	1.7	190.7	3.9	719.0	9.2

EUR million	Other tangible assets	Construction in progress	Total	Total	Total
	Owned	Owned	Owned	Leased	
	Acquisition cost, 1 Jan. 2022	23.0	306.1	3,309.2	
Translation differences	-0.7	-15.0	-141.3	-0.6	-141.9
Additions	1.4	121.9	264.1	8.1	272.2
Acquired business	0.1		11.6	18.0	29.6
Decrease	-1.3	3.3	9.8	-21.1	-11.3
Transfers between items	0.4	-253.1			
Acquisition cost, 31 Dec. 2022	23.0	163.2	3,453.3	32.1	3,485.5
Accumulated depreciation and impairment charges 1 Jan. 2022	-15.9		-2,389.8	-12.1	-2,401.9
Translation differences	0.6		90.8	0.1	90.9
Accumulated depreciation on deduction and transfers	1.3		11.8	3.5	15.3
Depreciation for the period	-0.8		-72.9	-8.0	-80.9
Impairments			-0.1	-0.9	-0.9
Accumulated depreciation and impairment charges 31 Dec. 2022	-14.8		-2,360.2	-17.4	-2,377.6
Book value, 1 Jan. 2022	7.2	306.1	919.4	15.7	935.0
Book value, 31 Dec. 2022	8.2	163.2	1,093.2	14.7	1,107.9

Acquired businesses include the tangible assets of Hämeenkyrön Voima Oy. More information on the acquired businesses can be found in note 7.2.

EUR million	Land and water areas		Buildings and constructions		Machinery and equipment	
	Owned	Leased	Owned	Leased	Owned	Leased
Acquisition cost, 1 Jan. 2021	17.0	2.3	410.7	10.8	2,557.8	21.9
Translation differences	0.0		-2.6	0.2	-27.2	-0.2
Additions	0.0	0.3	1.6	1.4	40.5	2.5
Decrease	-1.8	-0.6	-11.5	-2.1	-27.7	-8.5
Transfers between items	0.5		3.0		19.7	
Acquisition cost, 31 Dec. 2021	15.7	2.0	401.2	10.2	2,563.2	15.7
Accumulated depreciation and impairment charges 1 Jan. 2021	-0.5	-0.2	-282.1	-4.8	-2,066.3	-9.7
Translation differences	0.0		2.0	-0.1	22.0	0.1
Accumulated depreciation on deductions and transfers		0.1	0.6	1.5	7.7	8.5
Assets held for sale		-0.1	7.3		15.1	
Depreciation for the period		-0.3	-7.9	-2.0	-67.4	-5.0
Impairments						
Accumulated depreciation and impairment charges 31 Dec. 2021	-0.5	-0.5	-280.0	-5.4	-2,093.5	-6.2
Book value, 1 Jan. 2021	16.5	2.1	128.7	6.0	491.4	12.2
Book value, 31 Dec. 2021	15.2	1.4	121.3	4.8	469.7	9.5

EUR million	Other tangible assets	Construction in progress	Total	Total	Total
	Owned	Owned	Owned	Leased	
Acquisition cost, 1 Jan. 2021	24.8	158.4	3,168.7	35.0	3,203.7
Translation differences	-0.2	-4.5	-34.5	0.0	-34.5
Additions	0.4	172.2	214.6	4.1	218.7
Decrease	-0.4	1.6	-39.7	-11.2	-50.9
Transfers between items	-1.6	-21.7			
Acquisition cost, 31 Dec. 2021	23.0	306.1	3,309.2	27.8	3,337.0
Accumulated depreciation and impairment charges 1 Jan. 2021	-15.4		-2,364.3	-14.7	-2,379.0
Translation differences	0.2		24.2	0.0	24.2
Accumulated depreciation on deduction and transfers			8.4	10.1	18.4
Assets held for sale	0.3		22.7	-0.1	22.6
Depreciation for the period	-0.9		-76.2	-7.4	-83.6
Impairments			-4.6		-4.6
Accumulated depreciation and impairment charges 31 Dec. 2021	-15.9		-2,389.8	-12.2	-2,401.9
Book value, 1 Jan. 2021	9.4	158.4	804.4	20.2	824.7
Book value, 31 Dec. 2021	7.2	306.1	919.4	15.6	935.0

Assets held for sale include Oy Hangö Stevedoring Ab's assets.

Leases

EUR million	2022	2021
Costs related to short-term leases	0.8	1.1
Costs of leases in which the underlying asset is of low value	1.5	3.9
Interest expenses	0.5	0.5
Cash outflow for leases	25.6	7.6

Disclosures on lease liabilities are presented in Note 5.5 (Financial liabilities) and 5.6 (Management of financial risks) and disclosures on lease obligations in Note 8.1 (Commitments and contingencies).

Impairments

Year 2022 Impairments in 2022 include EUR 0.3 million of impairments related to the discontinuation of Russian business operations and EUR 0.7 million related to the restructuring of customer service and supply chain management. Year 2021 Metsä Board invests its folding boxboard capacity at Husum in Sweden. When the investment is completed, some of the board mill's machinery and equipment will be taken out of service. In 2021 there were an impairment loss of EUR 4.6 million recognised in the assets that will be taken out of service.

Borrowing costs

Borrowing costs capitalised in 2022 totalled to EUR 8.3 million (4.0). The average interest rate used in capitalisation was 2.2% (2.1%).

4.3 Other investments

Accounting principles

Other investments consist of listed and unlisted equity investments. The most significant of these is the Group's holding in Pohjolan Voima. This investment is unlisted and strategic in nature, serving the Group's long-term energy sourcing needs. This being the case, the Group classifies its shares in Pohjolan Voima as financial assets at fair value recognised under other items of comprehensive income. Changes in their fair value are presented in the fair value reserve, accounting for the tax effect. When the investment is abandoned, the fair value changes accumulated in the equity are transferred to the retained earnings from the fair value fund.

The Group classifies its other equity financial assets as financial assets at fair value to be recognised as financial assets through profit and loss.

The fair values of publicly listed shares are based on the share price on the balance sheet date. The fair values of shares other than listed shares are determined using various valuation models, such as the price levels of recent transactions and valuation methods based on the present value of discounted cash flows. As far as possible, the valuation methods are founded on market-based valuation factors.

Key estimates and judgements

Fair value measurement

The application of valuation models to measuring fair value requires judgement concerning the selection of the method to be applied, as well as valuation factors required by the chosen method that are based on the price and interest levels prevailing in the market on the end date of each reporting period. The most significant item of other investments that has been valued by using a valuation model is the Group's investment in the shares of Pohjolan Voima Oyj. The price of these shares is determined based on the present value of discounted cash flows. Key factors affecting cash flows include the price of electricity, inflation expectations and the discount rate. The 12-month moving average of electricity futures prices has been used as the energy price for the first eight years. Subsequent prices are based on a long-term market price forecast.

The carrying amount of the Group's shares in Pohjolan Voima was EUR 344.1 million on the balance sheet on 31 December 2022. The carrying value of other investments is estimated to change by EUR -12.3 million and EUR 13.0 million should the rate used for discounting the cash flows change by 0.5 percentage points from the rate estimated by the management. The carrying value of other investments is estimated to change by EUR 71.5 million should the energy prices used in calculating the fair value differ by 10% from the prices estimated by the management.

EUR million	2022	2021
Pohjolan Voima Oyj	344.1	177.6
Other unlisted shareholdings	1.3	3.4
Other investments total	345.4	181.0

The most important unlisted shareholding under other investments consists of a 2.6 per cent stake in Finnish energy company Pohjolan Voima Oyj, which produces electricity and heat for its shareholders in Finland. Pohjolan Voima trades with its shareholders at prices based on production costs, which generally are lower than market prices. The Group is entitled, through the B shares of Pohjolan Voima, to a share of approximately 5.2% of the energy generated by the Olkiluoto 1 and Olkiluoto 2 nuclear power plants and, through the B2 shares of Pohjolan Voima, to a share of 1.5% of the energy generated by the Olkiluoto 3 nuclear power plant, now being deployed.

On 1 January 2022, Metsä Board acquired the entire share capital of Hämeenkyrön Voima Oy from Pohjolan Voima Oyj (84%) and from DL Power Oy, part of Leppäkoski group (16%). In this connection, Metsä Board sold its series G10 shares, which corresponded to an 84% holding in Hämeenkyrön Voima Oy, to Pohjolan Voima Oyj for EUR 12.0 million. Hämeenkyrön Voima Oy was merged later during the financial year to the parent company.

The ownership is measured quarterly at fair value on share series basis by using the average of discounted cash flow method and valuation based on earlier transactions. The weighted average cost of capital used was 5.42 (2021: 3.14) per cent.

The acquisition cost of shares in Pohjolan Voima Oyj is EUR 28.3 million (40.2) and the fair value EUR 344.1 million (177.6). The change in fair value was due to an updated long-term price forecast for the electricity used in the shares' valuation model. The fair value of the G10 series in 2021 was EUR 12.0 million.

Shareholder agreement restricts sale of shares of Pohjolan Voima to buyers that are not existing shareholders.

4.4 Inventories

Accounting principles

Inventories are measured at the lower of acquisition cost or net realisable value. In measuring inventories, the FIFO principle is observed or, alternatively, the weighted average price method, depending on the nature of the inventories. The acquisition cost of finished products acquired comprises all purchase costs, including direct transport, handling and other expenses. The acquisition cost of finished and semi-finished products of own manufacture includes raw materials, direct production costs, and the systematically allocated portion of variable manufacturing overheads and fixed overheads at the normal level of operation. Borrowing cost is not included in the acquisition cost.

Net realisable value is the estimated sales price in ordinary business operations less the estimated cost of completion and the necessary sales costs.

Key estimates and judgements

The Group regularly reviews its inventories for situations where the inventories contain non-marketable items or items with net realisable value below the acquisition cost. When necessary, the Group reduces the book value of the inventories accordingly. This review requires the management's estimates of the sales prices of products, the cost of completion and the costs necessary to make the sale. Any changes in these estimates might lead to an adjustment in the book value of the inventories in future periods.

EUR million	2022	2021
Raw materials and consumables	211.6	162.3
Finished goods	276.1	211.7
Advance payments	19.0	8.6
Inventories total	506.7	382.6

In 2022 or 2021, no write-downs were recorded for inventory.

4.5 Accounts receivable and other receivables

Accounting principles

Accounts receivables are initially measured at fair value and later at amortised cost, taking into account impairment. The Group applies a model based on expected credit losses to the determination of the impairment of trade receivables. Provisions are furthermore set up on a case-by-case basis when there is a justifiable reason to assume that the Group will not receive payment for the invoiced amount according to the original terms.

Key estimates and judgements

The evaluation of the recognition criteria and the amount of impairment losses requires the management's judgement. If customers' financial position weakens so that it affects their solvency, further impairment losses may need to be recognised in future periods. The impacts of Russia's military aggression and corona pandemic on determining the impairment of sales receivables is discussed in Note 5.6, Management of financial risks, counterparty risk.

Accounts receivable and other non-interest bearing receivables

EUR million	2022	2021
From Group companies		
Accounts receivable	40.8	26.6
Other receivables		
Prepayments and accrued income	0.4	0.0
Total	41.2	26.7
From associated companies and joint ventures		
Accounts receivable	0.1	0.3
From others		
Accounts receivable	272.5	245.8
Impairment	-1.2	-2.5
Total	271.4	243.3
Other receivables	34.3	46.5
Prepayments and accrued income	7.5	14.7
From others total	313.2	304.5
Accounts receivable and other receivables total	354.5	331.5

Receivables from Group companies are receivables from parent company Metsäliitto Cooperative and from other subsidiaries of the parent company. Derivative receivables are from Metsä Group Treasury Oy, a wholly owned subsidiary of Metsäliitto Cooperative.

As a consequence of the discontinuation of Russian business operations, the Group made a write-down of all its accounts receivables and other receivables related to operations in Russia, totalling EUR 0.1 million.

Case-specific impairments and impairments determined by applying the model based on expected credit losses deducted from accounts receivable are as follows:

EUR million	2022	2021
Value 1 Jan	2.5	3.0
Increase	0.6	0.0
Decrease	-1.9	-0.5
Value 31 Dec	1.2	2.5

Credit losses recognised during 2022 were EUR 0.2 million (0.0).

Age distribution of accounts receivable less impairments

EUR million	2022	2021
Not overdue	251.2	236.3
Overdue		
Less than 30 days	17.3	8.0
Between 31 and 60 days	2.1	-0.2
Between 61 and 90 days	-0.3	0.0
Between 91 and 180 days		-0.4
Over 180 days	1.0	-0.3
Total	271.4	243.3

4.6 Other liabilities

EUR million	2022	2021
Non-current liabilities to Group companies		
Non-current liabilities		
Advance payments received	1.1	1.1
Accruals and deferred income	0.5	0.5
Total	1.5	1.5

4.7 Accounts payable and other liabilities

EUR million	2022	2021
Advance payments received	5.1	4.0
Accounts payable	223.0	222.2
Accounts payable, Supply Chain Finance schemes	91.0	76.3
Other liabilities	28.1	12.9
Accruals and deferred income		
Customer discounts	23.2	26.3
Purchase-related items	46.3	50.2
Employee costs	31.7	32.7
Other accrued expenses	34.2	43.0
Total	482.7	467.5

With financing banks, Metsä Group has established Supply Chain Finance (SCF) schemes aimed at a few key suppliers. In the schemes, the suppliers are offered the option of selling their Metsä Group receivables to a bank providing the SCF scheme. The SCF schemes partly replace the earlier advance payment arrangements, and their aim is not to cause a significant deviation from Metsä Group's normal payment terms.

4.8 Provisions

Accounting principles

A provision is recognised when, as a result of an earlier event, the Group has a legal or actual obligation, the realisation of a payment obligation is likely, and the amount of the obligation can be reliably estimated. Any reimbursement from a third party is presented as an asset separate from the provision if it is practically certain that reimbursement will be received.

Restructuring

A restructuring provision is recorded when the Group has incurred a legal or constructive obligation to make a payment. Termination payments are recorded when a detailed plan has been made for the restructuring and the Group has raised valid expectations in those affected that it will carry out the restructuring by starting to implement that plan or announcing its main features to those affected by it. If the Group makes an offer to employees concerning voluntary resignation against benefits determined in the offer, the liability arising from this is recorded when the Group can no longer withdraw its offer. The obligation arising from such an offer is based on the number of employees that the Group expects to accept the offer. Benefits falling due in twelve months' time or later are measured at their present value.

Environmental obligations

Costs arising from environmental remediation that do not increase present or future revenue are recorded as expenses. An environmental obligation is recognised if, based on the current interpretation of environmental legislation, an obligation has likely arisen and its amount can be reliably estimated. The obligation is recorded at the current value of estimated future expenses. A sum corresponding to the obligation is also recognised in property, plant and equipment.

Other provisions

Other provisions mainly consist of provisions arising from estimated cost of future restoration of leased sites.

Key estimates and judgements

The determination of the criteria for the recognition of provisions involves the management's judgement. The amounts recognised as provisions are based on the management's best assessment of the expenses required to handle the obligation. As the timing and amount of these expenses are not fully certain, the actual expenses may differ significantly from the original estimate. The book value of provisions is regularly reviewed and adjusted as required, taking into account changes in cost assessments, regulation, technology and conditions.

Provisions

EUR million	Restructuring	Environmental	Other	Total
1 Jan 2022	0.2	2.7	0.0	3.0
Translation differences	0.0		0.0	0.0
Increases	4.9			4.9
Utilised during the year		-0.7	0.0	-0.7
Unused amounts reversed	-0.2	-0.1		-0.3
31 Dec 2022	4.9	2.0	0.0	6.9
Non-current		2.0	0.0	2.0
Current	4.9			4.9
Total	4.9	2.0	0.0	6.9
1 Jan 2021	0.2	3.4	1.0	4.7
Translation differences	0.0			0.0
Increases			0.0	0.0
Utilised during the year		-0.7		-0.7
Unused amounts reversed		0.0		0.0
Transfers to assets held for sale			-1.0	-1.0
31 Dec 2021	0.2	2.7	0.0	3.0
Non-current		2.0	0.0	2.0
Current	0.2	0.8	0.0	1.0
Total	0.2	2.7	0.0	3.0

Half of non-current provisions are estimated to be utilised by the end of 2025 and the rest in 2030s. The increases in provisions in 2022 are related to the reorganization of customer service and supply chain management.

The Group companies have environmental responsibilities related to former industrial activities at sites that have since been closed, sold or leased, and from decommissioned landfill sites. Provisions for the costs of land rehabilitation work have been made in cases where it has been possible to measure the Group's liability for land contamination and any post-treatment obligations.

In 2021 assets held for sale include Oy Hangö Stevedoring Ab's assets.

5. Capital structure and financial risks

■ 5.1 Shareholders' equity

Changes in share capital

EUR million	Share capital		
	Series A	Series B	Total
1 Jan 2021	51.6	506.3	557.9
Conversion of A shares into B shares	-0.1	0.1	
31 Dec 2021	51.5	506.4	557.9
Conversion of A shares into B shares			
31 Dec 2022	51.5	506.4	557.9

Each series A share confers to its holder twenty (20) votes at the General Meeting of Shareholders, and each series B share confers to the holder one (1) vote. All shares carry the same right to receive a dividend. Metsä Board's A shares can be converted to B shares if shareholder or representative of the nominee registered shares makes a written request for the conversion to the company. No monetary consideration is paid for the conversion.

Number of shares

shares	Outstanding shares			Treasury shares	
	Series A	Series B	Total	Series B	Total
1 Jan 2021	32,887,151	322,625,595	355,512,746		355,512,746
Conversion of A shares into B shares	-84,976	84,976			
31 Dec 2021	32,802,175	322,710,571	355,512,746		355,512,746
Conversion of A shares into B shares					
Acquisition of treasury shares		-1,000,000	-1,000,000	1,000,000	
31 Dec 2022	32,802,175	321,710,571	354,512,746	1,000,000	355,512,746

The share has no nominal value. All shares have been paid in full. The weighted average number of shares, which does not include Metsä Board Oyj's treasury shares, is 355,359,331 (355,512,746) pieces.

Translation differences

Translation differences include translation differences arising from translation of subsidiaries in other currencies than euro and gains and losses arising on hedging of net investments in these subsidiaries less deferred tax, when requirements of hedge accounting have been fulfilled. Net investments were not hedged in Metsä Board Group in 2022 or in 2021.

EUR million	Cumulative translation		Translation differences in other comprehensive income	
	2022	2021	2022	2021
SEK	-77.5	-27.6	-49.9	-10.0
RUB *		-7.0	7.0	0.7
USD	13.1	6.5	6.5	6.1
CNY				
GBP	-0.6	-0.1	-0.5	0.5
Others	1.0	1.0	-0.1	0.4
Total	-64.0	-27.2	-36.9	-2.3

* RUB denominated translation difference arises mostly from associate company Metsä Fibre.

In June 2022, as a consequence of the discontinuation of Russian business operations, the Group recognised an expense of EUR 0.6 million for accumulated Russian ruble-denominated translation differences. The Russian ruble-denominated translation differences accumulated since June 2022 have been reported in the financial items in the income statement. Since March 2022, the rate used for the Russian ruble is the closing rate for EUR/RUB published by Refinitiv.

Fair value and other reserves

EUR million	2022	2021
Fair value reserve	282.2	116.6
Legal reserve and reserves stipulated by the Articles of Association	1.7	1.7
Total	283.9	118.3

Fair value reserve

Fair value changes in derivatives designated as cash flow hedges are recorded to fair value reserve deducted by deferred tax effect. Additionally, the fair value change of Pohjolan Voima Oyj shares recognised by the Group as other investments is moved to the reserve with deferred tax effect deducted.

Legal reserve and reserves stipulated by the Articles of Association

Legal reserve and reserves stipulated by the Articles of Association have been created and accumulated on resolutions by the General Meeting of Shareholders.

Reserve for invested unrestricted equity

The reserve for invested unrestricted equity fund includes other investments of an equity nature and the subscription price of the shares to the extent that it is not recognised to the share capital according to the specific decision.

EUR million	2022	2021
Reserve for invested unrestricted equity	208.9	208.9

Treasury shares

Accounting principles

When treasury shares are acquired, the equity belonging to the owners of the parent company is reduced by an amount that consists of the consideration paid, including immediate transaction costs after taxes, until the treasury shares are canceled or reissued. If the purchased treasury shares are reissued, the consideration received, less transaction costs after taxes, is recorded in the equity belonging to the owners of the parent company.

At the end of the year, the group held 1,000,000 (0) treasury shares, which corresponds to 0.3% (0.0) of the number of shares. The average purchase price of the shares was 7.82 euros per share.

EUR million	2022	2022 shares	2021	2021 shares
Treasury shares 1.1.	0.0	0	0.0	0
Acquisition of treasury shares	7.8	1,000,000		
Treasury shares 31.12.	7.8	1,000,000	0.0	0

Dividend

Dividends payable by the company are recorded as deductions to equity in the period during which the shareholders in a general meeting have declared the dividend.

The Board of Directors has proposed that a dividend of EUR 0.58 per share be distributed for the 2022 financial year.

Other comprehensive income after taxes 2022

Equity attributable to members of parent company

Milj. euroa	Translation differences	Fair value and other reserves	Retained earnings	Total	Non-controlling interest	Total equity
Items that will not be reclassified to profit or loss						
Actuarial gains/losses on defined benefit pension plans			-4.7	-4.7		-4.7
Financial assets at fair value through other comprehensive income		178.5		178.5		178.5
Share of profit from other comprehensive income of associated company		3.0		3.0		3.0
Income tax relating to items that will not be reclassified		-35.7	1.8	-33.9		-33.9
Total		145.8	-3.0	142.9		142.9
Items that may be reclassified to profit or loss						
Cash flow hedges						
Currency hedges						
Gains and losses recorded in equity		-63.0		-63.0	0.5	-62.5
Transferred to adjust Sales		87.4		87.4	-0.1	87.3
Interest hedges						
Gains and losses recorded in equity		4.4		4.4		4.4
Transferred to adjust net financial items						
Commodity hedges						
Gains and losses recorded in equity		46.6		46.6	0.8	47.4
Transferred to adjust purchases		-78.6		-78.6	-1.1	-79.7
Share of profit from other comprehensive income of associated company		22.4		22.4		22.4
Cash flow hedges total		19.1		19.1	0.2	19.3
Translation differences	-42.6			-42.6	-13.7	-56.3
Share of profit from other comprehensive income of associated company	5.8			5.8		5.8
Translation differences total	-36.9			-36.9	-13.7	-50.6
Income tax relating to items that may be reclassified		0.7		0.7	0.0	0.6
Total	-36.9	19.8		-17.1	-13.6	-30.6
Other comprehensive income, net of tax	-36.9	165.6	-2.9	125.8	-13.6	112.2

Other comprehensive income after taxes 2021

Equity attributable to members of parent company

Milj. euroa	Translation differences	Fair value and other reserves	Retained earnings	Total	Non-controlling interest	Total equity
Items that will not be reclassified to profit or loss						
Actuarial gains/losses on defined benefit pension plans			3.0	3.0		3.0
Financial assets at fair value through other comprehensive income		-5.8		-5.8		-5.8
Share of profit from other comprehensive income of associated company		-0.1	0.0	-0.1		-0.1
Income tax relating to items that will not be reclassified		1.2	-2.0	-0.8		-0.8
Total		-4.7	1.0	-3.7		-3.7
Items that may be reclassified to profit or loss						
Cash flow hedges						
Currency hedges						
Gains and losses recorded in equity		-40.8		-40.8	1.5	-39.4
Transferred to adjust Sales		0.3		0.3	-0.9	-0.6
Interest hedges						
Gains and losses recorded in equity		1.2		1.2		1.2
Transferred to adjust net financial items						
Commodity hedges						
Gains and losses recorded in equity		61.4		61.4		61.4
Transferred to adjust purchases		-33.7		-33.7		-33.7
Share of profit from other comprehensive income of associated company		-4.3		-4.3		-4.3
Cash flow hedges total		-15.9		-15.9	0.6	-15.3
Translation differences	-2.9			-2.9	-1.9	-4.8
Share of profit from other comprehensive income of associated company	0.6			0.6		0.6
Translation differences total	-2.3			-2.3	-1.9	-4.2
Income tax relating to items that may be reclassified		2.3		2.3	-0.1	2.2
Total	-2.3	-13.6		-15.9	-1.5	-17.4
Other comprehensive income, net of tax	-2.3	-18.3	1.0	-19.6	-1.5	-21.1

5.2 Financial income and expenses

Accounting principles

Interest income and expenses are recognised using the effective interest rate method.

Dividend income is recognised when the right to receive a payment is established.

Borrowing costs are generally recognised as an expense in the period in which they are incurred. When an item of property, plant or equipment is involved in a major and long-term investment project, the borrowing costs directly due to the acquisition, construction or production of the asset are included in the asset's acquisition cost.

The Group presents net interest income and expenses related to defined benefit plans as financial income and expenses.

EUR million	2022	2021
Exchange differences		
Commercial items	5.8	4.9
Hedging, hedge accounting not applied	-10.1	-7.2
Other items	-0.6	0.0
Exchange differences total	-5.0	-2.3
Other financial income		
Interest income on loans, other receivables and cash and cash equivalents	2.6	0.2
Dividend income	0.3	0.0
Other financial income total	3.0	0.2
Valuation of financial assets and liabilities		
Impairment gains and losses from financial assets		0.0
Gains and losses on derivatives, hedge accounting not applied		
Valuation total		0.0
Interest expenses on financial liabilities carried at amortised cost using the effective interest method	-3.8	-6.9
Other financial expenses	-0.8	-0.9
Interest and other financial expenses, total	-4.7	-7.9
Valuation of financial assets and liabilities and interest and other financial expenses, total	-4.7	-7.9

The Russian ruble-denominated translation differences accumulated since June 2022 as a consequence of the discontinuation of Russian business operations, amounting to EUR -0.5 million, have been reported in other exchange rate differences in the income statement.

