

Metsä Group  
Annual and Sustainability Report 2022



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Metsä Group  
promotes wellbeing  
in everyday life by  
producing recyclable  
and environmental-  
friendly products  
from northern wood.

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Several billion euros investments ongoing at Metsä Group.



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The recyclable Muoto® products are a good alternative for plastic.



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Metsä Group reduces fossil carbon dioxide emissions.



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# A strong 2022 despite the crisis in Europe

**A year of crisis in Europe tested our ability to maintain business continuity. Overall, the Group's business performance was excellent. Numerous development projects progressed on schedule and we are committed to sustainable business.**

The war in Europe following Russia's unjustified attack on Ukraine has overshadowed all Metsä Group's operations. In the second quarter, we discontinued our business in Russia and adopted measures to introduce new raw material sources and open new product markets. Overall, business in Russia accounted for around three per cent of the Group's sales. The discontinuation of Russian operations was felt most in our wood supply and Metsä Fibre's sawmill operations. In the third quarter, Metsä Group gave up the special measures that had been in place during the coronavirus pandemic. The post-pandemic economic stimulus measures gave rise to cost inflation, which was further exacerbated by Russia's attack on Ukraine, causing an energy crisis in Europe. Inflation pressures have affected profitability, especially in Metsä Tissue's operations, and increased the costs of our large investments already underway. Overall, the Group's result was excellent, as our business areas saw very good market demand throughout the year.

### From limiting ecological damage to operations improving living environments

Our result in 2022 broke all records. Metsä Board's paperboard business remained strong, and the prevailing business cycle supported the profitability of Metsä Fibre and Metsä