5.3 Other financial assets

EUR million	2022	2021
Other non-current financial assets		
Loan receivables	2.3	2.7
Defined benefit pension plans (Note 3.5)	3.4	12.2
Other receivables and accrued income	0.3	0.3
Total	6.0	15.3

5.4 Cash and cash equivalents

Accounting principles

Cash and cash equivalents consist of cash and other short-term, highly liquid investments that can be easily converted into an amount of cash known in advance and that carry a minimal risk of value changes. Metsä Board has classified as cash and cash equivalents the short-term money market investments made in accordance with its treasury policy and interest-bearing receivables comparable to cash funds and available immediately from Metsä Group's internal bank Metsä Group Treasury Oy.

When determining the impairment of monetary assets, a model based on expected credit losses is applied. The expected credit losses are reviewed for the following 12 months. The impacts of the corona pandemic on determining the impairment of sales receivables is discussed in Note 5.6, Management of financial risks, counterparty risk.

EUR million	2022	2021
Financial assets carried at amortized cost		1.3
Cash at hand and in bank	17.6	26.4
Deposits to Metsä Group Treasury Oy	338.6	496.4
Total	356.2	524.2

5.5 Borrowings and net debt

Accounting principles

Financial liabilities are categorised initially recognised at fair value. The Group has classified all financial liabilities under "Amortised cost". Transaction costs are included in the original book value of financial liabilities measured at amortised cost. Subsequently, all financial liabilities are measured at amortised cost using the effective interest method.

Interest-bearing liabilities

EUR million	2022	2021
Non-current interest-bearing financial liabilities		
Bonds	249.0	248.8
Loans from financial institutions	175.9	178.4
Lease liabilities	9.5	9.8
Other liabilities		
Total	434.4	437.0
Current interest-bearing financial liabilities		
Current portion of non-current debt	18.2	10.0
Current liabilities to group companies	0.4	
Total	18.6	10.0
Liabilities classified as held for sale, interest-bearing liabilities		1.5
Interest-bearing financial liabilities total	453.0	448.6

In 2021 current liabilities to group companies include EUR 0.9 million of Oy Hangö Stevedoring Ab's intra-group interest-bearing debt transferred to assets held for sale.

Interest-bearing assets

EUR million	2022	2021
Non-current interest-bearing financial assets		
Loan receivables	2.3	2.7
Current interest-bearing financial assets		
Current investments at amortised cost		1.3
Cash at hand and in bank	17.6	26.4
Deposits to Metsä Group Treasury Oy	338.6	496.4
Total	356.2	524.2
Interest-bearing financial assets total	358.5	527.0
Interest-bearing net debt	94.5	-78.4

Metsä Board has classified interest-bearing receivables comparable to cash funds and available immediately from Metsä Group's internal bank Metsä Group Treasury Oy as Cash and cash equivalents.

Changes in liabilities and current interest-bearing receivables reported in the cash flow from financing activities in 2022

EUR million	1 Jan 2022	Cash flows	Non-cash changes				31 Dec 2022
			Acquired / Sold businesses	Changes in foreign exchange rates	New finance leases	Other changes	
Non-current interest-bearing liabilities incl. Current portion							
Bonds	248.8					0.2	249.0
Loans from financial institutions	182.3	5.0				0.3	187.6
Pension loans							
Finance lease liabilities	15.9	-25.1	18.0	-0.5	7.0	0.7	15.9
Total	447.0	-20.1	18.0	-0.5	7.0	1.1	452.6
Non-current non-interest bearing liabilities							
	1.5	2.4		-0.0		0.0	3.9
Current interest-bearing liabilities							
	0.0	-0.5	0.0	0.0	0.0	0.9	0.4
Total	448.6	-18.1	18.0	-0.5	7.0	2.0	456.9

Changes in liabilities and current interest-bearing receivables reported in the cash flow from financing activities in 2021

EUR million	1 Jan 2021	Cash flows	Non-cash changes			31 Dec 2021
			Changes in foreign exchange rates	New finance leases	Other changes	
Non-current interest-bearing liabilities incl. Current portion						
Bonds	248.6				0.2	248.8
Loans from financial institutions	182.1				0.2	182.3
Pension loans						
Finance lease liabilities	20.4	-7.2	-0.1	3.4	-0.7	15.9
Total	451.1	-7.2	-0.1	3.4	-0.2	447.0
Non-current non-interest bearing liabilities						
	1.9	-0.4	0.0		0.0	1.5
Current interest-bearing liabilities						
	1.3	-0.4			-0.9	0.0
Total	454.3	-8.0	-0.1	3.4	-1.1	448.6

In 2021 Other changes consists of Oy Hangö Stevedoring Ab's liabilities transferred to assets held for sale and of accrual of effective interest during the financial year on financial liabilities valued.

Bonds

EUR million	Interest %	2022	2021
2017-2027	2.75	249.0	248.8
Total		249.0	248.8

Metsä Board Corporation issued in September 2017 a bond of EUR 250 million. The bond carries a fixed coupon rate of 2.75 per cent, and the maturity date is 29 September 2027. The bond ranks senior and is unsecured.

■ 5.6 Management of financial risks

The financial risks associated with business operations are managed in accordance with the financial policy endorsed by the Board of Directors and the senior management of the company. The policy defines focal instructions on the management of foreign currency, interest rate, liquidity and counterparty risks, and for the use of derivative financial instruments. Correspondingly, commodity risks are managed according to the company's commodity risk policy. The purpose is to protect the company against major financial and commodity risks, to balance the cash flow and to allow the business units time to adjust their operations to changing conditions.

Metsä Group Treasury Oy is specialized in finance and functions as the Group's internal bank. Metsäliitto Cooperative's holding is 100 per cent of the company. Financial operations have been centralised to Metsä Group Treasury, which is in charge of managing the Group companies' financial positions according to the strategy and financial policy, providing necessary financial services and acting as an advisor in financial matters.

Foreign currency risk

The Group's foreign currency exposure consists of the risks associated with foreign currency flows, translation risk of net investments in foreign entities and economic currency exposure. Most of the Group's costs are incurred in the euro zone and to some extent in Sweden, but a significant part of the sales is received or priced in other currencies. Sales may therefore vary because of changes in exchange rates, while production costs remain unchanged. The foreign currency transaction exposure is consisting of foreign currency denominated sales and costs. The exposure is including foreign currency denominated balance sheet exposure consisting of accounts receivable and accounts payable and 50 per cent share of the annual contracted or estimated net currency cash flow.

The main currencies of the Group's foreign currency transaction exposure are the US dollar, the Swedish krona and the British pound. The share of dollar is 60 per cent, share of Swedish krona is 32 per cent and share of pound is 6 per cent. A strengthening of the dollar and the pound has a positive impact on the financial result and a weakening a negative impact. A weakening of the Swedish krona has a positive impact on the result of the Group. From other currencies Metsä Board has currency risk in Canadian dollar. The hedging policy is to keep the balance sheet exposure and 50 per cent of annual cash flow of contracted or estimated currency flows consistently hedged. The amount of hedging may deviate from the normal level by 40 per cent in either direction. The Board of Directors of Metsä Board is deciding on hedging levels significantly deviating from the norm set out in the financial policy. The amount of currency-specific hedging depends on current exchange rates and market expectations, on the interest rate differences between the currencies and the significance of the exchange rate risk for the financial result of the Group. The transaction exposure is mainly hedged by forward transactions but also by the use of foreign currency loans and currency options.

At the end of the reporting period, the foreign exchange transaction exposure had been hedged 8.9 months on average (2021: 8.1) being 122 per cent of the hedging norm (117). During the reporting period, the hedging level has varied between 8 and 9 months (7–9) being between 113 and 128 per cent of the norm (108–118). The dollar's hedging level was 8.4 months (7.7) being 119 per cent of the norm (113). The Swedish krona's

hedging level was 10.4 months (9.3) being 135 per cent of the norm (135). The pound's hedging level was 7.7 months (7.5) being 100 per cent of the norm (100). Hedge accounting in accordance with IFRS 9 has been applied to hedging of transaction exposure and forwards and options allocated to hedge accounting have been used to hedge the portion of highly probable forecast sales of the currency transaction exposure.

The translation risk of a net investment in a foreign entity is generated from the consolidation of the equity of subsidiaries and associated companies outside the euro area into euros in the consolidated financial statements. Hedging of equity has been discontinued.

Metsä Board has applied the Value-at-Risk method to assess the risk of its open foreign currency positions. Value at Risk calculation model was abandoned as a risk calculation method starting the beginning of year 2022 and VaR was recouped with the average deviation vs. hedging norm key figure. The Metsä Board Group average deviation vs. hedging norm was 23.3 percentage (1.7 months) at the end of reporting period and has been on average 23.5 (1.6 months) percentage during year 2022.

Interest rate risk

The interest rate risk is related in the interest bearing receivables and loans, working capital financing and currency hedging. The most significant currencies in risk management are the euro, the US dollar, the British pound and the Swedish krona. The objective of the interest rate risk policy is to minimise the negative impact of interest rate changes on the Group's and group companies' result and the financial position, and to optimise financing costs within the framework of risk limits. The effect of interest rate changes on financial costs depends on the average interest fixing time of interest bearing assets and liabilities, which is measured in the Group by duration. As duration is lengthening the rise of interest rates affects more slowly the interest expenses of financial liabilities. The maturity of the loan portfolio can be influenced by adjusting between floating-rate and fixed-rate loans and by using interest rate swaps.

The average interest duration norm based on the Group's financial policy is 24 months. The duration can, however, deviate between 6 to 36 months from the hedging policy norm so that the decision of a larger deviation has to be made by the Board of Directors. The average duration of loans was high 36.1 months at the end of the year (45.3). During the reporting period duration has varied between 36 and 44 months (44–53). Duration is lengthened by the bond of EUR 250 million. Of interest-bearing liabilities 14 per cent (11) is subjected to variable rates and the rest to fixed rates and the average interest rate at the end of 2022 is 2.2 per cent (2.3). At the end of 2022, an increase of one per cent in interest rates would decrease net interest rate costs of the next 12 months by 2.3 million euros (decrease 5.0).

The Group has applied cash flow hedge accounting in accordance with IFRS 9 to interest rate swaps by which floating-rate financing has been converted to fixed-rate financing. The gross nominal volume of interest rate derivatives at the time of financial statements is EUR 100.0 million (100.0) and the maturity of interest rate swap contracts varies between 0–3 years (1–4).

Commodity risk

In the hedging of commodity risks the Group applies risk management policies defined separately for each selected commodity. According to

the policy, the management of commodity risks with regard to financial hedges is accomplished centralized by Metsä Group Treasury based on the strategy approved by Board of Directors of Metsä Board. The commodity hedging policy is applied to the management of the price risks of electricity, natural gas, propane and fuel oil and also transactions related to Emission allowances are managed by Metsä Group Treasury. Metsä Board has abandoned the hedging of electricity and propane and all hedges matured during year 2022. Hedge accounting in accordance with IFRS 9 has been applied to all commodity hedging. According to the commodity hedging policy an 80 per cent hedge level of the estimated net position during the first 12 month period has been set as a hedging norm and the hedge ratio can vary by 20 per cent in either direction. Hedges based on previous policy are gradually maturing. The Group Board of Directors makes significant strategic decisions.

Metsä Board's commodity risk management has electricity risk had a key role. The electricity exposure of Metsä Board is stabilizing after Olkiluoto 3 -project and investment in Husum pulp mill are getting ready. Therefore the need to hedge the electricity exposure ended and all electricity hedges matured during year 2022. Part of Metsä Board's mills' purchase of fuel is based on natural gas and the company is hedging the price risk of natural gas purchases by using financial hedges. Metsä Board is hedging also the gas oil, heavy fuel oil and 0.5% fuel oil price risk related to logistics costs (sea freights) based on commodity risk policy by using financial hedges. Metsä Board is not hedging its pulp price risk.

Liquidity risk

Liquidity risk is defined as the risk that funds and available funding become insufficient to meet business needs, or costs that are incurred in arranging the necessary financing are unreasonable high. Liquidity risk is monitored by estimating the need for liquidity needs 12–24 months ahead and ensuring that the total liquidity available will cover a main part of this need. According to the financial policy, the liquidity reserve must at all times cover 100 per cent of the Group's liquidity requirement for the first 12 months and 50–100 per cent of the following 12–24 months liquidity requirement. The objective is that at the most 20 per cent of the Group's loans, including committed credit facilities, are allowed to mature within the next 12 months and at least 25 per cent of the total debt must have a maturity in excess of four years. The target is to avoid keeping extra liquidity as liquid funds and instead maintain a liquidity reserve as committed credit facilities outside the balance sheet.

The cornerstone of liquidity risk management is to manage the Group's operative decisions in such a way that targets concerning indebtedness and sufficient liquidity reserve can be secured in all economic conditions. Liquidity risk is also managed by diversifying the use of capital and money markets to decrease dependency on any single financing source and the optimisation of the maturity structure of loans is also emphasized in financial decisions. Metsä Board is using short-term working capital financing related to accounts receivables and accounts payables. Metsä Board has for Husum investments Finnvera 95% guaranteed loan agreement of EUR 100.0 million, of which remaining EUR 66.8 was drawn down in May 2022.

Metsä Board's liquidity is good. At the end of the review period, available liquidity was EUR 556.2 million (916.0), consisting of following items: liquid assets and investments of EUR 356.2 million (524.2), a syndicated credit facility (revolving credit facility) of EUR 200.0 million (200.0), and other

committed credit facilities of EUR 0.0 million (191.8). Of the liquid assets, EUR 338.6 million consisted of short-term deposits with Metsä Group Treasury (496.4), and EUR 17.6 million were cash funds and investments (27.8). Other interest-bearing receivables amounted to EUR 2.7 million (2.7). In addition, Metsä Board's liquidity reserve is complemented by Metsä Group's internal undrawn short-term credit facility of EUR 150.0 million (150.0) and undrawn pension premium (TyEL) funds of EUR 227.6 million (215.9). At the end of 2022, the liquidity reserve covers the forecasted financing need of 2023–2024. 3 per cent (2) of long-term loans and committed facilities fall due in a 12 month period and 75 per cent (69) have a maturity of over four years. The average maturity of long-term loans is 4.0 years (4.7). The share of short-term financing of the Group's interest bearing liabilities is 0.1 per cent (0.0).

Counterparty risk

Financial instruments carry the risk that the Group may incur losses should the counterparty be unable to meet its commitments. The Group is managing this risk by entering into financial transactions only with most creditworthy counterparties and within pre-determined limits. Cash and cash equivalents, and other investments have been spread to several banks, commercial papers of several institutions and money market funds. During the reporting period, credit risks of financial instruments did not result in any losses. Counterparty limits have been revised during the year by taking into account the needs of the company and the view on the financial position of the used counterparties. Derivatives trading is regulated by the standardised ISDA contracts made with the counterparties. Main part of financial credit risks are in the balance sheet of Metsä Group Treasury and not directly in the balance sheet of Metsä Board. The Group has applied expected credit loss model in accordance with IFRS 9 to calculate the impairment of financial assets.

The Group's accounts receivable carry a counterparty risk that the Group may incur losses should the counterparty be unable to meet its commitments. Credit risk attached to accounts receivable is managed on the basis of the credit risk management policies approved by operative management. Accounts receivable performance is followed by Group Credit Risk Management Team and reported monthly to Customer Credit & Compliance Committee and operative management. Credit quality of customers is assessed at regular intervals based on the customers' financial statements, payment behaviour and credit ratings agencies. Credit limits are approved according to credit risk management policy with approval limits of varying values across the Group. Individual credit limits are reviewed at least annually. Letters of Credits, bank and parent company guarantees, and Credit insurance are used to mitigate credit risk according to management decisions. The Customer Credit & Compliance Committee reviews and sets all major credit limits which are not supported by credit insurance and / or other security.

Metsä Board implements regular impairment tests for customer accounts receivables. Credit loss impairment is booked when a customer enters legal bankruptcy or becomes past due for more than 6 months (180 days) without a valid payment plan or other acceptable reasons. New net credit loss provisions for the year were 239 thousand euros (2021: nil), of which 98% occurred as a result of war actions of Russia. The portion of overdue client receivables of all accounts receivable is at the time of financial statements 7.4 per cent (2.1), of which 0.0 per cent (3.8) is

overdue between 90–180 days and 4.8 per cent (0.5) over 180 days. The specification of doubtful receivables is in the Notes. In the 2022 financial statements, credit losses have returned to the application of normal calculation principle. Expected credit losses on accounts receivables are calculated by using a provision matrix. Expected credit loss expense is recognized by applying expected credit loss percentages based on five-year historic losses on accounts receivables from external debtors, net of credit insurance outstanding at period end. The expected credit loss percentage is 0.2 per cent of receivables.

The geographical structure of the accounts receivable is diversified and is reflecting the external sales structure presented in the Segment information. The top ten largest sources of credit risk exist in Italy, USA, Turkey, Poland, United Kingdom, Sweden, Germany, Spain, Finland and South-Africa (around 67 per cent of total external receivables (65)). The share of largest individual customer (individual companies or groups of companies under common ownership) credit risk exposure of Metsä Board at the end of 2022 represented 7 per cent (7) of total external accounts receivable. 32 per cent (33) of accounts receivable was owed by ten largest customer groups (individual companies or groups of companies under common ownership). At the end of 2022, there was around 1.0 per cent (0.4) shortfall of credit insurance limits beyond usual policy deductibles and exclusions.

Managing the capital

Terms capital and capital structure are used to describe investments made in the company by its owners and retained earnings (together equity) and debt capital (liabilities) as well as the relation between them. In managing its capital structure, the Group aims at maintaining an efficient capital structure that ensures the Group's operational conditions in financial and capital markets in all circumstances despite the fluctuations typical to the sector. The company has a credit rating for its long-term financing. Certain central target values, which correspond to standard requirements set by financing and capital markets, have been defined for the capital structure. No target level has been defined for the credit rating. The Group's capital structure is regularly assessed by the Group's Board of Directors and its Audit Committee.

Metsä Board updated the company's long-term financial targets and decided on a new dividend policy in 2017. Metsä Board's target for the comparable return on capital employed is at least 12 per cent. According to the company's target, the ratio of interest-bearing net liabilities to comparable EBITDA is a maximum of 2.5. This target level gives the company

enough flexibility for potential growth in the future. In 2022 the long-term financial targets have been kept constant.

The key ratios describing the capital structure and the capital amounts used for the calculation of the key ratio were on 31.12.2022 and 31.12.2021 the following:

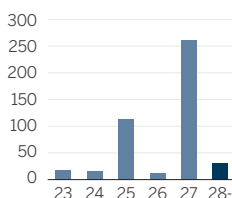
EUR million	2022	2021
Interest-bearing net liabilities/comparable EBITDA	0.2	-0.2
Net gearing ratio, %	-4	-4
Interest-bearing borrowings	453.0	448.6
./. Liquid funds	356.2	524.2
./.Interest-bearing receivables	2.3	2.7
Net interest bearing liabilities	-94.5	-78.4
Equity attributable to shareholders of parent company	2,082.0	1,699.4
+ Non-controlling interest	173.2	146.2
Total Equity	2,255.2	1,845.6

In Group's certain financial contracts financial covenants have been set regarding financial performance and capital structure. Other covenants in the Group's loan agreements are customary terms and conditions including for example a negative pledge, restrictions on major asset disposals, limitations on subsidiary indebtedness, restrictions on changes of business and mandatory prepayment obligations upon a change of control of the Group. According to the covenant conditions of Finnvera loan agreement guaranteed by a 95% share net gearing may not exceed 100 per cent in relation to the share capital. The Group has been in compliance with its covenants during the accounting periods 2022 and 2021. In case the company could not meet its obligations as defined in financial contracts and in order to avoid a breach of contract that could have an adverse effect on the company's financial position, it would need to renegotiate its financial arrangements, payback its loans or get its debtors to give up their claims to meet these obligations.

Metsä Group has launched a Green Finance Framework, which integrates sustainability and climate change mitigation to the Group's investments and related financing activities. The framework is based on the Group's strategy and the strategic sustainability objectives for 2030. The interest margin of Metsä Board's EUR 200 million syndicated credit limit (revolving credit facility) has been linked to results of environmental objectives set by the company.

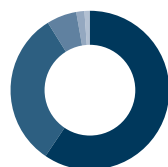
REPAYMENT OF NON-CURRENT LOANS

EUR million



BREAKDOWN OF CURRENCY EXPOSURE

%



■ USD69%
■ SEK37%
■ GBP7%
■ CAD2%
■ Others1%

Hedging of foreign exchange transaction exposure 31.12.2022

EUR million	Annual transaction exposure							Total
	USD	GBP	SEK	AUD	CAD	Other long	Other short	
Transaction exposure, net (mill. currency units)	1,069	96	-5,941		33			
Transaction exposure, net (EUR million)	1,003	108	-534		23	9	0	1,676
Transaction exposure hedging (EUR million)	-698	-69	462		-12	0	0	-1,242
Hedging at the end of the year (months)	8.4	7.7	10.4		6.6			8.9
Average hedging in 2022 (months)	8.0	7.8	9.8		5.5			8.5
Average rate of hedging at the end of the year	1.0403	0.8709	10.7134					

Hedging of foreign exchange transaction exposure 31.12.2021

EUR million	Annual transaction exposure							Total
	USD	GBP	SEK	AUD	CAD	Other long	Other short	
Transaction exposure, net (mill. currency units)	920	80	-5,296	11	37			
Transaction exposure, net (EUR million)	812	95	-517	7	26	3	0	1,460
Transaction exposure hedging (EUR million)	-520	-59	400	0	0	0	0	-980
Hedging at the end of the year (months)	7.7	7.5	9.3	0.0	0.0			8.1
Average hedging in 2021 (months)	6.9	7.6	10.0	1.3	1.0			7.9
Average rate of hedging at the end of the year	1.1655	0.8550	10.2117					

Net investments in a foreign entity 31.12.2022

EUR million	Equity exposure				Total
	USD	GBP	SEK	Others	
Equity exposure (mill. currency units)	109	3	7,769		
Equity exposure (EUR million)	103	4	699	3	808

Net investments in a foreign entity 31.12.2021

EUR million	Equity exposure				Total
	USD	GBP	SEK	Others	
Equity exposure (mill. currency units)	112	8	5,892		
Equity exposure (EUR million)	99	10	575	3	685

Interest rate risk / duration and re-pricing structure of loans (incl. interest rate derivatives) 31.12.2022

Loan amount (EUR million)	Duration (months)	Average interest rate (%)	Interest rate sensitivity ¹⁾ (EUR million)	31 Dec 2022						
				Re-pricing structure of interest rates of loans						
				1-4/2023	5-8/2023	9-12/2023	2024	2025	2026	>2026
453	36.1	2.2	-2.3	54	8	2	14	63	14	299

Interest rate risk / duration and re-pricing structure of loans (incl. interest rate derivatives) 31.12.2021

Loan amount (EUR million)	Duration (months)	Average interest rate (%)	Interest rate sensitivity ¹⁾ (EUR million)	31 Dec 2021						
				Re-pricing structure of interest rates of loans						
				1-4/2022	5-8/2022	9-12/2022	2023	2024	2025	>2025
449	45.3	2.3	-5.0	-97	9	157	76	35	84	377

¹⁾ Interest rate sensitivity is an estimate of the effect of an interest rate change of one percent in one direction on net interest cost based on year end exposure

Hedging of electricity price risk exposure

GWh	31 Dec 22	31 Dec 21
Electricity exposure, net	288	555
Electricity hedging		135
Hedging at the end of the year (%)		24
Average price of hedging at the end of the year (e/MWh)		32.07

Electricity price risk is hedged based on defined risk management policy by physical contracts or by financial contracts. The net electricity exposure has been calculated by taking into account the own and associated companies' electricity production. The company abandoned electricity hedging and the hedging derivatives matured in 2022.

Market risk sensitivity 2022

MEUR	31 Dec 2022	Impact on equity exposure and annual transaction exposure		
	Impact on financial assets and liabilities	Impact on net equity of foreign entities	Impact on annual transaction exposure (cash flow)	Impact on annual transaction exposure (cash flow) incl. hedging
Interest rate risk (100 bp rise in interest rates)				
Effect on profit			2.3	3.1
Effect on other change in equity	0.9			
Commodity risk (electricity price + 20%)				
Effect on profit			-17.6	-7.4
Effect on other change in equity	10.2			
FX risk (USD - 10%)				
Effect on profit	0.1		-100.3	-30.4
Effect on other change in equity	64.9	-10.3		
FX risk (GBP - 10%)				
Effect on profit	0.1		-10.8	-3.8
Effect on other change in equity	5.3	-0.4		
FX risk (SEK - 10%)				
Effect on profit	-10.0		53.4	7.3
Effect on other change in equity	-38.6	-69.9		

Market risk sensitivity 2021

MEUR	31 Dec 2021	Impact on equity exposure and annual transaction exposure		
	Impact on financial assets and liabilities	Impact on net equity of foreign entities	Impact on annual transaction exposure (cash flow)	Impact on annual transaction exposure (cash flow) incl. hedging
Interest rate risk (100 bp rise in interest rates)				
Effect on profit			5.0	7.0
Effect on other change in equity	2.0			
Commodity risk (electricity price + 20%)				
Effect on profit			-5.5	-3.7
Effect on other change in equity	1.9			
FX risk (USD - 10%)				
Effect on profit	0.0		-81.2	-29.2
Effect on other change in equity	46.5	-9.9		
FX risk (GBP - 10%)				
Effect on profit	0.1		-9.5	-3.6
Effect on other change in equity	4.7	-1.0		
FX risk (SEK - 10%)				
Effect on profit	0.8		51.7	11.7
Effect on other change in equity	-36.1	-57.5		

Items with + sign = positive effect = increase of assets / decrease of liabilities / increase of cash flow
 Items with - sign = negative effect = decrease of assets / increase of liabilities / decrease of cash flow

IFRS 7 requires an entity to disclose a sensitivity analysis for each type of market risk to which the entity is exposed at the reporting date, showing how profit or loss and equity would have been affected by changes in the relevant risk variable that were reasonably possible at that date. The Group has recognised interest rates, electricity prices and foreign exchange rates as its key market risks and has set 1 per cent interest rate rise, 20 per cent rise in electricity price and 10 per cent weakening of USD, GBP and SEK as reasonably possible risk variables. These currencies represent over 98 per cent of Group's annual transaction exposure. The nature of the market price risk is relatively linear so that the size of effects of opposite market price changes do not essentially differ from the presented figures. The scenarios have been calculated by using regular principles of calculating market values of financial instruments described in the Group Accounting policies. Figures at the reporting date reflect quite well the average market risk conditions throughout the reporting period.

Additionally the Group is presenting figures describing the effects of the risk variables to its equity exposure and annual transaction exposure (cash flow) to present a broader picture about market risks of interest rates, electricity prices and foreign exchange rates. Annual cash flows are based on estimates, and not on existing commercial contracts. The weakening of USD and GBP has a negative impact on annual cash flow and the weakening of SEK has a positive impact. Hedges reduce this impact depending on hedging strategy. The impact on net equity of foreign entities is arising from the consolidation of subsidiaries to the Group consolidated accounts. The rise of electricity price has a negative impact on cash flow. As according to hedging policy the electricity price risk of the nearest year has mostly been hedged, the impact including hedges remains minor.

Cash flows of installments and interest payments of financial liabilities 2022

EUR million	2023	2024	2025	2026	2027	2028–	Total
Bonds					249.0		249.0
Loans from financial institutions	11.8	11.8	111.3	11.8	11.8	29.3	187.6
Finance lease liabilities ¹⁾	6.7	4.3	2.8	1.0	0.5	2.0	17.3
Non-current interest-bearing liabilities total	18.5	16.1	114.0	12.7	261.3	31.3	453.9
Current interest-bearing liabilities	0.4						0.4
Financial liabilities total	18.9	16.1	114.0	12.7	261.3	31.3	454.3
Financial expenses total	9.8	9.7	8.1	7.4	7.3	0.5	42.8
Financial liabilities and expenses total	28.7	25.8	122.2	20.1	268.6	31.7	497.1
Guarantee agreements	0.4	0.1	0.3			1.2	2.1
Derivatives							
Currency derivative, liabilities	1,815.3						1,815.3
Currency derivative, receivables	-1,823.6						-1,823.6
Interest rate swaps, liabilities	-1.7	-1.1	-0.4				-3.1
Commodity derivatives, liabilities	5.0						5.0
Commodity derivatives, receivables	-6.7	0.0					-6.7
Derivatives, net	-11.7	-1.1	-0.4				-13.2

Cash flows of installments and interest payments of financial liabilities 2021

EUR million	2022	2023	2024	2025	2026	2027–	Total
Bonds						248.8	248.8
Loans from financial institutions	3.9	3.9	3.9	153.2	3.9	13.5	182.3
Finance lease liabilities ¹⁾	6.6	4.6	2.6	1.4	0.4	2.6	18.1
Non-current interest-bearing liabilities total	10.5	8.5	6.5	154.6	4.3	264.9	449.3
Current interest-bearing liabilities	0.0						0.0
Financial liabilities total	10.5	8.5	6.5	154.6	4.3	264.9	449.3
Financial expenses total	8.6	8.5	8.5	7.5	7.0	7.2	47.3
Financial liabilities and expenses total	19.0	17.1	15.0	162.0	11.4	272.1	496.6
Guarantee agreements	0.2	0.4	0.1	0.1		1.2	2.0
Derivatives							
Currency derivative, liabilities	1,085.4						1,085.4
Currency derivative, receivables	-1,068.9						-1,068.9
Interest rate swaps, liabilities	0.9	0.4	0.3	0.1			1.7
Commodity derivatives, liabilities	0.1						0.1
Commodity derivatives, receivables	-32.0						-32.0
Derivatives, net	-14.5	0.4	0.3	0.1			-13.7

¹⁾ Cash flows from lease liabilities include both debt repayment and financing expense.

The balance sheet value of lease liabilities on December 31, 2022 was EUR 15.9 million (15.9). The balance sheet value of currency derivative liabilities on 31 December 2022 was EUR 31.3 million (2.0) and the value of currency derivative receivables was EUR 25.0 million (18.5).

5.7 Classification and fair values of financial assets and liabilities

Classification and fair values of financial assets and liabilities 2022

EUR million	Note	Fair value through profit and loss	Fair value through other comprehensive income	Amortised cost	Total carrying amount
Financial assets					
Other non-current investments	4.3	1.3	344.1		345.4
Other non-current financial assets	5.3			6.0	6.0
Accounts receivable and other receivables	4.5			354.5	354.5
Cash and cash equivalents	5.4	0.0		356.2	356.2
Derivative financial instruments	5.7	4.2	39.3		43.4
Total carrying amount		5.5	383.4	716.8	1,105.6
Total fair value		5.5	383.4	716.8	1,105.6
Financial liabilities					
Non-current interest-bearing financial liabilities	5.5			434.4	434.4
Other non-current financial liabilities	4.7			2.9	2.9
Current interest-bearing financial liabilities	5.5			18.6	18.6
Accounts payable and other liabilities	4.7			444.3	444.3
Derivative financial instruments	5.7	0.7	29.5		30.2
Total carrying amount		0.7	29.5	900.1	930.3
Total fair value		0.7	29.5	879.3	909.5

Classification and fair values of financial assets and liabilities 2021

EUR million	Note	Fair value through profit and loss	Fair value through other comprehensive income	Amortised cost	Total carrying amount
Financial assets					
Other non-current investments	4.3	3.4	177.6		181.0
Other non-current financial assets	5.3			15.3	15.3
Accounts receivable and other receivables	4.5			331.5	331.5
Cash and cash equivalents	5.4	0.0		524.2	524.2
Derivative financial instruments	5.7	0.5	33.5		34.0
Assets classified as assets held for sale	7.2			2.1	2.1
Total carrying amount		3.9	211.1	873.1	1,088.1
Total fair value		3.9	211.1	873.1	1,088.1
Financial liabilities					
Non-current interest-bearing financial liabilities	5.5			437.0	437.0
Other non-current financial liabilities	4.7			0.5	0.5
Current interest-bearing financial liabilities	5.5			10.0	10.0
Accounts payable and other liabilities	4.7			430.9	430.9
Derivative financial instruments	5.7	0.6	19.6		20.3
Liabilities classified as held for sale	7.2			5.5	5.5
Total carrying amount		0.6	19.6	883.9	904.1
Total fair value		0.6	19.6	913.1	933.4

Accounts receivable and other receivables do not include advance payments, accrued tax receivables and periodisations of employee costs (Note 4.5). Accounts payable and other financial liabilities do not include advance payments, accrued tax liabilities and periodisations of employee costs (Note 4.7).

In Metsä Board, all interest-bearing liabilities are valued in the balance sheet at amortised cost based on effective interest method.

Fair values are based on present value of cash flow of each liability or assets calculated by market rate. The discount rates applied are between 2.2–4.6 per cent (0.3–2.1). The fair values of accounts and other receivables and accounts payable and other liabilities do not materially deviate from their carrying amounts in the balance sheet.

Fair value hierarchy of financial assets and liabilities

Accounting principles

Financial assets and liabilities measured at fair value have been categorised as follows:

- Level 1 Fair value is based on quoted prices in active markets.
- Level 2 Fair value is determined by using valuation techniques that use observable price information from market.
- Level 3 Fair value are not based on observable market data, but on company's own assumptions.

The fair value measurement of financial assets at fair value recognised under other items of comprehensive income is described in Note 4.3.

The fair values of electricity, natural gas and fuel oil derivatives are determined by using public price quotations in an active market (Level 1).

The fair values of currency forwards and options are determined by using the market prices of the closing date of the reporting period. The fair values of interest rate swaps are determined by using the present value of expected payments, discounted using a risk adjusted discount rate, supported by market interest rates and other market data of the closing date of the reporting period (Level 2).

For financial instruments not traded on an active market, the fair value is determined by valuation techniques. Judgment is used when choosing the different techniques and making assumptions, which are mainly based on circumstances prevailing in the markets on each closing date of the reporting period (Level 3).

Fair value hierarchy of financial assets and liabilities 2022

31 Dec 2022

EUR million	Note	Level 1	Level 2	Level 3	Total
Financial assets at fair value					
Other non-current investments	4.3			345.4	345.4
Derivative financial assets	5.7	6.7	36.7		43.4
Financial liabilities measured at fair value					
Derivative financial liabilities	5.7	5.0	25.2		30.2
Financial assets not measured at fair value					
Cash and cash equivalents	5.4		356.2		356.2
Financial liabilities not measured at fair value					
Non-current interest-bearing financial liabilities	5.5		413.6		413.6
Current interest-bearing financial liabilities	5.5		18.6		18.6

Fair value hierarchy of financial assets and liabilities 2021

31 Dec 2021

EUR million	Note	Level 1	Level 2	Level 3	Total
Financial assets at fair value					
Other non-current investments	4.3			181.0	181.0
Derivative financial assets	5.7	32.0	2.0		34.0
Financial liabilities measured at fair value					
Derivative financial liabilities	5.7	0.1	20.2		20.3
Financial assets not measured at fair value					
Cash and cash equivalents	5.4		524.2		524.2
Financial liabilities not measured at fair value					
Non-current interest-bearing financial liabilities	5.5		466.3		466.3
Current interest-bearing financial liabilities	5.5		10.0		10.0

Other non-current investments measured at fair value based on level 3 valuation

EUR million	2022	2021
Value 1 Jan	181.0	186.9
Total gains and losses in profit and loss	2.8	-0.1
Total gains and losses in other comprehensive income	178.5	-5.8
Purchases	0.0	
Sales	-16.9	0.0
Transfers out from Level 3		0.0
Value Dec 31.	345.4	181.0

Financial derivatives and hedge accounting

Accounting principles

Derivative contracts are initially recognised on the balance sheet at fair value at cost, and thereafter during their term-to-maturity revalued at their fair value at each reporting date. The fair value of derivatives is presented in non-interest-bearing receivables or liabilities. Gains and losses resulting from recognition at fair value are treated in accounting as required with regard to the intended use of the derivative contract in question. Derivatives are initially classified as either

1. Hedges of the exposure to changes in the fair value of receivables, liabilities or firm commitments;
2. Hedges of the cash flow from a highly probable forecast transaction;
3. Hedges of a net investment in a foreign entity, or
4. Derivatives to which it has been decided not to apply hedge accounting.

Metsä Board currently applies hedge accounting only to cash flow hedging. When applying hedge accounting at the inception of a hedging relationship, the Group has documented the relationship between the hedged item and the hedging instruments, as well as the hedging strategy observed. To meet the requirements of hedge accounting, the Group has also continuously carried out effectiveness testing to verify that changes in the fair value of the hedging instrument for each hedging relationship cover any changes in the fair value of the hedged item effectively enough, with respect to the hedged risk. Changes in the fair value of the effective portion of derivative instruments that meet the criteria for cash flow hedging are recognised in other items of comprehensive income. The gains and losses recognised in equity are transferred to the income statement when the forecast sale or purchase is realised, and are recognised as an adjustment to the hedged item. If the forecast transaction is no longer expected to occur, the gain or loss accrued in equity is recognised immediately in the income statement.

Derivatives not subject to hedge accounting, as well as the ineffective portion of derivatives subject to hedge accounting, are measured at fair value, and changes in the value of interest rate and currency derivatives are recognised in financial items and changes in the value of commodity derivatives are recognised in other income and expenses.

Hedge accounting is applied as cash flow hedging to highly probable cash flows from sales denominated in foreign currencies and contractual cash flows from floating interest rates of loans. In the management of price risks related to commodities, hedge accounting is applied to cash flows from highly probable purchases of electricity, liquefied natural gas (LNG), natural gas, propane, light, heavy and 0.5% fuel oil. The fair values of forward foreign exchange contracts are based on the forward prices prevailing on the balance sheet date, and currency options are measured at fair value in accordance with the Black–Scholes model. Interest rate swaps are measured at the current value of cash flows, with the calculation being based on the market

interest rate yield curve. The fair values of derivatives are measured on the basis of publicly quoted market prices.

Management of financial risks and hedge effectiveness

The management of the Group's currency, interest rate and commodity risks is described in more detail in Note 5.6, Management of financial risks. Note 5.7., Fair values of financial assets and liabilities, includes the fair values and grouping of derivatives. Note 5.1, Equity, includes itemisations of hedge accounting entries in the fair value reserve.

The hedging of the currency flow position is effective, given that there is a direct financial relationship between the hedged sale and the hedging derivative. The spot rate component of a forward contract or the reference value component of a currency option has been determined as the hedged item, and the forward points or the option's time value are treated as hedging costs subject to amortisation based on the period. Currency flow forecasts are fairly stable, invoicing steady within quarters and months, and forward deals are allocated to each month, due to which the ineffectiveness of hedging usually remains very low. Changes in production or the structure of sales may sometimes lead to ineffectiveness during the validity of a hedging relationship, in which case the hedging is adjusted accordingly.

The hedge accounting of the cash flow from interest rates is primarily effective, given that there is a direct financial relationship between the long-term loans subject to hedging and the hedging interest rate swaps. Ineffectiveness in the hedge relationship derives from any possible differences between the loans and the swaps' interest rate periods as well as from differences in the reference rates of contract terms. The ineffective portion of interest rate hedging is recognised through profit and loss. Premature loan withdrawals or premature repayment of loans may result in a state of ineffectiveness, in which case the hedging interest rate swaps are reversed or derecognised from hedge accounting, and the change in fair value is recognised in financial items under income.

The hedging of commodity purchases is effective, given that, in lieu of the total purchase price, the hedged item is the same, identical risk component of pricing applied in the hedging derivative. In the hedging of the price risk of electricity, the hedged item is what is referred to as the portion of the system price and the hedging takes place with a system-priced electricity swap. Correspondingly, the price components of the purchases and the hedging derivative in the hedging of natural gas, propane and fuel oil are identical. Commodity purchases are fairly steady and hedges are allocated to each month, due to which the ineffectiveness of the hedging usually remains low. Changes in the use of various commodities may sometimes lead to ineffectiveness during the validity of a hedging relationship, in which case the hedging is adjusted accordingly.

Hedging for electricity, propane and liquefied natural gas (LNG) ended at the end of 2022.

Derivatives 2022

EUR million	Nominal value		Fair value			
		Derivative assets	Derivative liabilities	Fair value net	Fair value through profit and loss	Fair value through other comprehensive income
Interest rate swaps	100.0	3.1		3.1		3.1
Interest rate derivatives	100.0	3.1		3.1		3.1
Currency forward contracts	1,790.1	31.3	25.0	6.3	1.4	4.9
Currency option contracts	281.3	2.2	0.1	2.1		2.1
Currency derivatives	2,071.4	33.5	25.2	8.4	1.4	7.0
Oil derivatives	27.5	0.5	3.9	-3.3		-3.3
Natural gas and propane derivatives	32.7	6.2	1.2	5.0	2.1	2.9
Commodity derivatives	60.2	6.7	5.0	1.7	2.1	-0.4
Derivatives total	2,231.5	43.4	30.2	13.2	3.5	9.7

Derivatives 2021

EUR million	Nominal value		Fair value			
		Derivative assets	Derivative liabilities	Fair value net	Fair value through profit and loss	Fair value through other comprehensive income
Interest rate swaps	100.0	0.0	1.7	-1.7	0.0	-1.7
Interest rate derivatives	100.0	0.0	1.7	-1.7	0.0	-1.7
Currency forward contracts	1,066.9	2.0	18.5	-16.5	-0.2	-16.3
Currency derivatives	1,066.9	2.0	18.5	-16.5	-0.2	-16.3
Electricity derivatives	4.4	4.9	0.0	4.9		4.9
Oil derivatives	17.1	3.7	0.0	3.7		3.7
Natural gas and propane derivatives	14.6	23.5	0.1	23.4		23.4
Commodity derivatives	36.1	32.0	0.1	31.9		31.9
Derivatives total	1,203.0	34.0	20.3	13.7	-0.2	13.9

Changes in the value of hedge accounting and the effects on profit or loss are presented in Note 5.1 Equity.

Economic effect of the net settlement of instruments under master netting agreements executed

	2022			2021		
	Financial derivatives on-balance sheet	Assets and liabilities related to master netting agreements	Net risk	Financial derivatives on-balance sheet	Assets and liabilities related to master netting agreements	Net risk
Derivative assets	43.4		43.4	34.0		34.0
Derivative liabilities	-30.2		-30.2	-20.3		-20.3

Master netting agreements are used for derivative contracts entered into by the Group and its counterparties. In the event of unlikely credit events, all valid transactions based on the agreement will be cancelled, and only one net sum will be payable by each counterparty for all the transactions. The items are not netted on the balance sheet.

Cash flow hedge maturities 2022

EUR million	1-6 months	6-12 months	1-5 years	over 5 years	Hedged cash flow total
Interest rate derivatives, hedge accounting	50.0		50.0		100.0
Currency rate derivatives, hedge accounting	834.2	230.7			1,064.9
Currency derivatives, no hedge accounting	137.8				137.8
Commodity derivatives, hedge accounting	30.1	30.1			60.2

Cash flow hedge maturities 2021

EUR million	1-6 months	6-12 months	1-5 years	over 5 years	Hedged cash flow total
Interest rate derivatives, hedge accounting			100.0		100.0
Currency rate derivatives, hedge accounting	672.4	204.1			876.5
Currency derivatives, no hedge accounting	82.0				82.0
Commodity derivatives, hedge accounting	18.5	17.6			36.1

6. Income taxes

Accounting principles

Tax expenses in the income statement consist of taxes based on the taxable income for the period, taxes for previous periods, and deferred tax assets and liabilities. The tax effect related to the items recorded in the comprehensive income statement is recognised in the comprehensive income statement. Taxes based on the taxable income for the period are calculated based on taxable income in accordance with the tax rate as it stands in each country at that time.

Deferred tax assets and liabilities are calculated on the temporary differences between the carrying amount and the tax base in accordance with the tax rates enacted as at the balance sheet date.

No deferred taxes are recognised for non-deductible goodwill, and no deferred taxes are recognised for subsidiaries' undistributed profits to the extent that the difference will not likely realise in the predictable future. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which a deductible temporary difference can be utilised.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred taxes are related to the same taxation authority.

The most significant temporary differences arise from depreciation of property, plant and equipment; the measurement of other investments and derivatives contracts at fair value; defined benefit plans; unused tax losses; and measurement at fair value in conjunction with acquisitions of business operations.

Key estimates and judgement

The management's judgement is required for determining the taxes based on the result for the period, deferred tax assets and liabilities, and the extent to which deferred tax assets are recorded. The Group is subject to income taxation in several countries, and the final amount of tax is uncertain for several business operations and calculations. The Group anticipates future tax audits and recognises liabilities based on estimates of whether further taxes will need to be paid. If the associated final tax differs from the originally recorded amounts, the difference has an effect on both the taxes based on the taxable income for the period, and on deferred tax receivables and liabilities.

EUR million	2022	2021
Income taxes for the financial period	-36.4	-48.6
Income taxes from previous periods	-0.5	-3.2
Deferred taxes	-26.7	-0.1
Income taxes total	-63.5	-51.8

Income tax reconciliation

EUR million	2022	2021
Result before tax	524.9	365.8
Calculated tax at Finnish statutory rate of 20.0%	-105.0	-73.2
Effects of differences between Finnish and non-Finnish tax rates	-2.4	-1.0
Tax exempt income	4.9	1.4
Non-deductible expenses	-0.4	-0.2
Restatement of deferred taxes recognised for temporary differences and tax losses in previous years	0.0	0.5
Use of unrecognised tax losses		1.1
Share of result from associate companies and joint ventures	32.6	22.9
Income taxes from previous periods	-0.5	-3.2
Other	7.2	-0.1
Income taxes total	-63.5	-51.8
Effective tax rate, %	12.1	14.2

Taxes for the current period include a 7.1 million euros of tax support to be applied for in the 2022 taxation of the investments of the Swedish subsidiary. Income taxes from previous periods include EUR 2.3 million in taxes recorded on the basis of a tax audit of an Italian subsidiary.

Taxes reported in other comprehensive income are specified in Note 5.1.

Deferred tax assets and liabilities 2022

EUR million	1 Jan 2022	Charged to income statement	Charged to other comprehensive income	Translation differences	Sold subsidiaries	31 Dec 2022
Deferred tax assets						
Pension obligations and provisions	3.8	-0.2		0.0		3.5
Intercompany margins	3.4	4.9		-0.2		8.2
Unused tax loss carry-forwards	4.8	-3.9		-0.1		0.8
Other temporary differences	2.2	0.3		0.1		2.6
Total	14.2	1.2		-0.1		15.1
Netting against liabilities	-5.8	-2.2		2.3		-5.7
Deferred tax assets in balance sheet	8.4	-1.0		2.2		9.4
Deferred tax liabilities						
Pension obligations	3.3	0.0	-3.0	-0.2		0.1
Depreciation differences and appropriations	62.6	19.1		-2.8		79.0
Other investments recognised at fair value	27.2		35.7			62.9
Financial instruments	4.8	0.4	-0.5	-0.7		3.9
Net investments in foreign operations		3.1		-3.1		
Other temporary differences	4.1	5.3	-0.1	-0.1		9.0
Total	102.0	27.8	32.1	-6.7		155.2
Netting against receivables	-5.8	-2.2		2.3		-5.7
Deferred tax liabilities in balance sheet	96.2	25.6	32.1	-4.4		149.5

Deferred tax assets and liabilities 2021

EUR million	1 Jan 2021	Charged to income statement	Charged to other comprehensive income	Translation differences	Sold subsidiaries	31 Dec 2021
Deferred tax assets						
Pension obligations and provisions	4.2	-0.2	0.0	0.0	-0.2	3.8
Intercompany margins	4.5	-1.2		0.1		3.4
Unused tax loss carry-forwards	0.6	4.2		0.0		4.8
Other temporary differences	2.4	-0.3	0.0	0.1		2.2
Total	11.8	2.5	-0.1	0.2	-0.2	14.2
Netting against liabilities	-4.3	-1.6	0.0	0.1		-5.8
Deferred tax assets in balance sheet	7.5	0.9	0.0	0.2	-0.2	8.4
Deferred tax liabilities						
Pension obligations	1.3	-0.1	2.0	0.1		3.3
Depreciation differences and appropriations	61.2	2.4		-0.6	-0.4	62.6
Other investments recognised at fair value	28.4		-1.2			27.2
Financial instruments	6.7	0.3	-2.2	0.0		4.8
Net investments in foreign operations		0.1		-0.1		
Other temporary differences	4.2	-0.1	0.0	0.0		4.1
Total	101.8	2.6	-1.4	-0.6	-0.4	102.0
Netting against receivables	-4.3	-1.6	0.0	0.1		-5.8
Deferred tax liabilities in balance sheet	97.5	1.0	-1.4	-0.6	-0.4	96.2

The Group has recognised deferred tax assets related to operating loss carry-forwards for EUR 0.8 million in Germany. Management assesses that taxable profit will be available against which loss carry-forward can be utilised.

The taxable loss carry-forwards of business operations, for which deferred tax assets have not been recognised due to uncertainty of amount or utilisation possibilities, amounted approximately to EUR 91 million (90) in Germany. The unrecognised deferred tax assets for these loss carry forwards is about EUR 29 million (29). Loss carry-forwards do not expire.

7. Group structure

7.1 Group companies

Accounting principles

Subsidiaries

The financial statements include all of the companies controlled by the Group. Intra-Group shareholding is eliminated using the acquisition method. Intra-Group business transactions, receivables, liabilities and unrealised gains, as well as internal distribution of profits, are eliminated on consolidation. Unrealised losses arising from impairment are not eliminated. When necessary, the accounting principles applied by subsidiaries have been adjusted to comply with the Group's principles.

The parent company's owners' and non-controlling interests' shares of the result for the period and comprehensive income are presented in the comprehensive income statement. The non-controlling interests' share of equity is presented as a separate item under equity on the balance sheet.

Joint operations

A joint operation is a joint arrangement in which parties who have joint control in the arrangement have rights concerning the assets related to the arrangement and obligations concerning liabilities. The Group consolidates its proportion of the assets, liabilities, income and expenses of the joint operation in its financial statements.

Subsidiaries and joint operations 31 December 2022

Metsä Board Oyj's holdings in Group companies

	Country	Holding, %	Number of shares	Book value EUR
Holdings in parent company				
Metsäliitto Cooperative	Finland	-	634,155	634,155.00
Subsidiary shares in Finland				
Kotimaiset				
Metsä Board International Oy	Finland	100.00	10,000	23,347,464.13
in other countries				
Metsä Board Americas Corporation ¹⁾	USA	99.00	17,820	12,209,018.39
Metsä Board Benelux n.v./s.a ¹⁾	Belgium	0.08	2	0.00
Metsä Board Hong Kong Ltd ¹⁾	Hong Kong	1.00	1	168.19
Metsä Board Deutschland GmbH	Germany	100.00	1	0.00
Metsä Board Ibérica S.A. ¹⁾	Spain	1.00	100	1,561.63
Metsä Board NL Holding B.V.	The Netherlands	100.00	15,350	4,492,764.02
Metsä Board Sverige Ab	Sweden	100.00	10,000,000	493,721,059.95
Subsidiary shares total				533,772,036.31
Shares and holdings in Group companies				534,406,191.31

¹⁾ Total Group holding 100.0%

Subgroup in Finland

Metsä Board International Oy

Metsä Board Benelux n.v./s.a ¹⁾	Belgium	99.92	2,919	140,001.71
OOO Metsä Board Rus	Russia	100.00	1	0.00
Metsä Board France SAS	France	100.00	8,211	418,951.75
Metsä Board Hong Kong Ltd ¹⁾	Hong Kong	99.00	99	1,069.35
Metsä Board Ibérica S.A. ¹⁾	Spain	99.00	147,771	155,316.78
Metsä Board Italia S.r.l.	Italy	100.00	100,000	1,250,691.84
Metsä Board (Middle East & Africa) Ltd	Cyprus	100.00	742,105	214,000.00
Metsä Board Polska Sp. Z o.o.	Poland	100.00	232	54,458.58
Metsä Board Singapore Pte Ltd	Singapore	100.00	10,000	4,036.51
Metsä Board Singapore Pte Ltd Indian Branch	India	100.00	-	-
Metsä Board Turkey LLC	Turkey	100.00	400	1,201.25
Metsä Board UK Ltd	United Kingdom	100.00	2,400	264,172.02
Metsä Board Americas Corporation ¹⁾	USA	1.00	180	4,435.15
Metsä Board Australia and New Zealand Pty Ltd	Australia	100.00	1	41,827.54
Total				2,550,162.48

	Country	Holding, %	Number of shares	Book value EUR
Subgroup in other countries				
Metsä Board Sverige Ab				
Husum Pulp Ab	Sweden	100.00	85,664	190,246,200.28

Material subsidiaries

Metsä Board has two material subsidiaries:

- Metsä Board Sverige AB

Metsä Board Sverige AB is located in Örnsköldsvik, Sweden. Metsä Board Sverige AB produces folding boxboard and kraftliner. Metsä Board Sverige AB's sales were EUR 642 million (446). The company's capacity is 250,000 tonnes of liner and 400,000 tonnes of folding boxboard.

- Husum Pulp AB

Husum Pulp AB produces pulp for Metsä Board Sverige Ab and to the market. The company's sales were EUR 560 million (379) and capacity 730,000 tonnes of chemical pulp. A 30% minority stake in the company was sold to the Swedish forest owners' cooperative Norra Skog and the transaction was completed on January 4, 2022.

Non-controlling interest's shares

Principal non-controlling interest's shares

EUR million	Country	Non-controlling interest Holding, %		Non-controlling interest Share of result, EUR million		Non-controlling interest Share of equity, EUR million	
		2022	2021	2022	2021	2022	2021
Husum Pulp AB	Sweden	30.0%	30.0%	51.4	21.9	173.2	146.2

Business transactions with non-controlling interest

Accounting principles

Changes in the parent company's holdings in subsidiaries that do not cause the parent company to lose its control over the subsidiary are processed as business transactions concerning equity.

The sale of a 30 percent stake in the Husum pulp mill to Norra Skog was completed on January 4, 2022. Following the arrangement, the non-controlling interests' share increased by EUR 125.7 million and retained earnings by EUR 134.4 million

In 2022 and 2021 there were no other significant acquisitions or sales of non-controlling interests.

Impact on parent company's equity from transactions with non-controlling interest:

EUR million	2022	2021
The sale of a 30 percent stake in the Husum pulp mill, Husum Pulp AB		
Net effect in equity		134.4

Summary of financial information of subsidiaries with a substantial non-controlling interest

EUR million	Husum Pulp Ab	
	2022	2021
Sales		378.8
Result for the period		75.3
Non-controlling interest's share of the result		22.6
Non-controlling interest's share of the total comprehensive result		-1.5
Dividends paid to non-controlling interest		
Non-current assets		313.2
Current assets		273.7
Non-current liabilities		7.1
Current liabilities		85.4
Net assets		494.3
Net cash flow from operating activities		68.8
Net cash flow arising from investing activities		-133.8
Net cash flow arising from financing activities		190.2
Change in cash and cash equivalents		125.3

The numbers are presented before eliminations.

Accounting principles

Associated companies include all companies over which the Group has considerable influence but no control. Significant influence is usually based on a shareholding conferring 20–50 per cent of the voting rights. A joint venture is a joint arrangement in which the parties that have joint control of the arrangement have rights to its net assets. Investments in associates and joint ventures are accounted for using the equity method and are initially recognized at cost. The Group's shares in associated companies and joint ventures also include the goodwill measured at the time of acquisition, less any impairment.

The Group's share of the profits or losses of associated companies and joint ventures is recognised in the income statement as a separate line item above the operating result in case of associate company Metsä Fibre and below the operating result in case of other associate companies. Correspondingly, the Group's share of other comprehensive income in associated companies and joint ventures is recognised in its items of other comprehensive income. A proportion corresponding to the Group's shareholding is eliminated from unrealised profits between the Group and its associate companies and joint ventures. Unrealised losses arising from impairment are not eliminated. When necessary, the accounting principles applied by associated companies and joint ventures have been adjusted to comply with the Group's principles.

Investments in associate companies and joint ventures

EUR million	2022	2021
Value 1 Jan	479.0	369.0
Share of results from associated companies and joint ventures		
Share of result from Metsä Fibre	163.1	114.4
Share of results from other associated companies and joint ventures	0.0	0.0
Dividends received	-58.8	
Decreases		-0.5
Share of other comprehensive income from associated companies and joint ventures		
Fair value reserve	25.4	-4.4
Translation differences and other changes in equity	5.6	0.6
Investments in associated companies and joint ventures 31 Dec	614.2	479.0

Amounts recognised in income statement

EUR million	2022	2021
Associate companies	163.1	114.4
Joint ventures		0.0
Amounts recognised in income statement total	163.1	114.4

Amounts recognised in balance sheet

EUR million	2022	2021
Associate companies	614.2	479.0
Amounts recognised in balance sheet total	614.2	479.0

The carrying amount of associated companies at 31 December 2022 includes goodwill of EUR 45.2 million (45.2). None of the associate companies or joint ventures are listed companies. Transactions with associate companies and joint ventures are detailed in Note 7.3.

Financial information summary of essential associated companies

According to management's view, the only essential associated company is Metsä Fibre Group, which produces chemical pulp and sawn timber. Metsä Board owns 24.9 per cent of Metsä Fibre. Metsä Board's parent company, Metsäliitto Cooperative, owns 50.1 per cent, and Itochu Corporation from Japan owns 25.0 per cent. Metsä Fibre has operations primarily in Finland, and its production capacity is approximately 3.2 million tonnes of chemical pulp. In Addition Metsä Fibre has five sawmills in Finland and Metsä Svir sawmill in Russia of which operations has been closed in 2022.

Summarised financial information for Metsä Fibre

Metsä Fibre Group

EUR million	2022	2021
Sales	3,070.7	2,628.1
Result for the period	664.7	472.4
Other comprehensive income	125.1	-15.4
Total comprehensive income for the period	789.8	457.0
Dividend received	58.8	
Non-current assets	2,976.9	1,966.9
Current assets	835.6	865.8
Non-current liabilities	781.0	469.1
Current liabilities	739.6	624.7
Net assets	2,291.8	1,738.9

Reconciliation of financial information for Metsä Fibre to the value recognised in consolidated balance sheet

EUR million	2022	2021
Group's share of net assets	570.7	433.0
Goodwill	45.2	45.2
Other purchase price allocations at acquisition	4.6	5.1
Other adjustments	-6.5	-4.5
Carrying value of associated company in consolidated balance sheet	614.0	478.8

Metsä Fibre has been consolidated according to equity method based on its consolidated financial statements prepared under IFRS.

Financial information summary of other than essential associated companies

EUR million	2022	2021
Share of result from other associated companies	0.0	0.0
Carrying value in consolidated balance sheet	0.2	0.2

Joint ventures

Kemishipping Oy offers logistics services in Kemi, Finland. At the end of November 2021, Metsä Board sold the joint venture Kemishipping Oy to Metsäliitto Cooperative. The transaction resulted in a sales loss of EUR 0.3 million.

EUR million	2022	2021
Sales		13.5
Result for the period		-0.1
Result for the period includes the following items:		
Depreciation, amortisation and impairment charges		1.3
Interest expenses		0.1
Income taxes		0.0
Dividends received from Joint Ventures		
Non-current assets		
Current assets		
Non-current liabilities		
Current liabilities		
Net assets		
Group's share of net assets		
Joint venture carrying value in consolidated balance sheet		

7.2 Acquisitions, assets classified as held for sale and operations disposed of

Accounting principles

Acquired business operations are consolidated from the time when control is transferred to the Group, and divested operations are consolidated until the time when control is transferred away from the Group.

The consideration paid, including the contingent sales price and the identifiable assets and liabilities of the acquired business operations, are measured at fair value at the time of acquisition. Expenses related to acquisitions are recognised as costs. Depending on the acquisition, the non-controlling interests' share in the object of the acquisition is recognised at fair value or the amount that corresponds to the non-controlling interests' proportion of the net assets of the object of the acquisition.

The amount by which the sum of the consideration paid, the fair value of the non-controlling interests' share and the fair value of the assets previously owned in the object of the acquisition exceed the fair value of the identifiable net assets is recognised as goodwill.

Assets held for sale are recognised at the lower of the book value or fair value less expenses arising from the divestment. Depreciation is not recognised on assets held for sale after classification.

Acquired businesses

On 1 January 2022, Metsä Board acquired the entire share capital of Hämeenkyrön Voima Oy from Pohjolan Voima Oyj (84%) and from DL Power Oy, part of Leppäkoski group (16%). Hämeenkyrön Voima Oy was merged to Metsä Board Oyj on 31 July 2022.

Hämeenkyrön Voima Oy

EUR million	2022	2021
Intangible assets	1.3	
Tangible assets	29.6	
Accounts receivables and other receivables	3.2	
Cash and cash equivalent	0.9	
Total assets	35.0	
Deferred tax liabilities	0.0	
Financial liabilities, non-current	16.7	
Financial liabilities, current	1.3	
Accounts payable and other liabilities	2.8	
Total liabilities	20.8	
Net assets	14.2	
Acquisitions cost	14.5	
Goodwill / Other operating expenses	0.2	
Acquisition price	-14.5	
Cash and cash equivalents in subsidiaries	0.9	
Net cash flow arising on acquisitions	-13.6	

Divested operations

Metsä Board and Euroports signed an agreement on 16 December 2021, according to which Metsä Board Corporation sold the entire share capital of its fully owned subsidiary Oy Hangö Stevedoring Ab to Euroports Finland Oy. Transaction was completed on 31 March 2022. The group recognised a capital gain of EUR 19.2 million and realised a EUR 24.5 million positive cash flow effect. In the 2021 financial statements, the balance sheet items of Oy Hangö Stevedoring Ab were presented as assets held for sale and valued at book value.

Oy Hangö Stevedoring Ab

EUR million	Note	2022	2021
Goodwill	4.1	0.1	
Other intangible assets	4.2	0.0	
Tangible assets		8.9	
Financial assets, non-current		0.0	
Deferred tax assets		0.2	
Inventories		0.0	
Accounts receivables and other receivables		2.3	
Financial assets	5.4	0.7	
Total assets		12.3	
Deferred tax liabilities	6	0.4	
Provisions	4.9	1.0	
Financial liabilities, non-current	5.5	0.7	
Financial liabilities, current		0.1	
Accounts payable and other liabilities		4.1	
Total liabilities		6.3	
Net assets		6.0	
Expert fees paid		0.8	
Total		6.9	
Transaction price paid in cash		26.1	
Capital gain after tax		19.2	
Transaction price paid in cash		26.1	
Expert fees paid		-0.8	
Cash and cash equivalents of divested subsidiary		-0.7	
Cash flow impact		24.5	

7.3 Related party transactions

Related parties include Metsä Board's ultimate parent company Metsäliitto Cooperative, which owns 50 per cent of Metsä Board's shares and 68 per cent of the voting rights, other subsidiaries of Metsäliitto, associated companies and joint ventures. The members of the Board of Directors, Metsä Group's Executive Management Team and Metsä Board's Corporate Management Team as well as their close family members are also included in related parties.

The management's salaries, remuneration and pension expenses are presented in Note 3.2.

The most significant subsidiaries of Metsäliitto, with which Metsä Board has business transactions, are as follows:

- Metsä Tissue Group
- Metsä Fibre Group
- Metsä Forest Sverige Ab

Metsä Fibre has been consolidated by using equity method according to Investments in associates standard (IAS 28). Related party transactions with Metsä Fibre are presented as transactions with sister companies.

Financial operations of the Group have been centralised to Metsä Group Treasury Oy, which is a wholly-owned subsidiary of Metsäliitto Cooperative and in charge of managing the Group companies' financial positions according to the strategy and financial policy defined by the Group, providing necessary financial services and acting as a competence center in financial matters. Financial transactions with Metsä Group Treasury Oy are carried out at market prices.

The value of wood purchases from Metsäliitto Cooperative was EUR 129.0 million (117.7) and pulp purchases from Metsä Fibre Oy EUR 416.0 million (336.9). The purchases were carried out at market prices.

Metsä Board is participating in the supplementary pension arrangement of Metsä Group executives. Payments to the arrangement amounted to EUR 0.6 million in 2022 (0.4).

Transactions with parent company and sister companies

EUR million	Transactions with parent company		Transactions with sister companies	
	2022	2021	2022	2021
Sales	24.8	13.7	172.9	96.6
Other operating income	5.4	3.9	1.2	1.1
Purchases	167.0	149.5	693.9	547.7
Share of result from associated companies			30.8	114.4
Dividend income			0.0	0.0
Interest income			2.3	0.0
Interest expense	0.0		0.9	1.0
Receivables				
Accounts receivable and other receivables	4.2	3.8	80.4	56.9
Cash equivalents			338.6	496.4
Liabilities				
Accounts payable and other liabilities	9.5	9.5	76.8	74.3

Transactions with associated companies and joint ventures

EUR million	2022	2021
Sales	0.7	0.2
Purchases	1.7	4.2
Receivables		
Accounts receivable and other receivables	0.1	0.3
Liabilities		
Accounts payable and other liabilities		0.7

Metsä Board has classified interest-bearing receivables comparable to cash funds and available immediately from Metsä Group's internal bank Metsä Group Treasury Oy as Cash and cash equivalents.

The receivables from group companies do not include doubtful receivables, and no bad debt was recognised during the period. No security or collateral has been provided for group liabilities.

8. Other notes

8.1 Contingent liabilities, assets and commitments

Disputes and claims

Metsä Board companies have been sellers in several share transactions in recent years. In these divestments, the companies have issued regular seller's assurances. Claims presented against Metsä Board companies and costs incurred by the companies due to these assurances cannot be ruled out.

Commitments

EUR million	2022	2021
Leases not yet commenced to which the Group is committed		18.0
Other commitments given on own behalf	1.5	1.5
Other commitments	3.8	
Total	5.3	19.5

Commitments include granted pledges, mortgages and floating charges as well as guarantees.

Investment commitments

EUR million	2022	2021
Payments due in following 12 months	132.0	80.6
Payments due later	1.6	1.9
Total	133.5	82.4

In 2022 commitments related to an investment to increase Husum's folding box-board capacity. In 2021 commitments related to property, plant and equipment concern the first phase of the modernisation of the Husum pulp mill and an investment to increase Husum's folding box-board capacity.

Other information

Metsä Board has investment grade credit ratings by S&P Global and Moody's Investor Service. In December 2022 Moody's upgraded Metsä Board's rating to Baa2 (was Baa3), with stable outlook (was positive). The company's rating by S&P Global is BBB-, with a stable outlook.

Parent company

Income statement

EUR	NOTE	1.1.–31.12.2022	1.1.–31.12.2021
Sales	2	1,572,707,178.40	1,389,003,575.21
Change in stocks of finished and unfinished products		43,724,591.06	18,978,903.15
Other operating income	3, 4	91,648,078.56	40,474,541.15
Materials and services			
Materials, consumables and goods			
Purchases during the financial period		-1,091,988,355.22	-820,695,309.71
Changes in stocks		3,368,182.68	1,622,173.39
External services	5	-255,741,958.55	-220,006,720.05
Employee costs	5	-106,360,648.15	-103,737,173.86
Depreciations and impairment charges	3, 6	-48,392,956.43	-49,811,731.10
Other operating expenses	3, 5	-112,597,632.50	-101,053,305.55
		-1,611,713,368.17	-1,293,682,066.88
Operating profit/loss		96,366,479.85	154,774,952.63
Financial income and expenses	7		
Income from group companies		68,282,404.82	5,644,555.11
Income from investments in other non-current assets		323,118.23	855.00
Other interest and financial income		37,044.13	16,028.55
Exchange rate differences		-24,823,074.91	-4,792,233.25
Interest expenses and other financial expenses		-11,243,159.60	-10,861,550.10
		32,576,332.67	-9,992,344.69
Profit/loss before appropriations and taxes		128,942,812.52	144,782,607.94
Appropriations			
Change in depreciation differences	6	-11,697,827.98	-16,340,995.30
Group contribution		0.00	391,363.11
		-11,697,827.98	-15,949,632.19
Income taxes	8	-5,624,167.05	-25,358,945.30
Profit/loss for the financial period		111,620,817.49	103,474,030.45

Parent company

Balance sheet

EUR	Note	31.12.2022	31.12.2021
ASSETS			
NON-CURRENT ASSETS			
Intangible assets	9		
Intangible assets		11,360,766.54	4,865,929.32
Other intangible assets		432,011.17	278,744.68
Advance payment and construction in progress		133,093.84	1,020,133.10
		11,925,871.55	6,164,807.10
Tangible assets	9		
Land and water areas		26,340,436.42	29,491,684.80
Buildings and constructions		127,095,989.94	123,703,859.97
Machinery and equipment		239,929,037.57	236,913,618.20
Other tangible assets		7,629,729.80	6,638,072.18
Advance payment and construction in progress		60,459,586.34	18,957,755.83
		461,454,780.07	415,704,990.98
Investments	10		
Shares in group companies		534,406,191.31	535,378,815.29
Receivables from group companies		290,412,859.87	305,699,997.81
Shares in associated companies		86,429,409.33	86,429,409.33
Other shares and holdings		344,817,070.84	178,311,058.30
Other receivables		0.00	5,002.00
		1,256,065,531.35	1,105,824,282.73
Total non-current assets		1,729,446,182.97	1,527,694,080.81
CURRENT ASSETS			
Inventories			
Materials and consumables		53,576,680.10	50,227,009.35
Finished products		197,662,125.58	153,937,534.52
Advance payments		15,432,257.27	4,695,368.34
		266,671,062.95	208,859,912.21
NON-CURRENT RECEIVABLES			
Receivables from group companies			
Receivables from group companies		38,878,585.67	19,511,624.05
		38,878,585.67	19,511,624.05
Current receivables			
Accounts receivables		156,737,059.46	136,478,748.63
Receivables from group companies		182,648,251.13	350,842,606.92
Receivables from associated companies		98,183.87	289,849.64
Other receivable		23,337,352.03	33,700,472.97
Prepayments and accrued income		41,637,891.74	7,928,830.79
		404,458,738.23	529,240,508.95
Total receivables		443,337,323.90	548,752,133.00
Cash and cash equivalents		13,371,673.53	24,353,833.76
Total current assets		723,380,060.38	781,965,878.97
TOTAL ASSETS		2,452,826,243.35	2,309,659,959.78

EUR	Note	31.12.2022	31.12.2021
EQUITY AND LIABILITIES			
SHAREHOLDERS' EQUITY			
	12		
Share capital		557,881,540.40	557,881,540.40
Other reserves			
Reserve for invested unrestricted equity		210,639,481.81	210,639,481.81
Value adjustment reserve		259,659,751.43	116,464,042.72
Profit/loss for previous financial periods		287,026,854.12	337,173,372.47
Profit/loss for the financial period		111,620,817.49	103,474,030.45
		1,426,828,445.25	1,325,632,467.85
APPROPRIATIONS			
Accumulated depreciation difference	6	176,002,120.56	164,304,292.58
PROVISIONS			
	13	2,729,857.00	3,760,116.35
LIABILITIES			
Non-current liabilities			
	15		
Bonds		249,601,391.02	249,517,437.02
Loans from financial institutions		176,470,588.24	179,316,176.48
Advance payments		1,082,432.07	1,082,432.10
Deferred tax liability	8, 14	64,368,909.96	28,363,930.89
Liabilities to group companies		0.00	1,691,108.71
Other liabilities		2,399,500.74	0.00
		493,922,822.03	459,971,085.20
Current liabilities			
	16		
Pension premium loans		11,764,705.88	3,908,823.52
Advance payments		3,756,180.63	2,521,860.77
Accounts payable		175,417,664.49	154,123,561.95
Liabilities to group companies		88,896,086.27	83,855,599.29
Liabilities to associated companies		0.00	704,619.73
Other liabilities		7,699,014.97	19,896,953.06
Accruals and deferred income		65,809,346.27	90,980,579.48
		353,342,998.51	355,991,997.80
Total liabilities		847,265,820.54	815,963,083.00
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES		2,452,826,243.35	2,309,659,959.78

Parent company accounts

Cash flow statement

EUR	1.1.–31.12.2022	1.1.–31.12.2021
CASH FLOW FROM OPERATING ACTIVITIES		
Profit/loss before appropriations and taxes	128,942,812.52	144,782,607.94
Adjustments to profit/loss a)	-47,715,398.92	37,829,380.81
Interest received	9,472,006.62	5,625,765.02
Interest paid	-10,680,827.37	-10,387,182.18
Dividends received	59,142,897.83	35,336.84
Other financial items, net	-10,999,779.03	-5,487,515.15
Income taxes paid	-49,996,551.31	-13,806,989.91
Change in net working capital b)	-109,960,671.71	60,201,890.97
Net cash flow from operating activities	-31,795,511.37	218,793,294.34
INVESTMENTS		
Acquisition of other shares	-15,767,840.00	0.00
Investments in tangible and intangible assets	-78,185,167.01	-52,139,088.99
Proceeds from disposal of shares in affiliated companies,	25,241,080.85	0.00
Proceeds from other investments	16,878,690.70	210,500.00
Proceeds from sale of tangible and intangible assets	40,771,107.52	30,349,351.55
Increase and decrease of non-current receivables, net	-19,342,971.29	60,245,134.44
Total cash flow from investing activities	-30,405,099.23	38,665,897.00
CASH FLOW BEFORE FINANCIAL ACTIVITIES	-62,200,610.60	257,459,191.34
Cash flow from financial activities		
Acquisition of own shares	-7,838,135.79	0.00
Dividends paid and other profit distribution	-145,782,413.01	-92,433,313.95
Increase in non-current liabilities	60,899,777.40	0.00
Decrease in non-current liabilities	-55,889,483.28	0.00
Pitkäaikaisten korollisten velkojen muutos	2,399,500.72	0.00
Increase or decrease in interest bearing current receivables, net	197,037,841.22	-147,374,614.78
Group contribution	391,363.11	1,160,000.00
	51,218,450.37	-238,647,928.73
CHANGES IN CASH AND CASH EQUIVALENTS	-10,982,160.23	18,811,262.61
Cash and cash equivalents opening balance	24,353,833.76	5,542,571.15
Change in cash and cash equivalents	-10,982,160.23	18,811,262.61
Cash and cash equivalents closing balance	13,371,673.53	24,353,833.76
a) Adjustments to profit/loss		
Depreciations and impairment charges	48,392,956.43	49,811,731.10
Financial income and expenses	-32,576,332.67	9,992,344.69
Gains or losses on sale of fixed assets	-62,501,763.33	-21,257,815.66
Change in provisions	-1,030,259.35	-716,879.32
Total	-47,715,398.92	37,829,380.81
b) Change in net working capital		
Inventories	-57,800,939.75	-17,961,740.73
Change in current receivables, non-interest bearing	-39,982,068.72	-14,579,980.26
Change in current liabilities, non-interest bearing	-12,177,663.24	92,743,611.96
Total	-109,960,671.71	60,201,890.97

Parent company accounting policies

1. Accounting policies

Metsä Board Oyj belongs to Metsä Group, whose parent company is Metsäliitto Cooperative. Metsäliitto Cooperative's registered office is in Helsinki. The Metsä Group prepares consolidated financial statements which are available at the Group's main office at Revontulenpuisto 2 A, FIN-02100 Espoo, Finland.

Metsä Board Oyj's financial statements have been prepared in accordance with Finnish Accounting Standards (FAS).

Metsä Board Oyj has related party transactions in the Metsä Group. Those are described in more detail in the Metsä Board Annual report in section 7.3. Transactions with related parties are based on market prices.

Foreign currency transactions

Foreign exchange gains and losses have been booked to exchange gains/losses under financial income and expense. Open and actual foreign exchange differences hedging sales are recorded immediately to financial income and expenses in the income statement. Exchange rate differences are recorded in the financial statements with effect on profit.

Derivative financial instruments

The company uses derivatives only for hedging against currency, interest rate and commodity risks. Derivatives are valued at fair value in accordance with the alternative treatment permitted by Chapter 5, Section 2a of the Accounting Act. The management of financial risks and the principles applied to derivatives are explained in Notes 5.6 and 5.7 to the consolidated financial statements.

The unrealised fair value of cash flow hedges in hedge accounting is recognised in the fair value reserve of the balance sheet to the extent that they are effective. The unrealised fair value of derivatives not in hedge accounting is recognised in the income statement. In addition, the company has recognised deferred tax assets and liabilities as a separate item in the income statement and balance sheet during the financial year.

Metsä Board Oyj applies the fair value option under Chapter 5, Section 2a of the Accounting Act also to the other shares and holdings. Accordingly, the company has classified its shares in Pohjolan Voima Oyj as financial assets at fair value through equity in accordance with IFRS 9 and other equity instruments in financial assets valued at fair value through profit or loss. The principles applied in determining the fair value of shares and the sensitivity of fair value to various valuation factors are described in Note 4.3 to the consolidated financial statements.

Sales

Sales are calculated after deduction of indirect sales taxes, trade discounts and other items adjusting sales.

Share-based payments

Share-based payments are booked on the fiscal year when the non cancelable right of the shares for the employee is issued.

Pensions and pension funding

Statutory pension security is handled by pension insurance companies outside the Group. In addition to statutory pension security, some salaried employees have supplementary pension arrangements which are either insured at Pohjola or are arranged through Metsäliitto Employees' Pension Foundation or are Metsäliitto Employees' Pension Foundation or are an unfunded liability of the company. Pension insurance premiums have been accrued to correspond to the accrual-based wages and salaries given in the financial statements.

Leasing

Lease payments are treated as rental expenses.

Income taxes

Tax expenses in the income statement consists of taxes based on the taxable income for the period, taxes for the previous periods and deferred tax assets and liabilities. Deferred tax assets and liabilities are calculated on the temporary differences between the carrying amount and the tax base in accordance with the tax rate issued as at the balance sheet date. Deferred taxes are calculated on the basis of the enacted tax rate.

Property, plant and equipment and depreciation

The carrying values of property, plant and equipment are based on original acquisition costs less depreciation according to plan and impairment losses.

Depreciation according to plan is based on the estimated useful life of the asset as follows:

Buildings and constructions	20–40 years
Heavy machines of power plants	20–40 years
Other heavy machines	15–20 years
Lightweight machinery and equipment	5–15 years
Other tangible assets	5–10 years

Depreciation is not recorded on the purchase cost of land and water.

Inventories

Inventories are measured at the lower of cost or net realisable value. FIFO principle is observed in measuring inventories or, alternatively, the weighted average cost method. Value of finished and semi-finished goods comprises raw materials, direct wages and salaries, depreciation and amortisation and other direct cost as well as a reasonable share of variable and fixed production overhead cost calculated at normal level of production. Net realizable value is the estimated selling price less the estimated cost of completion and the estimated costs necessary to make the sale.

Provisions

Contingent costs and losses that are no longer generate corresponding income and for which the parent company is obliged or committed and whose monetary value can be reasonably estimated are recognized in the income statement in line with the nature of the expense item and in the mandatory provisions of the balance sheet.

EUR	2022	2021
2. Sales by region		
Finland	65,103,945.73	93,016,225.27
Other EU-countries	785,329,475.63	620,765,028.16
Other European countries	221,181,415.75	258,084,428.42
Other countries	501,092,341.29	417,137,893.36
Total	1,572,707,178.40	1,389,003,575.21
3. Exceptional items		
Other operating income		
Oy Hangö Stevedoring Ab Proceeds from liquidation of shares	22,955,409.24	0.00
Proceeds of selling land	6,533,675.05	7,007,417.18
Encore Ympäristöpalvelut Oy Proceeds of liquidation of shares	4,892,703.24	0.00
Merger profit	632,637.88	0.00
Environmental reservation	93,187.59	0.00
	35,107,613.00	7,007,417.18
Exceptional items in income statement	35,107,613.00	7,007,417.18
4. Other operating income		
Rental income	1,053,865.71	1,051,500.39
Service revenue	16,868,639.19	14,641,881.77
Gains on disposal	62,127,817.78	21,367,326.91
Government grants and allowances	3,214,154.64	787,581.19
Scrap and waste sale	219,922.43	255,568.97
Others	8,163,678.81	2,370,681.92
	91,648,078.56	40,474,541.15
5. Operating expenses		
External services		
Distribution costs	178,928,268.89	149,817,832.97
Other external services	76,813,689.66	70,188,887.08
	255,741,958.55	220,006,720.05
Employee costs		
Wages and salaries for working hours	64,823,548.60	62,526,946.89
Osakeperusteiset maksut	-495,369.86	2,004,301.44
Social security expenses		
Pension expenses	15,531,896.13	13,676,031.03
Other social security expenses	26,500,573.28	25,529,894.50
	106,360,648.15	103,737,173.86

Share-based fee arrangement is concerning 31.12.2022 19 persons of mother entity Metsä Board Oyj. From earning period 2020–2022 it is possible to earn total 469,498 (brutto), from earning period 2021–2023 total 344,109 (brutto) and from earning period 2022–2024 total 351,398 (brutto) Metsä Board B-series shares.

Additional information of salaries, rewards and pension plans to management are presented in Group's Note 3.2.
Additional information of share-based payments are presented in Group's Note 3.3.

The average number of personnel during the financial period in the parent company	1,222	1,219
Other operating expenses		
Rental and other property costs	13,469,651.58	12,758,855.97
Purchases of services	73,671,626.62	64,063,910.41
Losses on disposal of non-current assets	258,692.33	109,511.25
Other expenses		
Voluntary social costs	4,080,223.14	4,686,272.21
Fixed energy costs	8,938,239.16	9,688,348.45
Traveling expenses	897,984.13	230,641.07
Insurances	3,283,249.15	2,406,028.29
Advertising and marketing expenses	1,858,792.58	2,252,894.58
Others	6,139,173.81	4,856,843.32
	112,597,632.50	101,053,305.55
Fees of principal auditor		
Audit fees	221,447.49	196,064.00
Auditor's opinions	49,612.51	4,930.00
	271,060.00	200,994.00

The principal auditor is KPMG Oy Ab.

EUR	2022	2021
6. Depreciation and impairment charges		
Planned depreciation		
Intangible rights	754,573.95	1,487,864.06
Other intangible assets	85,985.10	87,667.88
Buildings and constructions	8,496,098.14	8,469,149.47
Machinery and equipment	38,298,727.98	38,997,457.55
Other tangible assets	757,571.26	769,592.14
Total	48,392,956.43	49,811,731.10
Change in depreciation difference	11,697,827.98	16,340,995.30
Total depreciation	60,090,784.41	66,152,726.40
Depreciation difference at the beginning of the financial year	164,304,292.58	147,963,297.28
Change in depreciation differences	11,697,827.98	16,340,995.30
Depreciation difference at the end of the financial year	176,002,120.56	164,304,292.58
7. Financial income and expenses		
Income from investments in non-current assets		
Dividend income		
From Group companies	58,847,155.62	34,481.84
From others	323,118.23	855.00
	59,170,273.85	35,336.84
Interest income on investments in non-current assets		
From Group companies	8,273,801.16	5,580,610.15
	8,273,801.16	5,580,610.15
Total income from non-current assets	67,444,075.01	5,615,946.99
Other interest and financial income		
Interest income from Group companies	1,161,448.04	29,463.12
Other interest income	36,757.42	15,691.75
Other financial income	286.71	336.80
	1,198,492.17	45,491.67
Exchange rate differences recognised in financial income and expenses		
Exchange rate differences on sales	1,127,532.45	3,481,677.43
Exchange rate differences on purchases	-513,406.61	-545,443.31
Exchange rate differences on financing	-25,437,200.75	-7,728,467.37
	-24,823,074.91	-4,792,233.25
Interest and other financial expenses		
Interest expenses for the same group companies	-794,579.90	-1,011,035.11
Other interest expenses	-9,631,591.72	-8,902,440.98
Other financial expenses	-816,987.98	-948,074.01
Total interest expenses and other financial expenses	-11,243,159.60	-10,861,550.10
Financial income and expenses total	32,576,332.67	-9,992,344.69
8. Income taxes		
Taxes for the financial year	5,596,020.86	25,557,347.96
Taxes for previous financial years	-177,905.68	-341,778.52
Deferred taxes	206,051.87	143,375.86
	5,624,167.05	25,358,945.30

9. Intangible and tangible assets

	2022	2021
Intangible rights		
Acquisition costs 1.1.	111,057,990.95	117,493,533.02
Increases	8,019,339.65	458,238.69
Decreases	-68,792,929.00	-7,529,650.20
Transfers between items	1,020,133.10	635,869.44
Acquisition costs 31.12.	51,304,534.70	111,057,990.95
Accumulated depreciation and impairment charges 1.1.	-106,192,061.63	-104,835,551.39
Accumulated depreciation of deductions and transfers	67,002,867.42	131,353.82
Depreciation and write-downs for the financial period	-754,573.95	-1,487,864.06
Accumulated depreciation and impairment 31.12.	-39,943,768.16	-106,192,061.63
Book value 31.12.	11,360,766.54	4,865,929.32
Goodwill		
Acquisition costs 1.1.	24,970,634.39	24,970,634.39
Decreases	-24,970,634.39	
Acquisition costs 31.12.	0.00	24,970,634.39
Accumulated depreciation and impairment charges 1.1.	-24,970,634.39	-24,970,634.39
Accumulated depreciation of deductions and transfers	24,970,634.39	0.00
Accumulated depreciation and impairment on 31.12.	0.00	-24,970,634.39
Book value 31.12.	0.00	0.00
Other intangible assets		
Acquisition costs 1.1.	7,846,976.75	7,878,550.92
Lisäykset	245,460.55	0.00
Decreases	-872,084.63	-31,574.17
Transfers between items	1,445,140.51	0.00
Acquisition costs 31.12.	8,665,493.18	7,846,976.75
Accumulated depreciation and impairment charges 1.1.	-7,568,232.07	-7,512,138.36
Accumulated depreciation of deductions and transfers	-579,264.84	31,574.17
Depreciation and write-downs for the financial period	-85,985.10	-87,667.88
Accumulated depreciation and impairment 31.12.	-8,233,482.01	-7,568,232.07
Book value 31.12.	432,011.17	278,744.68
Advance payments and work in progress		
Acquisition costs 1.1.	1,020,133.10	635,869.44
Increases	133,093.84	1,020,133.10
Transfers between items	-1,020,133.10	-635,869.44
Acquisition costs 31.12.	133,093.84	1,020,133.10
Intangible assets total		
Acquisition costs 1.1.	144,895,735.19	150,978,587.77
Increases	8,397,894.04	1,478,371.79
Decreases	-94,635,648.02	-7,561,224.37
Transfers between items	1,445,140.51	0.00
Acquisition costs 31.12.	60,103,121.72	144,895,735.19
Accumulated depreciation and impairment charges 1.1.	-138,730,928.09	-137,318,324.14
Accumulated depreciation of deductions and transfers	91,394,236.97	162,927.99
Depreciation and write-downs for the financial year	-840,559.05	-1,575,531.94
Accumulated depreciation and impairment charges 31.12.	-48,177,250.17	-138,730,928.09
Book value 31.12.	11,925,871.55	6,164,807.10

EUR	2022	2021
Land and water areas		
Acquisition costs 1.1.	29,491,705.78	31,282,434.04
Increases	9,464.00	3,000.00
Decreases	-3,164,398.52	-1,793,728.26
Transfers between items	3,685.36	0.00
Acquisition costs 31.12.	26,340,456.62	29,491,705.78
Accumulated depreciation and impairment charges 1.1.	-20.98	-20.98
Accumulated depreciation of deductions and transfers	0.78	0.00
Accumulated depreciation and impairment on 31.12.	-20.20	-20.98
Book value 31.12.	26,340,436.42	29,491,684.80
Buildings and constructions		
Acquisition costs 1.1.	311,087,587.69	308,253,184.06
Opening balance correction	11,134,125.36	0.00
Increases	4,330,072.64	1,510,233.98
Decreases	-3,256,608.92	-598,747.98
Transfers between items	3,015,475.54	1,922,917.63
Acquisition costs 31.12.	326,310,652.31	311,087,587.69
Accumulated depreciation and impairment charges 1.1.	-187,383,727.72	-179,513,326.23
Opening balance correction	-4,868,791.86	0.00
Accumulated depreciation of deductions and transfers	1,533,955.35	598,747.98
Depreciation and write-downs for the financial year	-8,496,098.14	-8,469,149.47
Accumulated depreciation and impairment on 31.12.	-199,214,662.37	-187,383,727.72
Book value 31.12.	127,095,989.94	123,703,859.97
Machinery and equipment		
Acquisition costs 1.1.	1,281,155,098.82	1,240,170,683.48
Opening balance correction	6,979,604.01	0.00
Increases	34,987,919.86	31,110,627.78
Decreases	-17,313,443.78	-7,582,216.10
Transfers between items	6,373,558.75	17,456,003.66
Acquisition costs 31.12.	1,312,182,737.66	1,281,155,098.82
Accumulated depreciation and impairment charges 1.1.	-1,044,241,480.62	-1,012,826,239.17
Opening balance correction	-6,744,936.04	0.00
Accumulated depreciation of deductions and transfers	17,031,444.55	7,582,216.10
Depreciation and write-downs for the financial year	-38,298,727.98	-38,997,457.55
Accumulated depreciation and impairment on 31.12.	-1,072,253,700.09	-1,044,241,480.62
Book value 31.12.	239,929,037.57	236,913,618.20
Other tangible assets		
Acquisition costs 1.1.	14,204,781.97	13,862,872.09
Increases	1,363,101.25	341,745.97
Decreases	-1,296,226.73	0.00
Transfers between items	386,127.63	163.91
Acquisition costs 31.12.	14,657,784.12	14,204,781.97
Accumulated depreciation and impairment charges 1.1.	-7,566,709.79	-6,797,117.65
Accumulated depreciation of deductions and transfers	1,296,226.73	0.00
Depreciation and write-downs for the financial year	-757,571.26	-769,592.14
Accumulated depreciation and impairment on 31.12.	-7,028,054.32	-7,566,709.79
Book value 31.12.	7,629,729.80	6,638,072.18
Advance payments and work in progress		
Acquisition costs 1.1.	18,957,755.83	20,641,731.56
Increases	51,280,677.79	17,695,109.47
Transfers between items	-9,778,847.28	-19,379,085.20
Acquisition costs 31.12.	60,459,586.34	18,957,755.83

EUR	2022	2021
Total tangible assets		
Acquisition costs 1.1.	1,654,896,930.09	1,614,210,905.23
Opening balance correction	18,113,729.37	0.00
Increases	91,971,235.54	50,660,717.20
Decreases	-25,030,677.95	-9,974,692.34
Acquisition costs 31.12.	1,739,951,217.05	1,654,896,930.09
Accumulated depreciation and impairment charges 1.1.	-1,239,191,939.11	-1,199,136,704.03
Opening balance correction	-11,613,727.90	0.00
Accumulated depreciation of deductions and transfers	19,861,627.41	8,180,964.08
Depreciation and write-downs for the financial year	-47,552,397.38	-48,236,199.16
Accumulated depreciation and impairment on 31.12.	-1,278,496,436.98	-1,239,191,939.11
Book value 31.12.	461,454,780.07	415,704,990.98

10. Investments

Shares in Group companies		
Acquisitions costs 1.1.	535,378,815.29	535,378,815.29
Increases	14,495,216.02	0.00
Decreases	-15,467,840.00	0.00
Transfers between items	0.00	0.00
Acquisitions costs 31.12.	534,406,191.31	535,378,815.29
Shares in participating companies		
Acquisitions costs 1.1.	86,429,409.33	86,429,409.33
Acquisitions costs 31.12.	86,429,409.33	86,429,409.33
Other shares and holdings		
Acquisitions costs 1.1.	178,311,058.30	184,224,295.61
Increases	178,492,000.00	0.00
Decreases	-11,985,987.46	-5,913,237.31
Acquisitions costs 31.12.	344,817,070.84	178,311,058.30
Total investments and holdings		
Acquisitions costs 1.1.	800,119,282.92	806,032,520.23
Increases	192,987,216.02	0.00
Decreases	-27,453,827.46	-5,913,237.31
Acquisitions costs 31.12.	965,652,671.48	800,119,282.92
Receivables from Group companies		
Acquisitions costs 1.1.	305,699,997.81	306,190,496.80
Increases	0.00	0.00
Decreases	-15,287,137.94	-490,498.99
Acquisitions costs 31.12.	290,412,859.87	305,699,997.81
Other receivables		
Acquisitions costs 1.1.	5,002.00	35,222.52
Decreases	-5,002.00	-30,220.52
Acquisitions costs 31.12.	0.00	5,002.00
Receivables total		
Acquisitions costs 1.1.	305,704,999.81	306,225,719.32
Increases	0.00	0.00
Decreases	-15,292,139.94	-520,719.51
Acquisitions costs 31.12.	290,412,859.87	305,704,999.81
Investments total		
Acquisitions costs 1.1.	1,105,824,282.73	1,112,258,239.55
Increases	192,987,216.02	0.00
Decreases	-42,745,967.40	-6,433,956.82
Acquisitions costs 31.12.	1,256,065,531.35	1,105,824,282.73

EUR	2022	2021
11. Receivables		
Non-current receivables		
Receivables from group companies		
Loans receivables	35,965,401.28	19,511,624.05
Derivatives	2,913,184.39	0.00
	38,878,585.67	19,511,624.05
Total non-current receivables	38,878,585.67	19,511,624.05
Current receivables		
Receivables from group companies		
Accounts receivable	72,118,873.10	42,204,078.56
Loans receivables	68,312,253.83	278,895,200.81
Other receivables	-1,012,541.57	-536,314.82
Prepayments and accrued income	43,229,665.77	30,279,642.37
	182,648,251.13	350,842,606.92
Receivables from associated companies		
Accounts receivable	98,183.87	289,849.64
	98,183.87	289,849.64
Receivables from others		
Accounts receivable	156,737,059.46	136,478,748.63
Other receivables	23,337,352.03	33,700,472.97
Prepayments and accrued income	41,637,891.74	7,928,830.79
	221,712,303.23	178,108,052.39
Total current receivables	404,458,738.23	529,240,508.95
Accrued income from group companies, current, specification		
Derivatives	40,510,486.72	28,920,689.87
Accrued interests	2,719,179.05	1,358,952.50
	43,229,665.77	30,279,642.37
Accrued income from others, current, specification		
Tax accrual	33,516,269.26	0.00
Accrued personnel costs	-40,370.38	41,175.43
Energy and other taxes	2,472,676.17	2,474,456.57
Others	5,689,316.69	5,413,198.79
	41,637,891.74	7,928,830.79
Total receivables	443,337,323.90	548,752,133.00

EUR

2022

2021

12. Shareholders' equity

	2022	2021
Restricted equity		
Share capital 1.1.		
A-shares	51,788,806.85	51,607,529.31
B-shares	506,092,733.55	506,274,011.09
	557,881,540.40	557,881,540.40
Conversion of A shares into B shares		
A-shares	0.00	-133,346.95
B-shares	0.00	133,346.95
	0.00	0.00
Share capital 31.12.		
A-shares	51,788,806.85	51,788,806.85
B-shares	506,092,733.55	506,092,733.55
	557,881,540.40	557,881,540.40
Fair value reserve 1.1.	116,464,042.72	134,374,020.36
Changes	143,195,708.71	-17,909,977.64
Fair value reserve 31.12.	259,659,751.43	116,464,042.72
	817,541,291.83	674,345,583.12
Unrestricted equity		
Reserve for invested unrestricted equity 1.1.	210,639,481.81	267,521,521.17
Return of invested unrestricted equity	0.00	-56,882,039.36
Reserve for invested unrestricted equity 31.12.	210,639,481.81	210,639,481.81
Retained earnings 1.1.	440,647,402.91	372,724,647.06
Acquisition of own shares	-7,838,135.78	0.00
Dividends	-145,782,413.01	-35,551,274.60
Profit for the financial period	111,620,817.49	103,474,030.45
Retained earnings 31.12.	398,647,671.61	440,647,402.91
	609,287,153.42	651,286,884.72
Equity total 31.12	1,426,828,445.25	1,325,632,467.84
Distributable funds		
Reserve for invested unrestricted equity	210,639,481.81	210,639,481.81
Profit from previous financial periods	287,026,854.12	337,173,372.46
Profit for the financial period	111,620,817.49	103,474,030.45
Distributable funds	609,287,153.42	651,286,884.72

EUR	2022	2021
13. Mandatory provisions		
Provisions for pension		
1.1.	843,168.00	843,168.00
Decrease	-104,220.00	0.00
31.12.	738,948.00	843,168.00
Provisions for unemployment pension costs		
1.1.	172,714.66	196,086.09
Decrease	-172,714.66	-23,371.43
31.12.	0.00	172,714.66
Provisions for environmental obligations		
1.1.	2,744,233.69	3,437,741.58
Increase		29,091.00
Decrease	-689,228.10	-722,598.89
Cancellation of unused provision	-64,096.59	0.00
31.12.	1,990,909.00	2,744,233.69
Total provisions		
1.1.	3,760,116.35	4,476,995.67
Increase	0.00	29,091.00
Decrease	-966,162.76	-745,970.32
31.12.	2,729,857.00	3,760,116.35
14. Deferred tax assets and liabilities		
Deferred tax assets		
Mandatory provisions	545,971.40	752,023.27
	545,971.40	752,023.27
Deferred tax liabilities		
Valuation of Pohjolan Voima Oyj shares at fair value	62,945,573.05	27,247,173.05
Financial instruments	1,969,308.31	1,868,781.12
	64,914,881.36	29,115,954.17
Deferred tax assets (+) and liabilities (-), net	-64,368,909.96	-28,363,930.90
The deferred tax liability for accrued depreciation in 2022 was EUR 35.2 million (32.9).		
15. Non-current liabilities		
Liabilities to group companies		
Accrued liabilities		
Derivatives	0.00	1,691,108.43
	0.00	1,691,108.43
Other liabilities		
Bonds	249,601,391.02	249,517,437.02
Loans from financial institutions	176,470,588.24	179,316,176.48
Government grants	2,399,500.74	0.00
Deferred tax liabilities	64,368,909.96	28,363,930.89
Advance payments	1,082,432.07	1,082,432.10
	493,922,822.03	458,279,976.49
Non-current liabilities total	493,922,822.03	459,971,084.92

Bond and debentures

Bond	Nominal value	Interest %	2022	2021
2017–2027	250,000,000.00	2.75	249,601,391.02	249,517,437.02
	250,000,000.00		249,601,391.02	249,517,437.02

Metsä Board has for Husum investments Finnvera 95% guaranteed loan agreement of EUR 100.0 million, of which remaining EUR 66.8 million was drawn down in May.

Non-current liabilities and repayment

	Liabilities to group companies	Bonds	Loans from financial institutions	Other loans	Total
2023			0.00		0.00
2024			11,764,705.88		11,764,705.88
2025			111,764,705.88		111,764,705.88
2026			11,764,705.88		11,764,705.88
2027			11,764,705.88		11,764,705.88
2028–		249,601,391.02	29,411,764.72		279,013,155.74
Total	0.00	249,601,391.02	176,470,588.24	0.00	426,071,979.26

EUR	2022	2021
16. Current liabilities		
Liabilities from Group companies		
Accounts payable	56,142,768.77	63,200,799.16
Accruals and deferred income	32,753,317.50	20,654,800.27
	88,896,086.27	83,855,599.43
Liabilities from associated interests		
Accounts payable	0.00	704,619.73
	0.00	704,619.73
Liabilities from other		
Return loans from occupational pension insurance institutions	11,764,705.88	3,908,823.52
Advance payment	3,756,180.63	2,521,860.77
Accounts payable	175,417,664.49	154,123,561.95
Other liabilities	7,699,014.97	19,896,953.06
Accruals and deferred income	65,809,346.27	90,980,579.48
	264,446,912.24	271,431,778.78
Total current liabilities	353,342,998.51	355,991,997.94
Accruals and deferred income to group companies, current, specification		
Derivatives	30,218,666.25	18,589,770.35
Others	2,534,651.25	2,065,029.92
	32,753,317.50	20,654,800.27
Accruals and deferred income, current, external		
Personnel expenses	26,666,808.07	27,813,139.51
Accruals of purchases	20,622,684.87	28,729,281.88
Discounts	16,000,244.15	18,065,576.49
Interests	2,275,783.41	2,093,172.00
Taxes	224,929.41	11,623,372.28
Others	18,896.36	2,656,037.32
	65,809,346.27	90,980,579.48

17. Financial Instruments

Financial derivatives 2022

EUR	Nominal value	Fair value			Fair value	
		Derivative assets	Derivative liabilities	Total	Fair value through profit and loss	Fair value through fair value reserve
Interest rate swaps	100,000,000.00	3,147,221.92	0.00	3,147,221.92	0.00	3,147,221.92
Total interest rate derivatives	100,000,000.00	3,147,221.92	0.00	3,147,221.92	0.00	3,147,221.92
Currency forward agreements	1,790,092,903.51	31,341,614.74	25,038,675.12	6,302,939.62	1,378,520.10	4,924,419.66
Currency option agreements	281,267,579.22	2,200,385.60	137,976.17	2,062,409.43	0.00	2,062,409.43
Currency derivatives total	2,071,360,482.73	33,542,000.34	25,176,651.29	8,365,349.05	1,378,520.10	6,986,829.09
Oil derivatives	27,484,187.40	538,987.95	3,877,616.12	-3,338,628.17	0.00	-3,338,628.17
Other commodity derivatives	32,698,452.00	6,195,460.90	1,164,398.84	5,031,062.06	2,089,620.00	2,941,442.06
Commodity derivatives	60,182,639.40	6,734,448.85	5,042,014.96	1,692,433.89	2,089,620.00	-397,186.11
Derivatives total	2,231,543,122.13	43,423,671.11	30,218,666.25	13,205,004.86	3,468,140.10	9,736,864.90

Financial derivatives 2021

EUR	Nominal value	Fair value			Fair value	
		Derivative assets	Derivative liabilities	Total	Fair value through profit and loss	Fair value through fair value reserve
Interest rate swaps	100,000,000.00		1,691,108.57	-1,691,108.57	0.00	-1,691,108.43
Total interest rate derivatives	100,000,000.00		1,691,108.57	-1,691,108.57	0.00	-1,691,108.43
Currency forward agreements	1,066,871,526.94	2,033,435.72	18,507,293.72	-16,473,858.00	-157,510.75	-16,316,347.25
Currency option agreements	0.00	0.00	0.00	0.00	0.00	0.00
Currency derivatives total	1,066,871,526.94	2,033,435.72	18,507,293.72	-16,473,858.00	-157,510.75	-16,316,347.25
Oil derivatives	17,103,868.80	3,658,212.43	4,129.93	3,654,082.50	0.00	3,654,082.50
Other commodity derivatives	14,030,062.80	23,229,041.72	78,346.70	23,150,695.02	0.00	23,150,695.02
Commodity derivatives	31,133,931.60	26,887,254.15	82,476.63	26,804,777.52	0.00	26,804,777.52
Derivatives total	1,198,005,458.54	28,920,689.87	20,280,878.92	8,639,810.95	-157,510.75	8,797,321.84

All derivative agreements of Metsä Board Oyj have been entered into for hedging purpose, and cash flow hedge accounting according to IFRS 9 has been applied in major part of the agreements within IFRS financial statements. Only the part of currency derivatives designated as hedges of accounts receivables and accounts payables is not directed to hedge accounting. Interest rate derivatives are interest rate swaps maturing in 1–3 years and entered into to hedge the floating rate interest payments. Currency derivatives contracts concluded to hedge currency cash flows mature fully during 2022. Commodity derivatives are natural gas forwards and fuel oil forwards directed to hedge the cash flows arising from purchases of these commodities. Commodity forwards mature fully during 2023. A more detailed description of financial risk management and the principles applied to derivative contracts is included in note 5.6 and 5.7 of the consolidated Group accounts.

The fair value hierarchy of financial assets and liabilities 2022

EUR	Level 1	Level 2	Level 3	Total
Financial assets at fair value				
Other shares and holdings			344,817,070.84	344,817,070.84
Derivative financial assets	6,734,448.85	36,689,222.26		43,423,671.11
Financial liabilities measured at fair value				
Derivative financial liabilities	5,042,014.96	25,176,651.15		30,218,666.11

The fair value hierarchy of financial assets and liabilities 2021

EUR	Level 1	Level 2	Level 3	Total
Financial assets at fair value				
Other shares and holdings			178,311,058.30	178,311,058.30
Derivative financial assets	26,887,254.15	2,033,435.72		28,920,689.87
Financial liabilities measured at fair value				
Derivative financial liabilities	82,476.63	20,198,402.15		20,280,878.78

The principles applied to classification of financial assets and liabilities valued at fair value are described in Notes 5.6 and 5.7 of the Metsä Board consolidated financial statements.

18. Disputes, legal proceedings and commitments

Disputes and legal proceedings

Disputes are presented in Note 8.1 of the consolidated financial statements.

Commitments and contingencies

EUR	2022	2021
For own and for affiliated companies		
Guarantees and counter-indemnities	2,061,906.00	2,045,966.00
For affiliated companies		
Other commitments	3,759,384.00	0.00
Leasing commitments		
Payments due in following 12 months	2,650,424.63	1,939,543.43
Payments due later than 1 year	5,180,159.98	4,913,625.50
Total		
Guarantees	2,061,906.00	2,045,966.00
Other commitments	3,759,384.00	0.00
Leasing commitments	7,830,584.61	6,853,168.93
Total commitments	13,651,874.61	8,899,134.93
Investment commitments		
Payments due in following 12 months	4,250,625.57	5,793,673.55
Payments due later than 1 year	1,595,315.50	1,856,148.10
	5,845,941.07	7,649,821.65

19. Shares and holdings

Shares and holdings are presented in Note 7.2. of consolidated financial statements.

The Board's proposal to the Annual General Meeting for the distribution of funds

The distributable funds of the company are EUR 609,287,153.42 of which retained earnings constitute EUR 287,026,854.12 and profit for the period EUR 111,620,817.49.

The Board of Directors proposes the following to the Annual General Meeting regarding the distribution of funds:

Dividend of EUR 0.58 per share be paid, or in total	205,617,392.68
To be left in the unrestricted shareholders' equity	403,669,760.74
Distributable funds of the company	609,287,153.42

The Board of Directors proposes that the dividend will be paid on 5 April, 2023.

No material changes have been taken place in respect of the company's financial position after the balance sheet date. The liquidity of the company is good, and in the opinion of the Board of Directors, the proposed profit distribution would not compromise the liquidity of the company.

Espoo 8 February 2023

Ilkka Hämälä

Jussi Linnaranta

Hannu Anttila

Raija-Leena Hankonen-Nybom

Erja Hyrsky

Mari Kiviniemi

Jukka Moisio

Timo Saukkonen

Veli Sundbäck

Mika Joukio
CEO

Auditor's Report

To the Annual General Meeting of Metsä Board Corporation

■ Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Metsä Board Corporation (business identity code 0635366-7) for the year ended 31 December, 2022. The financial statements comprise the consolidated balance sheet, statement of comprehensive income, statement of changes in equity, statement of cash flows and notes, including a summary of significant accounting policies, as well as the parent company's balance sheet, income statement, statement of cash flows and notes.

In our opinion

- the consolidated financial statements give a true and fair view of the group's financial position, financial performance and cash flows in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU
- the financial statements give a true and fair view of the parent company's financial performance and financial position in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements.

Our opinion is consistent with the additional report submitted to the Audit Committee.

Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report.

We are independent of the parent company and of the group companies in accordance with the ethical requirements that are applicable in Finland

and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

In our best knowledge and understanding, the non-audit services that we have provided to the parent company and group companies are in compliance with laws and regulations applicable in Finland regarding these services, and we have not provided any prohibited non-audit services referred to in Article 5(1) of regulation (EU) 537/2014. The non-audit services that we have provided have been disclosed in note 2.4 to the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Materiality

The scope of our audit was influenced by our application of materiality. The materiality is determined based on our professional judgement and is used to determine the nature, timing and extent of our audit procedures and to evaluate the effect of identified misstatements on the financial statements as a whole. The level of materiality we set is based on our assessment of the magnitude of misstatements that, individually or in aggregate, could reasonably be expected to have influence on the economic decisions of the users of the financial statements. We have also taken into account misstatements and/or possible misstatements that in our opinion are material for qualitative reasons for the users of the financial statements.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion

THE KEY AUDIT MATTER	HOW THE MATTER WAS ADDRESSED IN THE AUDIT
Valuation of tangible and intangible assets (Refer to notes 4.1 and 4.2 to the consolidated financial statements)	
<p>Tangible and intangible assets total EUR 1,126 million and represent 33 percent of the consolidated total assets. The carrying value of construction in progress under the tangible assets amounts to EUR 163 million.</p> <p>Tangible and intangible assets are allocated to cash-generating units and tested for impairment annually or more frequently should there be an indication of impairment.</p> <p>Determining the key assumptions used in the cash flow forecasts underlying the impairment tests requires management judgment.</p> <p>Due to the significant carrying values involved, valuation of tangible and intangible assets is determined a key audit matter.</p>	<p>Our audit procedures included evaluation of the appropriateness of the capitalization and depreciation principles applied as well as testing of the financial controls over investments.</p> <p>We also assessed the key assumptions used in the impairment tests by reference to the budgets approved by the parent company's Board of Directors, data external to the Group and our own views. We involved KPMG valuation specialists when assessing the mathematical accuracy of the calculations, as well as comparing the assumptions to externally available market and industry data.</p> <p>In addition, we considered the appropriateness of the disclosures regarding the tangible and intangible assets.</p>
Valuation of inventories (Refer to note 4.4 to the consolidated financial statements)	
<p>Inventory management, stocktaking routines and pricing of inventories are key factors in the valuation of inventories. The Group's carrying value of inventories was EUR 507 million at the end of the financial year.</p> <p>The valuation of inventories involves management estimates in relation to potentially obsolete inventory, as well as to fluctuations in the market prices of finished goods.</p> <p>The valuation of inventories has a significant impact on the profit and loss account and therefore it is determined as a key audit matter.</p>	<p>We evaluated the appropriateness of the accounting policies by reference to IFRS standards, as well as the functionality of the key IT systems of inventory management.</p> <p>We tested the controls over inventory management, accuracy of inventory amounts and valuation of inventories, as well as performed substantive audit procedures relating to the valuation of inventories to test the accuracy of inventory valuation. We also followed the execution of certain stocktaking routines during the financial year.</p>
Financial contracts and hedging instruments (Refer to notes 5.5, 5.6 and 5.7 to the consolidated financial statements)	
<p>The financial liabilities amount to EUR 453 million, accounting for 13 percent of the consolidated balance sheet. In addition, the Group has off-balance sheet committed credit facility agreements amounting to EUR 200 million.</p> <p>The Group hedges financial risks with interest rate and foreign currency derivatives and their nominal values amounted to EUR 2,171 million at the end of the financial year.</p> <p>Due to the significance of the financial and derivative contracts and large number of transactions, the financial contracts and hedging instruments are determined as a key audit matter.</p>	<p>Our audit procedures included evaluation of the recognition and measurement principles applied to financial instruments for appropriateness in relation to IFRS requirements, as well as testing of controls over the accuracy and valuation of financial instruments.</p> <p>As part of our year-end audit procedures we tested the appropriateness of valuations by using various analysis, as well as selecting transactions for testing on a sample basis.</p> <p>In addition, we evaluated the adequacy of the disclosures relating to financial instruments.</p>
Controls over financial reporting and related IT systems	
<p>The IT control environment relating to the financial reporting process and the application controls of individual IT systems have an impact on the selected audit approach.</p> <p>As the consolidated financial statements are based on extensive number of data flows from multiple IT systems, consequently the financial reporting control environment is determined as a key audit matter.</p>	<p>Our audit procedures included evaluation of the financial reporting process and related control environment, as well as testing of the effectiveness of controls including general IT controls. Our audit procedures focused on testing the reconciliation and approval controls as well as on evaluating the administration of access rights.</p> <p>Our audit procedures extensively consisted of several substantive procedures as well as data analysis relating to the most significant balances on the income statement and on the balance sheet.</p>

thereon, and we do not provide a separate opinion on these matters. The significant risks of material misstatement referred to in the EU Regulation No 537/2014 point (c) of Article 10(2) are included in the description of key audit matters below.

We have also addressed the risk of management override of internal controls. This includes consideration of whether there was evidence of management bias that represented a risk of material misstatement due to fraud.

Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

The Board of Directors and the Managing Director are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, and of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors and the Managing Director are responsible for assessing the parent company's and the group's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the parent company or the group or cease operations, or there is no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with good auditing practice will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with good auditing practice, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher

than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the parent company's or the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the parent company's or the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the parent company or the group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Reporting Requirements

Information on our audit engagement

We were first appointed as auditors by the Annual General Meeting on 28 March 2012, and our appointment represents a total period of uninterrupted engagement of 11 years.

Other Information

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises the report of the Board of Directors and the information included in the Annual Report, but does not include the financial statements and our auditor's report thereon. We have obtained the report of the Board of Directors prior to the date of this auditor's report, and the Annual Report is expected to be made available to us after that date. Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the

financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. With respect to the report of the Board of Directors, our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

In our opinion, the information in the report of the Board of Directors is consistent with the information in the financial statements and the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Other opinions

We support that the financial statements should be adopted. The proposal by the Board of Directors regarding the treatment of distributable funds is in compliance with the Limited Liability Companies Act. We support that the Board of Directors of the parent company and the Managing Director should be discharged from liability for the financial period audited by us.

Helsinki, February 9, 2023

KPMG Oy Ab

Kirsi Jantunen

Authorized Public Accountant, KHT

Shares and shareholders

Metsä Board's shares

Metsä Board's shares are listed on the Nasdaq Helsinki. The share capital of the company on 31 December 2022 was EUR 557,881,540.40. Metsä Board has two series of shares. At the end of 2022, there were 32,802,175 A shares and 322,710,571 B shares. Each series A share entitles its holder to twenty (20) votes at a General Meeting of Shareholders, and each series B share entitles the holder to one (1) vote. Metsä Board's A shares can be converted to B shares if a shareholder or a representative of the nominee registered shares makes a written request for a conversion to the company. During the review period, there were no share conversions.

On 27 October 2022, the Board of Directors of Metsä Board decided to launch a share buyback of company's own shares. The acquisition of the company's own shares started on 28 October 2022 and ended on 11 November 2022. During this period, Metsä Board acquired 1,000,000 B shares for an average price of EUR 7.8225 per share. The own shares were acquired for payment of the Board fees or to implement the company's share-based incentive systems.

On 30 December 2022, Metsäliitto Cooperative announced that its ownership in Metsä Board had exceeded the 50% threshold, and that its holding in Metsä Board was 50.16% of shares and 68.24% of votes. As Metsä Board is an entity controlled by Metsäliitto Cooperative, Metsäliitto Cooperative's ownership also includes the 1,000,000 own shares held by Metsä Board.

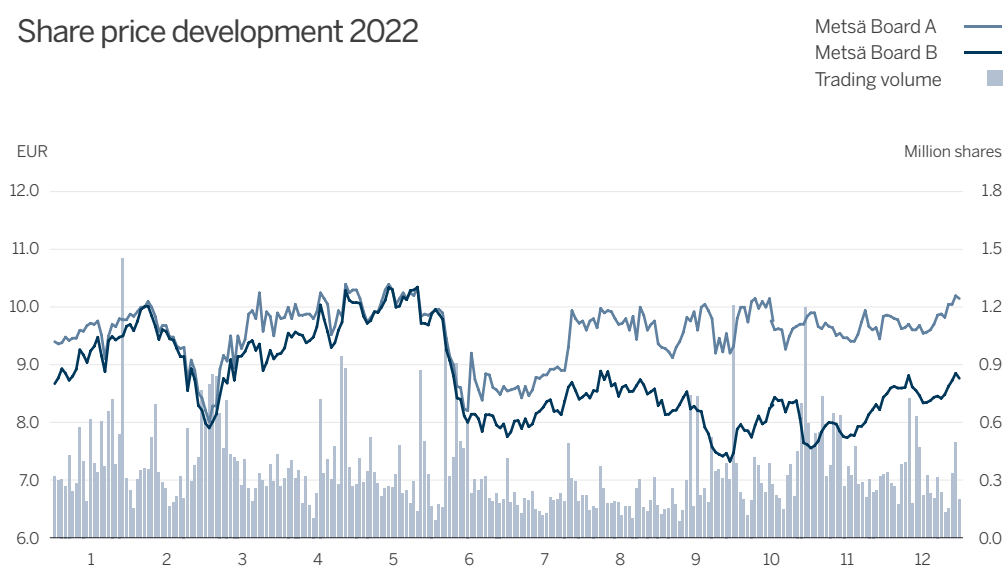
Basic information on Metsä Board's shares

	Metsä Board's A share	Metsä Board's B share
Listing	Nasdaq Helsinki	Nasdaq Helsinki
Date of listing	2 January 1987	2 January 1987
Market cap segment	Large Cap	Large Cap
Ticker symbol	METSA	METSB
ISIN code	FI0009000640	FI0009000665
Reuters code	METSA.HE	METSB.HE
Bloomberg code	METSA FH	METSB FH
Number of shares 31 Dec 2022	32,802,175	322,710,571

Trading on the Nasdaq Helsinki in 2022 (2021)

	Metsä Board's A share	Metsä Board's B share
Closing price on 31 December, EUR	10.15 (9.38)	8.77 (8.61)
Lowest price, EUR	7.66 (8.50)	7.09 (7.50)
Highest price, EUR	10.50 (11.00)	10.49 (11.01)
Average price, EUR	9.48 (9.48)	8.73 (9.14)
Average daily trading volume, no. of shares	3,357 (7,153)	347,165 (389,117)
Total trading volume, no. of shares	849,346 (1,802,589)	87,832,699 (98,057,575)
Market capitalisation, EUR million	333 (308)	2,829 (2,779)

Share price development 2022



Source: Euroland <https://www.metsagroup.com/metsaboard/investors/share-tools/share-monitor/>

Major shareholders, 31 December 2022 ¹⁾²⁾

Shareholders	A series		B series		Total shares		Votes	
	No. of shares	No. of shares	No. of shares	No. of shares	%	%	%	
1 Metsäliitto Cooperative	25,767,605	150,986,697	176,754,302	49.72	68.08			
2 Varma Mutual Pension Insurance Company	2,203,544	15,041,485	17,245,029	4.85	6.04			
3 Ilmarinen Mutual Pension Insurance Company	1,250,000	9,597,000	10,847,000	3.05	3.53			
4 Etola Erkki Olavi	0	6,000,000	6,000,000	1.69	0.61			
5 Elo Mutual Pension Insurance Company	0	4,064,000	4,064,000	1.14	0.42			
6 The State Pension Fund	0	3,400,000	3,400,000	0.96	0.35			
7 Evli Finnish Small Cap Fund	0	1,503,000	1,503,000	0.42	0.15			
8 Danske Invest Finnish Equity Fund	0	1,322,643	1,322,643	0.37	0.14			
9 OP-Finland Small Firms Fund	0	1,218,629	1,218,629	0.34	0.12			
10 OP-Finland	0	1,212,887	1,212,887	0.34	0.12			
11 OP-Henkivakuutus Ltd.	0	1,088,833	1,088,833	0.31	0.11			
12 Etola Markus Eeriki	0	1,000,000	1,000,000	0.28	0.1			
13 Metsä Board Oyj	0	1,000,000	1,000,000	0.28	0.1			
14 Säästöpankki Small Cap Mutual Fund	0	951,643	951,643	0.27	0.1			
15 Etola Mikael Kristian	0	870,000	870,000	0.24	0.09			
16 Säästöpankki Kotimaa Mutual Fund	0	857,600	857,600	0.24	0.09			
17 Aktia Capital Mutual Fund	0	854,841	854,841	0.24	0.09			
18 Maa- ja Metsätaloustuottajain Keskusliitto MTK ry	576,551	201,852	778,403	0.22	1.2			
19 Nordea Pro Finland Fund	0	649,977	649,977	0.18	0.07			
20 Seppälä Tommi Kalervo	0	600,000	600,000	0.17	0.06			

¹⁾ Shareholders in the book entry system²⁾ Ownership information is as recorded in the book-entry account, i.e. taking into account the settlement date (T+2)Supplied by Euroland <https://www.metsagroup.com/metsaboard/investors/share-information/major-shareholders/>

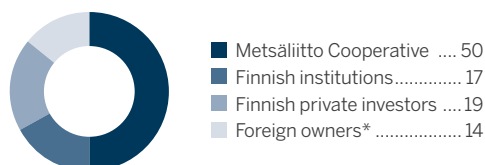
Shares

Number of shares	A share				B share			
	Number of Shareholders	%	Number of shares	%	Number of Shareholders	%	Number of shares	%
1-10	2,042	20.43	11,015	0.03	4,209	7.40	26,337	0.01
11-100	3,994	39.96	201,075	0.61	16,185	28.45	847,301	0.26
101-1,000	3,428	34.30	1,233,583	3.76	25,878	45.49	10,202,708	3.16
1,001-10,000	507	5.07	1,162,199	3.54	9,625	16.92	26,636,607	8.25
10,001-100,000	20	0.20	396,603	1.21	894	1.57	20,580,452	6.38
100,001-	4	0.04	29,797,700	90.84	96	0.17	264,417,166	81.94
Total	9,995	100.00	32,802,175	100.00	56,887	100.00	322,710,571	100.00

Split of shareholdings and voting rights, 31 December 2022

SPLIT OF
SHAREHOLDINGS

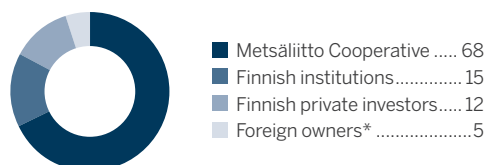
%



* includes nominee registered

SPLIT OF
VOTING RIGHTS

%



* includes nominee registered

Dividend policy

Metsä Board aims to distribute at least 50% of the result for the financial period in dividends every year. The Board of Directors proposes that a dividend of EUR 0.58 per share be distributed for the 2022 financial period, corresponding to 50% of the earnings per share in 2022.

Board of Directors' authority to issue shares

The Board of Directors is authorised to decide on an issue of shares and any special rights with an entitlement to shares as referred to in Chapter 10, section 1 of the Limited Liability Companies Act as follows. The maximum number of shares that can be issued on the basis of the authorisation is 35,000,000 B shares, which corresponds to approximately 10% of all shares in the company. The Board of Directors decides on all terms and conditions applicable to the issue of shares and the special rights with an entitlement to shares. The authorisation applies to both an issue of new shares and the assignment of own shares. The issue of shares and any special rights with an entitlement to shares may occur in departure from a shareholder's subscription right (private placement). The authorisation is valid until 30 June 2023. The authorisation was fully unused on 31 December 2022.

Impact of change in control

Some of Metsä Board's shareholder agreements concerning resource and associated companies include provisions under which Metsä Board must offer its shares in an associated company for sale to the other shareholders in the case of a change of control of Metsä Board. Of these agreements, pursuant to the shareholders agreement of Metsä Fibre Oy, Metsä Fibre's shareholders should offer their shares for sale to the other shareholders in the case of a change of control. A decrease in the voting rights of Metsäliitto Cooperative in Metsä Board to below 50% would not, however, obligate Metsä Board to offer its shares in Metsä Fibre Oy for sale.

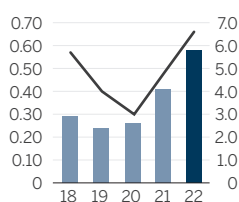
Shareholdings of the members of the Board of Directors and CEO on 31 December 2022

		Holding
Ilkka Hämälä	Chair of the Board of Directors	287,349 B shares
Jussi Linnaranta	Vice Chair of the Board of Directors	29,801 B shares
Hannu Anttila	Member of the Board of Directors	147,575 B shares
Raija-Leena Hankonen	Member of the Board of Directors	6,956 B shares
Erja Hyrsky	Member of the Board of Directors	9,456 B shares
Mari Kiviniemi	Member of the Board of Directors	3,633 B shares
Jukka Moisio	Member of the Board of Directors	12,231 B shares
Timo Saukkonen	Member of the Board of Directors	16,831 B shares
Veli Sundbäck	Member of the Board of Directors	74,908 B shares
Mika Joukio	CEO	352,500 B shares

Share holdings of the Corporate Management Team members are presented on pages 178–179.

DIVIDEND

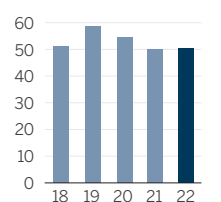
EUR %



■ Dividend/share, EUR
— Dividend yield, %

DIVIDEND / NET RESULT

%



Price development and number of shares

		2022	2021	2020	2019	2018
Adjusted share prices, EUR						
A share	high	10.50	11.00	8.80	7.98	10.10
	low	7.66	8.50	4.80	5.46	6.00
	closing	10.15	9.38	8.64	6.14	6.14
	average	9.48	9.48	6.88	6.56	8.36
B share	high	10.49	11.01	8.79	6.65	10.30
	low	7.09	7.50	4.47	3.86	4.98
	closing	8.77	8.61	8.62	6.00	5.12
	average	8.73	9.14	6.12	5.26	7.95
Trading volume at Nasdaq Helsinki, number of shares						
A share		849,346	1,802,589	1,758,683	694,519	2,227,788
% of total number of shares		2.6	5.5	5.3	2.1	6.3
B share		87,832,699	98,057,575	155,232,570	220,170,829	180,834,626
% of average number of shares		27.2	30.4	48.1	68.3	56.5
Number of shares at year end						
A share		32,802,175	32,802,175	32,887,151	33,087,647	35,358,794
B share		322,710,571	322,710,571	322,625,595	322,425,099	320,153,952
Total		355,512,746	355,512,746	355,512,746	355,512,746	355,512,746
Number of shares at year end		355,359,331	355,512,746	355,512,746	355,512,746	355,512,746
Market capitalisation at year end, EUR million		3,161.5	3,086.2	3,065.2	2,136.1	1,856.3
Number of shareholders, B shares		56,887	54,904	48,165	50,420	45,341

Key figures

EUR million		2022	2021	2020	2019	2018
Earnings per share						
Result before tax		524.9	365.8	212.3	165.6	224.2
– Income taxes		-63.5	-51.8	-42.2	-21.0	-20.8
= Result for the period		461.4	314.0	170.1	144.6	203.4
– Average number of shares		355,359,331	355,512,746	355,512,746	355,512,746	355,512,746
Earnings per share, basic and diluted, EUR		1.15	0.82	0.48	0.41	0.57
Shareholders' equity per share, EUR		5.86	4.78	3.89	3.76	3.72
Dividend per share, EUR		0.58 ¹⁾	0.41	0.26	0.24	0.29
Payout ratio, %		50.4	49.9	54.3	58.5	50.9

Metsä Board shares have no nominal value.

Dividend yield, % of closing price						
A share		5.7 ¹⁾	4.4	3.0	3.9	4.7
B share		6.6 ¹⁾	4.8	3.0	4.0	5.7
Price/earning ratio (P/E ratio)						
A share		8.8	11.4	18.1	15.0	10.8
B share		7.6	10.5	18.0	14.6	9.0
Price to book value (P/BV), %						
A share		173.2	196.2	222.0	163.3	165.1
B share		149.6	180.1	221.5	159.6	137.6

¹⁾ The Board of Directors has proposed that a dividend of EUR 0.58 per share be distributed for the 2022 financial year.

Calculation of key ratios

Alternative performance measures

Key figure	Definition	Justification for the use of the key figure
Profitability		
Operating result	= $\frac{\text{Result before income tax, financial income and expenses, exchange gains and losses and share of results from associated companies and joint ventures}}{\text{Shareholder's equity (average)}}$	The key figure describes the Group's ability to produce a profit from its business, and it is independent of the company's capital structure
EBITDA	= $\frac{\text{Operating result before depreciation, amortisation and impairment losses}}{\text{Shareholder's equity (average)}}$	The key figure shows how much margin is left over from the Group's sales after deducting the variable and fixed costs of business before depreciation, amortisation and impairment
Return on equity (%)	= $\frac{\text{Result before income tax - income taxes}}{\text{Shareholder's equity (average)}}$	The key figure describes the Group's ability to produce a profit with the assets invested in the Group by shareholders
Return on capital employed (%)	= $\frac{\text{Result before income taxes + net exchange differences and other financial expenses}}{\text{Balance total + non-interest bearing liabilities (average)}}$	The key figure describes the Group's ability to produce a profit on the capital invested, from the point of the party investing the capital
Financial position		
Equity ratio (%)	= $\frac{\text{Shareholder's equity}}{\text{Balance total - advance payments received}}$	The key figure describes the Group's capital structure, solvency and ability to take care of its commitments in the long run
Net gearing ratio (%)	= $\frac{\text{Interest-bearing net liabilities}}{\text{Shareholder's equity}}$	The key figure describes the Group's capital structure and financial position
Interest-bearing net liabilities	= $\text{Interest-bearing liabilities} - \text{cash and cash equivalents and interest-bearing receivables}$	The key figure describes the Group's indebtedness
Other		
Total investments	= $\text{Investments in owned and leased fixed assets and investments in business combinations}$	The key figure describes the Group's application of funds for maintaining and renewing its production machinery and plants and for expanding its business with corporate acquisitions
Interest cover	= $\frac{\text{Net cash flow arising from operating activities + net interest expenses}}{\text{Net interest expenses}}$	The key figure describes the Group's ability to meet its debt obligations

Share performance indicators

Key figure	Definition
Earnings per share	= $\frac{\text{Profit attributable to shareholders of parent company}}{\text{Adjusted number of shares (average)}}$
Shareholders' equity per share	= $\frac{\text{Equity attributable to shareholders of parent company}}{\text{Adjusted number of shares at the end of the period}}$
Dividend per share	= $\frac{\text{Dividends}}{\text{Adjusted number of shares at 31 December}}$
Payout ratio (%)	= $\frac{\text{Dividend per share}}{\text{Earnings per share}}$
Dividend yield (%)	= $\frac{\text{Dividend per share}}{\text{Share price at 31 December}}$
Price/earnings ratio (P/E ratio) (%)	= $\frac{\text{Share price at 31 December}}{\text{Earnings per share}}$
P/BV (%)	= $\frac{\text{Share price at 31 December}}{\text{Shareholders' equity per share}}$
Adjusted average share price	= $\frac{\text{Total traded volume per share (EUR)}}{\text{Average adjusted number of shares traded during the financial year}}$
Market capitalisation	= $\text{Number of shares} \times \text{market price at the end of period}$

The presentation of earnings per share is regulated by the Decree of the Ministry of Finance on the Regular Duty of Disclosure of an Issuer of a Security. In addition, the earnings per share ratio is regulated by the IAS 33 standard.

Comparable performance measures

European Securities and Markets Authority (ESMA) guidelines on Alternative Performance Measures define alternative performance measures as a financial measure of historical or future financial performance, financial position or cash flows, other than a financial measure defined in the applicable financial reporting framework, in Metsä Board's case International Financial Reporting Standards as adopted in the EU pursuant to Regulation (EC) No 1606/2002. With the exception of Earnings per share defined in IAS 33 Earnings Per Share, performance measures provided in the interim report all qualify as alternative performance measures under the ESMA guidelines.

Metsä Board sees the presentation of alternative performance measures as providing users of financial statements with an improved view of the company's financial performance and position, including among other things the efficiency of its capital utilisation, operational profitability and debt servicing capabilities.

Exceptional and material items outside the ordinary course of business have been eliminated from the comparable operating result. Metsä Board has defined operating result as follows: Result for the period presented in IFRS income statement before income taxes, financial income and expense as well as share of result of associate companies and joint ventures.

Reconciliation of operating result under IFRS and comparable operating result as well as EBITDA and comparable EBITDA is presented below. Comparable return on capital employed has been calculated using the same adjustments as the comparable operating result, and it has been further adjusted with items of financial income affecting comparability when applicable. Metsä Board considers that key figures derived in this manner improve comparability between reporting periods.

None of these key figures with items affecting comparability eliminated are key figures used in IFRS reporting, and they cannot be compared with other companies' key figures identified with the same names. Items affecting comparability include material gains and losses on disposals of assets, impairment and impairment reversals in accordance with IAS 36 "Impairment of Assets", corporate divestments and acquisitions, adjustment measures and other restructuring measures and their adjustments, costs arising from extensive and unforeseeable interruptions in production and the compensation received for them as well as items arising from legal proceedings.

In Metsä Board's view, comparable performance measures better reflect the underlying operational performance of the company by eliminating the result effect arising from items and transactions outside ordinary course of business.

Reconciliation of items affecting comparability

EUR million	2022	2021
Operating result	531.5	375.9
Depreciation, amortisation and impairment charges	83.1	90.2
EBITDA	614.6	466.0
Items affecting comparability		
Other operating income	-28.6	-12.2
Employee costs	4.6	
Share of results of associated companies	11.6	8.7
Other operating expense	0.6	9.7
Total	-11.7	6.2
EBITDA, comparable	602.8	472.2
Depreciation, amortisation and impairment charges	-83.1	-90.2
Items affecting comparability		
Impairment charges and reversals of impairments	0.9	4.6
Operating result, comparable	520.7	386.6
Share of results of associated companies and joint ventures		0.0
Net financial items	-6.6	-10.0
Items affecting comparability		
Financial items	0.5	
Result before income tax, comparable	514.6	376.6
Income taxes	-63.5	-51.8
Income taxes related to items affecting comparability	0.3	1.9
Result for the period, comparable	451.4	326.6

"+" sign items = expense affecting comparability

"-" sign items = income affecting comparability

Items affecting operating result comparability in 2022 totalled EUR 10.8 million. They comprised EUR 19.2 million from the sale of the share capital in Hangö Steve-doring Ab to Euroports Finland Oy; a EUR 6.5 million capital gain from the sale of a land area unrelated to business operations; a EUR -5.5 million restructuring of customer service and supply chain management; a EUR 2.8 million valuation gain related to the divestment of shares; a EUR -1.0 million impairment recognised for the Russian operations; a EUR -10.5 million impairment recognised for the Russian operations of the associated company Metsä Fibre; a EUR -1.2 million impairment recognised in the assets of Metsä Fibre's Kyrö sawmill; and other items EUR 0.3 million.

Items affecting comparability during 2021 totalled EUR 10.8 million and comprised the following items: a EUR 7.0 million capital gain from the sale of a land area unrelated to business operations; a EUR -6.9 million impairment recognised in the assets of Metsä Fibre's Kemi pulp mill; EUR -1.8 million recognised in taxes as a result of the tax audit in Metsä Fibre's sub-sidiary in Italy; a EUR -4.6 million impairment recognised in the current paperboard production assets in Husum; and EUR -4.5 million in costs related to the chip conveyor fire at the Husum pulp mill. In addition, EUR -2.3 million of taxes affecting comparability are reported in the taxes of previous financial years based on the tax audit of the Italian subsidiary.

Taxes

Metsä Board's business generates taxes to finance public society. In addition to taxes and tax-like payments we pay as a taxpayer our value chain generates various other taxes.

Considering all directly and indirectly generated taxes and tax-like payments arising from Metsä Board's operations, our economic contribution to surrounding society is material.

Metsä Board is committed to follow international transfer pricing guidelines and local tax laws and regulations in all of its operating countries. Majority of Metsä Board's management, production and other functions are located in Finland, thus most of the corporate taxes are paid in Finland.

Based on our Board Tax Policy Metsä Board's business models and structures shall always be based on business reasons and real substance.

We refrain from artificial means to decrease our tax cost.

Metsä Board's cooperation with tax authorities is transparent and active. In Finland Metsä Board participates in enhanced cooperation with Finnish Tax Administration.

Tax issues are managed by Metsä Board's tax function and taxes are in the scope of Board of Directors' Audit Committee's regular follow-up.

Metsä Fibre's share of result

Metsä Board's consolidated result includes associated company Metsä Fibre's result share (24.9% ownership). Metsä Fibre pays corporate income taxes on its own results and Metsä Board consolidates the result share on post-tax basis.

Taxes to be paid

EUR million	Finland		Sweden		Other countries		Total	
	2022	2021	2022	2021	2022	2021	2022	2021
Direct taxes on Corporate income	5.7	25.4	26.7	20.8	4.5	5.6	36.9	51.8
Payroll related taxes and contributions	29.4	29.5	14.5	14.7	4.1	3.5	47.9	47.6
Operational taxes	4.1	4.1	6.2	4.8	0.0	0.0	10.4	8.9
Other taxes	0.6	0.3	0.0	0.0	0.2	0.2	0.8	0.5
Total	39.8	59.4	47.5	40.2	8.7	9.2	96.0	108.8

Quarterly data

EUR million	Full year					Quarterly				
	2022	2021	IV/2022	III/2022	II/2022	I/2022	IV/2021	III/2021	II/2021	I/2021
Sales	2,479.6	2,084.1	599.8	647.3	650.5	582.0	518.5	516.1	555.8	493.7
Operating result, comparable	520.7	386.6	100.8	152.5	145.9	121.5	91.3	104.0	102.5	88.8
Operating result	531.5	375.9	94.7	153.4	142.6	140.7	90.8	99.4	103.7	82.0
Share of profit from associated companies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exchange gains/losses	-5.0	-2.3	-1.8	-0.5	-2.3	-0.4	-0.6	-0.3	-1.1	-0.4
Other financial income and expenses	-1.7	-7.7	0.5	-0.6	-0.3	-1.2	0.6	-2.8	-2.8	-2.7
Result before tax	524.9	365.8	93.4	152.4	140.0	139.1	90.7	96.4	99.8	78.9
Operating result, % of sales	21.4	18.0	15.8	23.7	21.9	24.2	17.5	19.3	18.6	16.6

1,000 t	Full year					Quarterly				
	2022	2021	IV/2022	III/2022	II/2022	I/2022	IV/2021	III/2021	II/2021	I/2021
Deliveries										
Folding boxboard	1,208	1,296	285	308	308	307	300	319	348	329
White kraftliner	609	627	133	146	164	166	143	156	166	162
Metsä Fibre's pulp ¹⁾	503	496	105	124	152	122	120	104	156	116
Metsä Board's pulp	717	762	162	177	192	187	203	178	185	196
Production										
Folding boxboard	1,272	1,272	264	337	336	335	295	317	318	342
White kraftliner	605	634	133	147	164	162	155	155	160	164
Metsä Fibre's pulp ¹⁾	1,409	1,362	319	360	362	368	335	335	329	362
Metsä Board's pulp	731	747	190	190	171	181	183	184	194	186

¹⁾ Corresponds to Metsä Board's ownership of 24.9 per cent in Metsä Fibre.

Ten years in figures

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Income statement, eur million										
Sales	2,479	2,084	1,890	1,932	1,944	1,849	1,720	2,008	2,008	2,019
- change, %	19.0	10.3	-2.2	-0.1	5.2	7.5	-14.3	-0.0	-0.5	-4.2
EBITDA, comparable	603	472	316	279	344	289	231	283	236	208
- % of sales	24.3	22.7	16.7	14.4	17.7	15.6	13.4	14.1	11.8	10.3
Operating result	532	376	227	181	246	207	132	199	117	114
Operating result, comparable	521	387	221	184	252	193	137	180	137	104
- % of sales	21.0	18.6	11.7	9.5	13.0	10.5	8.0	9.0	6.8	5.2
Result for the period	461	314	170	145	203	150	90	137	69	64
Balance sheet, eur million										
Balance sheet total	3,403	2,922	2,302	2,270	2,284	2,226	2,194	2,220	2,149	2,097
Equity attributable to shareholders of parent company	2,082	1,699	1,384	1,338	1,323	1,167	1,052	1,029	841	850
Interest bearing net liabilities	-94	-78	236	308	335	358	464	333	427	597
Key figures per share and distribution equity owners of the parent company										
Dividend and equity distribution, EUR million	205.6 ¹⁾	145.8	92.4	85.3	103.1	74.7	67.5	60.4	39.4	29.5
Dividend and equity distribution per share, EUR	0.58 ¹⁾	0.41	0.26	0.24	0.29	0.21	0.19	0.17	0.12	0.09
Payout ratio including equity distribution, %	50.4 ¹⁾	49.9	54.31	58.5	50.9	50.0	76.0	43.6	57.1	47.4
Dividend yield, %	6.6 ¹⁾	4.8	3.0	4.0	5.7	2.9	2.8	2.5	2.7	2.9
Key figures – profitability										
Return on capital employed (ROCE), comparable, %	20.9	18.7	12.2	10.4	14.4	11.2	8.1	11.3	9.1	6.4
Return on equity, comparable, %	22.0	20.2	12.1	11.0	16.7	12.4	9.0	12.9	10.4	6.5
Key figures – balance sheet and financing										
Interest bearing net liabilities / EBITDA, comparable	0.2	-0.2	0.7	1.1	1.0	1.2	2.0	1.2	1.8	2.9
Equity ratio, %	66.4	63.3	60.3	59.1	58.1	52.6	48.2	46.5	39.2	40.7
Net gearing, %	4	-4	17	23	25	31	44	32	51	70
Net cash flow from operations, EUR million	232	330	308	201	151	236	77	247	198	82
Net interest expense, EUR million	5	8	12	14	19	36	26	26	42	60
Interest cover	50.7	42.7	27.6	15.4	9.0	7.6	4.0	10.4	5.7	2.4
Other key figures										
Total investments, EUR million	304	220	166	99	70	65	162	178	44	67
Depreciation, amortisation and impairment losses, EUR million	83	90	95	114	92	92	102	104	126	101
R & D expenditure, EUR million ²⁾	6	6	9	9	6	6	6	8	6	5
- % of sales	0.2	0.3	0.5	0.4	0.3	0.3	0.4	0.4	0.3	0.3
Personnel, average	2,352	2,461	2,455	2,433	2,435	2,456	2,588	2,851	3,200	3,245
- in Finland	1,340	1,490	1,486	1,458	1,433	1,441	1,552	1,538	1,542	1,560
Paperboard deliveries, 1,000 t	1,817	1,922	1,810	1,791	1,830	1,803	1,568	1,404	1,256	1,141

Dividend and key figures per share for years 2012–2014 have been issue-adjusted. The rights issue factor was 1.030627.

¹⁾ The Board of Directors has proposed that a dividend of EUR 0.58 per share be distributed for the 2022 financial year. Dividend yield for 2022 has been calculated including the proposed equity distribution and using the B share closing price as of 31 December 2022.

²⁾ The reporting of research and development expenses has been clarified and the figures for 2019–2022 are comparable.

Calculation of key ratios is presented on page 165.

Corporate governance statement

■ Introduction

This statement describing the corporate governance of Metsä Board Corporation ('Metsä Board' or 'Company') has been issued as a separate statement pursuant to the Securities Markets Act and the Finnish Corporate Governance Code 2020 and is published concurrently with the Company's financial statements and report of the Board of Directors. The Finnish Corporate Governance Code 2020 is available on the website of the Finnish Securities Market Association at <https://cgfinland.fi/en/corporate-governance-code/>.

Metsä Board is a Finnish public limited company whose A and B series shares are publicly traded on the official list of NASDAQ Helsinki Ltd. (Helsinki Stock Exchange). In its administration and governance Metsä Board complies with Finnish laws, especially the Limited Liability Companies Act, the Company's Articles of Association, and rules and regulations issued under the law, including those issued by the Financial Supervisory Authority that apply to listed companies. Metsä Board also complies

with the rules and recommendations of Nasdaq Helsinki as applicable to listed companies.

Metsä Board prepares its financial statements and interim reports according to the International Financial Reporting Standards (IFRS). The financial statement documents are prepared and published in Finnish and English.

Metsä Board's headquarters are located in Espoo, Finland. The Company's registered domicile is Helsinki.

Compliance with the Finnish Corporate Governance Code

As a Finnish listed company, Metsä Board complies with the Finnish Corporate Governance Code, which became effective on 1 January 2020. Metsä Board does not currently depart from any single recommendation of the Code. This statement has been issued in compliance with the regulations concerning reporting content set out in the Code. This statement has been reviewed by the Board of Directors' Audit Committee.

■ Corporate governance in Metsä Board

The Company's statutory bodies include the General Meeting of Shareholders, the Board of Directors and the CEO. In addition, a Corporate Management Team assists the CEO in the operative management of the Company and in coordinating its operations. Members of the management team (including the CEO) are not members of the Board of Directors. The tasks and responsibilities of the different corporate bodies are determined in accordance with the Finnish Limited Liability Companies Act.

Metsä Board's organisation is based on the following key functions: sales and supply chain, production, technology, finance, business development and human resources. The heads of functions are members of the Corporate Management Team. Functions are supported by centralised support functions, most of which are common with other Metsä Group companies. Support functions are based on separate arm's length service agreements.

General Meeting

The General Meeting of Shareholders is the Company's highest decision-making body where shareholders use their decision-making power. Each shareholder is entitled to participate in a General Meeting by following the procedure described in the General Meeting notice. According to the Limited Liability Companies Act, the General Meeting decides on matters such as:

- amendments to the Articles of Association;
- adoption of the financial statements;
- profit distribution;
- mergers and demergers;
- acquisition and disposal of own shares;
- appointment of the members of the Board, and their and the Board committee members' remuneration; and
- appointment of the auditor and the auditor's remuneration.

Shareholders are entitled to have a matter pertaining to the General Meeting addressed by the General Meeting, provided that they submit a written request well in advance so that the matter can be included in the meeting notice. The Company has specified 15 January as the deadline. In addition, shareholders have the right

CORPORATE GOVERNANCE IN METSÄ BOARD



to request information about the items on the agenda of the General Meeting. To be entitled to participate in a General Meeting, a shareholder must be included in the register of shareholders eight working days before the General Meeting. An Annual General Meeting takes place each year in June at the latest. Notice of a General Meeting is served at the earliest three months and at the latest three weeks before the meeting by publishing it on the Company's website and by publishing the notice or a summary thereof in at least one Finnish newspaper of general circulation.

An Extraordinary General Meeting will convene if the Board finds it necessary, or if the auditor or shareholders representing at least 10% of all shares deliver a written request to this effect in order to process a specified matter.

Board of Directors

The Board of Directors is responsible for the Company's administration and arranging the Company's operations properly according to applicable laws, the Articles of Association and good corporate governance. The general authority of the Board covers matters that are far-reaching, strategically significant, or unusual, and which therefore do not belong to the Company's day-to-day business operations. The Board supervises Metsä Board's operations and management and decides on the Company's strategy, major investments, organisation structure and significant financing matters. The Board supervises the appropriate organisation of the Company's operations. It also ensures that accounting and financial control, financial reporting and risk management have been organised appropriately.

The Board has written rules of procedure for its operations. In accordance with the rules of procedure, the Board's tasks include:

- monitoring compliance with the Company's Articles of Association;
- appointing and discharging the CEO and ensuring that the CEO takes care of the Company's day-to-day administration in accordance with the regulations and guidelines issued by the Board;
- establishing necessary committees, appointing their members and approving their rules of procedure;
- addressing and approving the Company's values, the long-term plan and corporate strategy;

- accepting the annual operational plan and budget;
- supervising the organisation of the Company's accounting, asset management, risk control and financial reporting;
- deciding on significant investments, business acquisitions, divestments and closures of operations;
- deciding on considerable investments and financing arrangements;
- deciding on the transfer and pledging of the Company's significant real property;
- deciding on management authorisations and granting rights to represent the Company;
- convening the General Meeting and monitoring that the decisions taken by the General Meeting are implemented;
- signing and presenting the financial statements to the Annual General Meeting for approval, and preparing a proposal for the use of profits;
- approving key business policies, orders and guidelines, including the insider rules;
- deciding on the incentive schemes and their criteria and terms and conditions;
- approving and publishing the financial statements bulletin as well as interim and half-year financial reports; and

- publishing or authorising the CEO to publish all inside information likely to have a significant effect on the value of the Company's shares, or which otherwise must be made public under the Finnish Securities Markets Act or the Rules of the Helsinki Stock Exchange.

The Board's rules of procedure are available in their entirety on the Company's website at <https://www.metsagroup.com/globalassets/metsa-board/documents/investors/corporate-governance/en/general/metsa-board-board-working-order.pdf>. The Board can delegate matters falling within its general competence to the CEO and correspondingly take charge of decision making in a task that falls within the CEO's general competence.

On an annual basis, the Board assesses its own operation and the Company's corporate governance principles and decides on any necessary changes to them.

The Board convenes on a regular basis. In the financial year 2022, the Board held a total of 13 meetings. The Board members' attendance rate was 97% (99% in 2021 and 100% in 2020).

Each member's attendance in the meetings of the Board and its committees

Member of the Board of Directors	Number of Board meetings	Attendance rate (%)	Number of committee meetings	Attendance rate (%)
Ilkka Hämälä Chair of the Board and the Nomination and HR Committee	13/13	100	4/4	100
Jussi Linnaranta Deputy Chair of the Board and Member of the Nomination and HR Committee	13/13	100	4/4	100
Hannu Anttila Member of the Board and the Audit Committee	13/13	100	4/4	100
Raija-Leena Hankonen-Nyborn Chair of the Audit Committee and Member of the Board	12/13	92	4/4	100
Erja Hyrsky Member of the Board and the Nomination and HR Committee	13/13	100	4/4	100
Mari Kiviniemi (as of 24 March 2022) Member of the Board and the Audit Committee	10/10	100	3/3	100
Kirsi Komi (until 24 March 2022) Member of the Board and the Audit Committee	2/3	67	1/1	100
Jukka Moisio Member of the Board and the Audit Committee	12/13	92	4/4	100
Timo Saukkonen Member of the Board and the Nomination and HR Committee	13/13	100	4/4	100
Veli Sundbäck Member of the Board and the Nomination and HR Committee	13/13	100	4/4	100

Composition, diversity and independence of the Board of Directors

The composition and number of members of the Board of Directors must facilitate the effective fulfilment of the Board's tasks. The composition of the Board of Directors takes into account the Company's development stage, ownership structure, the special requirements of the industry and the needs of the Company's operations. The goal is to set up a diverse Board, while also ensuring that each Board member has the necessary qualifications and time to perform the duties assigned to them. The Board of Directors has both women and men as members.

The Board of Directors has adopted diversity principles, which are available on the Company's website (<https://www.metsagroup.com/globalassets/metsa-board/documents/investors/corporate-governance/en/general/metsa-board-board-diversity-principles.pdf>). The Board recognises the benefits that a diverse and broad Board composition can offer the Company and its shareholders. Diversity supports the Board's open work atmosphere, independent role and decision making. One of the Board's key tasks is to support and challenge the operative management from various perspectives proactively and consistently. For the Board and its committees to successfully handle their duties, they require a diverse composition and varied competence and experience. Attention must also be paid to the personal qualities of individual members. Diversity must also support the Company's development stages and correspond to the future development needs of the Company and its business.

In addition to industry knowledge, Metsä Board has determined experience from different fields of business and the international business scene are to be key factors in terms of the Board of Directors' diversity. In addition, varying educational backgrounds, management experience from different business sectors and a varying age and gender structure have been identified as factors promoting diversity. Metsä Board's goal is to have both women and men on the Board. The Board evaluates the achievement of diversity targets as part of its own and its Nomination and HR Committee's normal operations.

According to the Articles of Association, a minimum of five and a maximum of ten ordinary members are appointed to the Board of Directors by the shareholders at the Annual

General Meeting for a one-year period at a time. The number of consecutive terms is not limited. At present, the Board has nine members.

The Board appoints a Chair and a Deputy Chair from among its members. The 2022 Annual General Meeting appointed the following persons as members of the Board of Directors:

- Hannu Anttila, born in 1955, independent of the Company and of its significant shareholders, M.Sc. (Econ.), member since 2018, 147,575 B shares
- Raija-Leena Hankonen-Nyblom, born in 1960, independent of the Company and of its significant shareholders, M.Sc. (Econ.), APA, member since 2021, 6,956 B shares
- Erja Hyrsky, born in 1979, independent of the Company and of its significant shareholders, M.Sc. (Econ.), MBA, member since 2021, 9,456 B shares
- Ilkka Hämälä, born in 1961, not independent of the company or its significant shareholder, Chair, M.Sc. (Eng.), member since 2018, 287,349 B shares
- Mari Kiviniemi, born in 1968, independent of the Company and of its significant shareholders, M.Soc.Sc. (Econ.), member since 2022, 3,633 B shares
- Jussi Linnaranta, born in 1972, independent of the Company, M.Sc. (Agr.), member since 2017, 29,801 B shares
- Jukka Moisio, born in 1961, independent of the Company and of its significant shareholders, M.Sc. (Econ.), MBA, member since 2020, 12,231 B shares
- Timo Saukkonen, born in 1963, independent of the Company, M.Sc. (For.), member since 2020, 16,831 B shares
- Veli Sundbäck, born in 1946, independent of the Company and of its significant shareholders, L.L.M., member since 2013, 74,908 B shares

These ownerships include shares possibly owned by controlled entities on 31 December 2022.

A majority of the members of the Board of Directors are independent of both the Company and its significant shareholders. As President and CEO of Metsä Group, Ilkka Hämälä, the Chair of the Board, is dependent of both the Company and its majority shareholder, Metsäliitto Cooperative. Jussi Linnaranta and Timo Saukkonen are members of the Board of Metsäliitto Cooperative and consequently

dependent on a significant shareholder. Further information about the Board members is available on the Company's website at <https://www.metsagroup.com/metsaboard/investors/corporate-governance/board-of-directors/>.

Board Committees

If required, the Board can decide to establish committees to provide assistance to and prepare matters for which the Board is responsible. The Board has appointed an Audit Committee and a Nomination and HR Committee from among its members. Every year after the Annual General Meeting, the Board of Directors appoints each committee's chair and members. The Board and its committees can also consult external advisors.

Final decisions concerning matters related to the tasks of the committees are made by the Board of Directors on the basis of committee proposals, excluding proposals on Board composition and compensation made directly to the General Meeting by the Nomination and HR Committee.

Audit Committee

The Audit Committee is responsible for assisting the Board of Directors in ensuring that the Company's financial reporting, calculation methods, financial statements and other financial information and non-financial information published by the Company are correct, balanced, transparent and clear. The Audit Committee regularly reviews the internal control and management systems and monitors the progress of financial risk reporting and the auditing of the accounts. The Audit Committee assesses the efficiency and scope of internal auditing, the Company's risk management, key risk areas and compliance with applicable laws and regulations. It assesses the independence of the auditor and audit firm and gives a recommendation to the Board concerning the appointment of auditors to the Company. The Audit Committee also processes the annual plan for internal auditing and the reports prepared on significant audits.

The Audit Committee consists of four Board members. Since the 2022 Annual General Meeting, Raija-Leena Hankonen-Nyblom has been Chair of the Audit Committee with Hannu Anttila, Mari Kiviniemi and Jukka Moisio as members. All the members are independent of the Company and its significant shareholders.

The committee members must have adequate expertise in accounting and financial statement policies. The Audit Committee convenes regularly, at least four times a year. In connection with the meetings, the Committee hears the Company's auditor. The Chair of the Audit Committee provides the Board with a report on each meeting. The tasks and responsibilities are specified in the Committee's rules of procedure approved by the Board of Directors (<https://www.metsagroup.com/globalassets/metsa-board/documents/>

[investors/corporate-governance/en/general/metsa-board-audit-committee-charter.pdf](https://www.metsagroup.com/globalassets/metsa-board/documents/investors/corporate-governance/en/general/metsa-board-audit-committee-charter.pdf)).

At the invitation of the Committee, the Company's auditor, CEO and CFO, as well as other management representatives and external advisors, are represented at the Audit Committee's meetings if required.

The Audit Committee convened four times in 2022. All the members attended all the meetings (attendance rate: 100% in 2021 and 95% in 2020).

Audit Committee member	Number of meetings	Attendance rate (%)
Raija-Leena Hankonen-Nyborn (Chair)	4/4	100
Hannu Anttila	4/4	100
Mari Kiviniemi	4/4	100
Jukka Moisio	4/4	100

Nomination and HR Committee

In spring of 2022, the Nomination and Remuneration Committee changed its name to the Nominations and HR Committee. According to the Committee's view, the new name better describes the Committee's work and the issues on the agenda. The task of the Nomination and HR Committee is to assist the Board of Directors in matters related to the appointment and remuneration of the Company's CEO, any Deputy CEO and senior management, and prepare matters related to the incentive schemes for management and employees. In addition, the Committee prepares for the Annual General Meeting a proposal on the number of Board members, the Board composition and the remuneration for Board members. The Committee also recommends, prepares and presents for the Board's approval the appointment of the CEO (and any Deputy CEO), as well as their salary and compensation. The Committee also prepares and provides recommendations to the Board and the CEO concerning matters related to the remuneration and incentive schemes of management and employees.

The Committee consists of five Board members. It convenes on a regular basis, at least four times a year. The Chair of the Committee presents the Committee's proposals to the Board. The tasks and responsibilities of the Nomination and HR Committee are specified in the Committee's rules of procedure approved by the Board of Directors (<https://www.metsagroup.com/globalassets/metsa-board/documents/investors/corporate-governance/en/general/metsa-board-nomination-and-hr-committee-charter.pdf>).

Since the 2022 Annual General Meeting, Ilkka Hämälä has been Chair of the Nomination and HR Committee with Erja Hyrsky, Jussi Linnaranta, Timo Saukkonen and Veli Sundbäck as members.

The Nomination and HR Committee convened four times in 2022. All the members attended all the meetings (100% attendance rate also in 2021 and 2020).

Members of the Nomination and HR Committee	Number of meetings	Attendance rate (%)
Ilkka Hämälä (Chair)	4/4	100
Erja Hyrsky	4/4	100
Jussi Linnaranta	4/4	100
Timo Saukkonen	4/4	100
Veli Sundbäck	4/4	100

Chief Executive Officer

Chief Executive Officer Mika Joukio (born in 1964), M.Sc. (Eng.), MBA, is responsible for the daily management of the Company's administration in accordance with the guidelines and instructions provided by the Board. The CEO is also responsible for ensuring that the Company's accounting has been carried out according to applicable legislation and that asset management has been organised in a reliable manner. The CEO manages the Company's daily business and is responsible for controlling and steering the different functions.

The CEO has a written CEO contract approved by the Board. The Board monitors the CEO's performance and provides a performance evaluation once a year. The CEO is covered by the Employees Pensions Act, which provides pension security based on the period of service and earned income as provided in the Act. In the Finnish earnings-related pension system, basic salary, remuneration and taxable fringe benefits are included in earned income, whereas income from options and share-based incentive schemes for management are not. The Company has commissioned an extra pension insurance policy for the CEO, entitling the CEO to retire at the age of 62. The maximum level of his pension is 60% of the total salary under the Employees Pensions Act, calculated on the basis of the five-year period preceding retirement.

The Board appoints and discharges the CEO. The CEO may be discharged at the Board of Directors' decision without a separate reason. The CEO can also resign from his assignment. The mutual period of notice is six months. However, the Board may decide to discharge the CEO without a period of notice. If the Board terminates the CEO's contract, the CEO is entitled to a discharge compensation equal to his 12-month salary.

Deputy to the CEO

At its discretion, the Board can appoint a Deputy to the CEO. The Deputy to the CEO is responsible for carrying out the CEO's tasks when the CEO is unable to perform their duties. For now, no Deputy to the CEO has been appointed.

Corporate Management Team

In the operative management of Metsä Board, the CEO is assisted by the Corporate Management Team, which consists of Mika Joukio, CEO, together with function heads Ari Kiviranta

(Technology), Markku Leskelä (Development), Jussi Noponen (Sales and Supply Chain), Harri Pihlajaniemi (Production), Henri Sederholm (Finance) and Camilla Wikström (Human Resources), who all report to the CEO.

Each of the members of the Corporate Management Team have a written employment or service contract. With the exception of the CEO, they do not have extraordinary pension arrangements apart from the statutory pension cover. The term of notice of Corporate Management team members is six months on both sides.

The Corporate Management Team's tasks and responsibilities include planning investments, specifying and preparing the Company's strategic guidelines, allocating resources, controlling routine functions as well as preparing various matters to be reviewed by the Board. As a rule, the Corporate Management Team convenes at the Chair's invitation once a month, and otherwise if required.

At the end of the financial year 2022, the Corporate Management Team members owned the Company's shares as follows:

Mika Joukio	352,500 B shares
Ari Kiviranta	30,000 B shares
Markku Leskelä	16,406 B shares
Jussi Noponen	80,000 B shares
Harri Pihlajaniemi	41,414 B shares
Henri Sederholm	42,466 B shares
Camilla Wikström	19,984 B shares.

Any controlled entities of the Corporate Management Team members do not hold shares in the Company.

Internal control, internal audit and risk management

Profitable business requires that operations are monitored continuously and with adequate efficiency. Metsä Board's internal management and control procedure is based on the Finnish Limited Liability Companies Act, the regulations and recommendations for listed companies, the Articles of Association and the Company's own approved principles and policies. The functioning of the Company's internal control is evaluated by the Company's internal auditing. Internal control is carried out throughout the organisation. Internal control methods include internal guidelines and reporting systems that support control. The principles, objectives

and responsibilities of Metsä Board's internal control, risk management and internal auditing are described in the following section.

Internal control

As a listed company, Metsä Board's internal control is steered by the Finnish Limited Liability Companies Act and the Securities Markets Act, other laws and regulations applicable to the operations, and the rules and recommendations of the Nasdaq Helsinki, including the Corporate Governance Code. External control is carried out by Metsä Board's auditor and the authorities.

In Metsä Board, internal control covers financial reporting and other monitoring. Internal control is implemented by the Board and operative management as well as the entire personnel. Internal control aims to ensure the achievement of the company's goals and objectives; economical, appropriate and efficient use of resources; correct and reliable financial information and other management information; adherence to external regulations and internal policies; adequate security of operations, information and property; and the arrangement of adequate and appropriate manual and IT systems to support operations.

Internal control is divided into (i) proactive control, such as the specification of corporate values, general operational and business principles; (ii) daily control, such as operational steering and monitoring including the relevant operational systems and work instructions; and (iii) subsequent control, such as management evaluations and inspections, comparisons and verifications with the aim of ensuring that the goals are met and that the agreed operational and control principles are followed. The corporate culture, governance and approach to control jointly form the basis for overall internal control.

Monitoring of the financial reporting process, credit control and authorisation rights

The financial organisations of the different functions and central administration are responsible for financial reporting. The units report their financial figures each month. The units' controller functions check their units' monthly performance and submit a performance report to central administration. The functions' profitability development and business risks and opportunities are discussed in monthly meetings attended by the Company's and each function's management. The result is reported

to the Board and Corporate Management Team monthly. The Board presents the financial statements to the Annual General Meeting for approval, approves the financial statement bulletin and interim reports, and decides on their publication. The rules for reporting and control as well as the reporting process are described in greater detail in the Company's internal guidelines.

Credit control in Metsä Board has been centralised under a Credit Committee, which convenes at least each quarter. Credit controllers monitor the trend in trade receivables in each sales company under the supervision of the Group VP of Credits. Counterparty-specific credit limits are set within the boundaries of the credit policy confirmed by the Board in cooperation with centralised credit control, sales and financial management. The development of credit risks is reported to the Board on a regular basis.

Authorisation rights concerning expenses, significant contracts and investments have been specified progressively for different organisation levels according to the decision-making authority policy confirmed by the Board and the authority separately granted by the CEO and other management personnel. Investment follow-up is carried out by the Group's financial administration according to the investment policy confirmed by the Board. After pre-approval, investments are handled by the functions' management teams and the Corporate Management Team within the framework of the annual investment plan. The most significant investments are separately submitted to the Board for approval. Investment follow-up reports are compiled each quarter.

Internal auditing

Internal auditing is an independent and objective assessment, assurance and consulting activity designed to add value to Metsä Board and improve its operations.

Internal auditing assists the Board of Directors in its supervisory role and supports Metsä Board and its management in achieving the Company's objectives by providing a systematic approach to assessing and improving the effectiveness of risk management, control, governance and management processes.

Metsä Board's internal auditing is carried out by Metsä Group's internal audit unit. Audit work is carried out in compliance with the internal

audit guidelines approved by the Audit Committee. The internal audit function reports to the Audit Committee on operations and to Metsä Group's President and CEO on administration.

Internal auditing draws up a six-monthly action plan which is approved by the Audit Committee. Auditing is risk-based and focuses on the Company's activities and units that are considered to be key to achieving the objectives set for operations. In cooperation with the audit function, internal auditing sees to the coordination of plans to ensure adequate coverage of auditing and avoid overlapping work. Similarly, cooperation is carried out with Metsä Group's other assurance functions such as risk management, internal controls and compliance.

The results of the audit are compiled into an audit report, which is shared with Metsä Board's CEO and CFO, the management of the audited entity and the persons in charge. The audit reports are submitted to Metsä Group's President and CEO, CFO, auditor and, if required, to other Group management for informative purposes.

Internal auditing provides the Audit Committee with a six-monthly summary report on the audits carried out, the main findings and recommendations, and the management action plans and their implementation. The Chair of the Audit Committee and the Audit Director also meet regularly without the presence of management.

Risk management

Risk management is an essential part of Metsä Board's standard business planning and leadership. Risk management is part of daily decision making, operations follow-up and internal control, helping to promote and ensure the achievement of the Company's objectives.

Business management and risk management are efficiently coordinated based on the operational principles confirmed by the Board, the aim of which is to secure a well-defined, understandable and sufficiently practical risk management process. Risks and their development are regularly reported to the Board of Directors' Audit Committee. Centralised risk management also takes care of the coordination and competitive bidding of Metsä Board's insurance coverage.

The key objective of risk management is to identify and evaluate the risks, threats and

opportunities that may have an impact on the implementation of the strategy and the achievement of short- and long-term objectives. The businesses regularly evaluate and monitor the risk environment and related changes as part of their normal operational planning. The risks identified and their management are reported to the Audit Committee and the Board at least twice a year. Business risks also involve opportunities, and they can be capitalised on within the boundaries of the agreed risk limits. Conscious risk-taking decisions must always be based on an adequate evaluation of the risk-bearing capacity and the profit/loss potential, among other things. Such an evaluation must be conducted before any pre-engineering and execution phases of projects and investments.

Risk management responsibilities are divided among different functions in Metsä Board. The Board is responsible for the Company's risk management and approves the Company's risk management policy; the Audit Committee evaluates the levels and procedures of the Company's risk management as well as the essential risk areas and provides the Board with related proposals. The CEO and Management Team are responsible for the specification and adoption of the risk management principles. They are also responsible for ensuring that the risks are taken into account in the Company's planning processes and that risk reporting is adequate and appropriate. The Vice President of Risk Management reports to the CFO and is responsible for the development and coordination of the Company's risk management process, the implementation of risk evaluation and the essential insurance decisions. The Risk Committee conducts a twice-yearly risk review, the results of which the CEO presents to the Board following a review by the Corporate Management Team. The Risk Committee consists of the CFO acting as Chair, and SVP Production, SVP Development, VP Risk Management and VP Group Accounting. The businesses and support functions identify and evaluate the essential risks related to their own areas of responsibility in their planning processes, prepare for them, take necessary preventive action and report on the risks as agreed.

The key elements of Metsä Board's risk management include implementing a comprehensive risk management process that supports the entire business, protecting property and

ensuring business continuity, corporate security and its continuous development, as well as crisis management and continuity and recovery plans. According to the risk management policy and principles, adequate risk management forms a necessary part of the preliminary review and implementation stages of projects that are financially or otherwise significant.

Metsä Board's risk management is tasked with:

- ensuring that all the identified risks with an impact on personnel, customers, products, property, information assets, corporate image, corporate responsibility or operational capacity are controlled according to applicable laws and based on the best available information;
- ensuring that the Company's objectives are met;
- fulfilling stakeholders' expectations;
- protecting property and ensuring disruption-free business continuity;
- optimising the profit/loss potential; and
- ensuring the management of the company's overall risk exposure and minimising the overall risks.

The most significant risks and uncertainties that the Company is aware of are described in the Report of the Board of Directors.

Auditing

According to Metsä Board's Articles of Association, the Company has one auditor that must be an audit firm authorised by the Central Chamber of Commerce of Finland. The General Meeting appoints the auditor each year at the Annual General Meeting. The Company's Audit Committee together with the Audit Committee of its parent entity, Metsäliitto Cooperative, organised a competitive bidding for audit services in 2011 and 2021. As a result of the 2011 bidding, the Company's long-term auditor PricewaterhouseCoopers Oy was changed to KPMG Oy Ab at the 2012 Annual General Meeting. Following the competitive bidding organised in 2021 and pursuant to the decision of the 2022 Annual General Meeting, KPMG Oy Ab now acts as the Company's auditor with Kirsi Jantunen, APA, as the auditor with main responsibility. Under the EU Audit Directive, an audit firm may act as a company's auditor for a maximum of 10 years, after which a competitive

bidding must be organised for the audit services. Should the same audit firm be re-elected, it may serve continuously as the Company's auditor for another 10 years at most, after which the audit firm must be changed. The Audit committee

controls the appointment procedure of auditors and provides the Board and the General Meeting with a recommendation for the appointment of the auditor.

In 2022 audit fees were paid as follows:

Audit fees	2022	2021	2020
Audit fees to KPMG Oy Ab	EUR 200,000	EUR 196,000	EUR 196,000
International fees	EUR 255,000	EUR 241,000	EUR 206,000
For services unrelated to the audit proper	EUR 0	EUR 0	EUR 4,000
Total	EUR 455,000	EUR 437,000	EUR 406,000
Fee to other audit firms other than KPMG Oy Ab	EUR 11,000	EUR 21,000	EUR 23,000
Total	EUR 466,000	EUR 458,000	EUR 429,000

Insider administration

For insider matters, Metsä Board and its group companies comply with Finnish laws, especially the Securities Markets Act, Regulation N:o 596/2014 of the European Parliament and of the Council on market abuse (MAR) and supporting orders and regulations as well as the insider guidelines of NASDAQ Helsinki Ltd. (Helsinki Stock Exchange) (www.nasdaq.com/solutions/rules-regulations-helsinki). Based on the above provisions, the Company has approved its own insider guidelines.

Pursuant to MAR Article 14 and Chapter 51 of the Criminal Code, a person who possesses inside information shall not (i) engage or attempt to engage in insider trading by acquiring or transferring financial instruments on his or her own account or on behalf of a third party, (ii) recommend that another person engage in insider trading or induce another person to engage in insider dealing, (iii) unlawfully disclose inside information to another person, unless such disclosure is made as part of carrying out normal work duties. The goal of insider administration is to enable people considered the company's insiders, to openly hold shares in the company while maintaining public trust in the trading and price formation involving the company's securities. The Company recommends only long-term investments. Insiders are provided with instructions and training at regular intervals.

Since the Market Abuse Regulation MAR took effect on 3 July 2016, the Company has not had a register of public insiders or maintained a permanent company-specific insider register. If required and by decision of the Chair of the

Board of Directors, the Company can set up a project-specific insider register to cover all the persons involved in the preparation of a specific project containing insider information.

The Company's managers with a duty to notify include the members of the Board of Directors and the CEO. The holdings of these individuals and their related parties is public. Each of them has an individual duty vis-à-vis the Company and the competent supervisory authority, to notify all transactions executed with the shares and other financial instruments of Metsä Board. Metsä Board will publish all such notifications in a stock exchange release.

Managers with a duty to notify are not allowed to trade in the Company's shares and other financial instruments during a period starting at the end of each reporting period and lasting until the interim report has been published (always at least 30 calendar days, a period known as the 'closed window'). This prohibition applies not only to managers with a duty to notify, but also to any other persons specified by the Company who participate in the preparation of financial reports.

Related party transactions

The Board of Directors has determined the principles for monitoring and evaluating business transactions with related parties. The Company's business activities include contractual relationships with the parent entity Metsäliitto Cooperative and affiliated companies Metsä Fibre Oy and Metsä Tissue Corporation. The most significant of these are related to the procurement of raw material (such as wood

and pulp) and to operating in joint integrated mills. The Board of Directors decides on contractual relationships with related parties unless the matter is related to the Company's normal business operations and is of minor significance. In situations where the Board of Directors addresses a business relationship or other contractual relationship or connection to Metsäliitto Cooperative or the Company's affiliated companies, the Board of Directors acts, as a rule, without those of its members who are dependent on Metsäliitto Cooperative. or the relevant affiliated company considered a related party. The Audit Committee regularly follows up and analyses contractual relationships between the Company and its related parties.

To assess the independence and impartiality of the members of the Board of Directors, the members are required to notify the Company of circumstances that may have an impact on the member's ability to act without conflict of interest. As of 31 December 2022, neither the Board members, nor the Company's CEO or Corporate Management Team members had monetary loans from the Company or its subsidiaries. No collateral arrangements or significant business relations existed between these persons (including their related parties as defined in IFRS) and the Company during 2022.

Metsä Board's Board of Directors

→ Read more at metsagroup.com/metsaboard

ILKKA HÄMÄLÄ

b. 1961

M.Sc. (Eng.)
Vuorineuvos
(Finnish honorary title)
Metsä Group, President and CEO

Chair of the Board since 2018

Not independent of the company
or its significant shareholder

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
287,349 B shares



JUSSI LINNARANTA

b. 1972

M.Sc. (Agriculture and Forestry)
Agronomist

Member of the Board since 2017
Vice Chair of the Board since 2020

Independent of the company.
Not independent of the company's
significant shareholder

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
29,801 B shares



HANNU ANTTILA

b. 1955

M.Sc. (Econ.)
Teollisuusneuvos
(Finnish honorary title)

Member of the Board since 2018

Independent of the company
and of its significant shareholders

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
147,575 B shares



RAIJA-LEENA HANKONEN-NYBOM

b. 1960

M.Sc. (Econ.)
Authorized Public Accountant degree

Member of the Board since 2021

Independent of the company
and of its significant shareholders

Shares owned in Metsä Board
Corporation 31 Dec. 2022: 6,956 B shares



ERJA HYRSKY

b. 1979

M.Sc. (Econ.)

Member of the Board since 2021

Independent of the company
and of its significant shareholders

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
9,456 B shares



MARI KIVINIEMI

b. 1968

M.Soc.Sc. (Econ.)

Member of the Board since 2022

Independent of the company
and of its significant shareholders

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
3,633 B shares



JUKKA MOISIO

b. 1961

M.Sc. (Econ.), MBA

Member of the Board since 2020

Independent of the company
and of its significant shareholders

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
12,231 B shares



TIMO SAUKKONEN

b. 1963

M.Sc. (Agriculture and Forestry)
Forester

Member of the Board since 2020

Independent of the company.
Not independent of the company's
significant shareholder

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
16,831 B shares



VELI SUNDBÄCK

b. 1946

LL.M., Master of Laws

Member of the Board since 2013

Independent of the company
and of its significant shareholders

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
74,908 B shares



Metsä Board's Corporate Management Team

→ Read more at metsagroup.com/metsaboard

MIKA JOUKIO

b. 1964

M.Sc. (Tech), MBA
Chief Executive Officer

Metsä Group employee since 1990.
Chair of Metsä Board Corporate
Management Team since 2014

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
352,500 B shares



HENRI SEDERHOLM

b. 1978

M.Sc. (Econ.)
Chief Financial Officer

Metsä Group employee since 2003.
Member of Metsä Board Corporate
Management Team since May 2021.

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
42,466 B shares



JUSSI NOPONEN

b. 1975

M.Sc. (Tech)
Senior Vice President, Sales and Supply
Chain

Metsä Group employee since 2000.
Member of Metsä Board Corporate
Management Team since 2016

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
80,000 B shares



HARRI PIHLAJANIEMI

b. 1970

M.Sc. (Tech)
Senior Vice President, Production

Metsä Group employee since 2017.
Member of Metsä Board Corporate
Management Team since 2017

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
41,414 B shares



ARI KIVIRANTA

b. 1963

D.Sc. (Tech)
Senior Vice President,
Technology

Metsä Group employee since 1993.
Member of Metsä Board Corporate
Management Team since 2014

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
30,000 B shares



MARKKU LESKELÄ

b. 1962

PhD.
Senior Vice President, Development

Metsä Group employee since 2016.
Member of Metsä Board Corporate
Management Team since October 2021.

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
16,406 B shares



CAMILLA WIKSTRÖM

b. 1970

M.Sc. (Tech)
Senior Vice President, Human Resources

Metsä Group employee since 2002.
Member of Metsä Board Corporate
Management Team since 2019

Shares owned in Metsä Board
Corporation 31 Dec. 2022:
19,984 B shares



Investor relations and investor information

The task of Metsä Board's Investor Relations is to ensure that the market receives accurate and adequate information to determine the value of Metsä Board's shares. The Investor Relations function engages in active dialogue with representatives of the capital markets and is responsible for the planning and implementation of the company's financial and investor communication.

The activities of Investor Relations also include collecting feedback from investors and market information for Metsä Board's management and Board of Directors.

Meetings with investors and analysts are primarily attended by the Vice President for Investor Relations, the CFO and/or the CEO. All requests from investors are handled in a centralised manner by Investor Relations. During the silent period, the company will not provide comments on the company's financial standing or outlook, or the market environment.

Investors website

More information about Metsä Board as an investment, as well as the company's strategy, operating environment, financials and governance, can be found on the company's website at <https://www.metsagroup.com/metsaboard/investors/>.

Investor relations in 2022

In 2022, investor and analyst meetings were increasingly organised in person, as the restrictions in force during the coronavirus pandemic were gradually lifted. Nevertheless, many meetings and events were held virtually. Roadshows were held in several cities in Central Europe and the US. The company also participated in investor conferences organised by various brokerage firms. In November, Metsä Board organised a Capital Markets day for investors and analysts, the material and webcast recording of which is available at <https://www.metsagroup.com/metsaboard/>

[investors/reports-and-presentations/capital-markets-day/](#).

The 2022 Annual General Meeting was held with extraordinary meeting procedures. It was only possible to attend the meeting by voting and asking questions and making any counter-proposals in advance.

In connection with the publishing of interim reports, Metsä Board organises a conference call, in which the CEO and CFO present the interim report, and the audience can ask questions. Presentation materials and recordings of the conference calls are available on the company's Investors website.

Metsä Board's investor communication makes use of social media through Twitter and LinkedIn accounts, for example.

Analyst coverage

At least the following brokerage firms conducted analyses of Metsä Board in 2022: ABGSC, Carnegie, Danske Equities, DnB, Inderes, Nordea Markets, OP Equities, SEB and UBS. The contact details of the analysts and some of the consensus forecasts are available on the company's Investors web page.

Metsä Board is not responsible for the content, accuracy or scope of the analysts' views.

Annual General Meeting in 2023

The registration period and advance voting period commence on 24 February 2023 at 12.00 noon EET. A shareholder, who is registered in the Company's shareholders' register and who wishes to participate in the general meeting, were register for the general meeting by giving prior notice of participation no later than 17 March 2023 at 4 p.m. EET, by which time the notice must be received. When registering, requested information such as the shareholder's name, birth date or company identification number, address and telephone number, as well as requested information on a possible proxy representative (name, birth date), must

be notified. The personal data submitted to Inderes Oyj and Innovatics Oy will be used only in connection with the general meeting and with the processing of related registrations.

Shareholders with a Finnish book-entry account can register and vote in advance on certain matters on the agenda during the period 24 February 2023, 12 noon–17 March 2023, 4 p.m. EET as follows:

a) electronically via the Company's website at <https://www.metsagroup.com/AGM2023>.

The shareholder's book-entry account number is required for the electronic advance voting. Terms and instructions for electronic advance voting are available on the website; or

b) by completing and submitting the advance voting form available on the Company's website by mail to Innovatics Oy, Yhtiökokous/Metsä Board Oyj, Ratamestarinkatu 13A, 00520 Helsinki, or by email to agm@innovatics.fi.

Profit distribution

The Board of Directors proposes to the Annual General Meeting to be held on 23 March 2023 that a dividend of EUR 0.58, totalling approximately EUR 206 million, be paid for the 2022 financial period.

The dividend will be paid to shareholders who are registered in the shareholders' register held by Euroclear Finland Ltd on the date of record, 27 March 2023. The Board of Directors proposes 5 April 2023 as the dividend payment date.

Contact details for investor relations

Katri Sundström
Vice President, Investor Relations
tel. +358 10 462 0101
katri.sundstrom@metsagroup.com

General questions and comments related to investor relations can be emailed to: metsaboard.investors@metsagroup.com.

Metsä Board has a global sales network. The contact details of our sales offices are available on our website at <https://www.metsagroup.com/metsaboard/contacts/>.

Business ID 0635366-7

METSÄ BOARD CORPORATION
Head office
PO Box 20
02020 METSÄ, Finland

Financial reporting in 2023

Silent period	Financial report	Publication date
1 January–8 February 2023	Financial Statements Bulletin 2022	9 February 2023
1 April–26 April 2023	Interim Report for January–March 2023	27 April 2023
1 July–26 July 2023	Half-Year Financial Report for January–June 2023	27 July 2023
1 October–25 October 2023	Interim Report for January–September 2023	26 October 2023

Metsä Board is a leading European producer of premium fresh fibre paperboards and a forerunner in sustainability. Metsä Board is part of Metsä Group.

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Metsä Group
Brochure
2022



Metsä Group
Annual and
Sustainability Report
2022



Metsä Board
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2022



**Together we make
the perfect package**

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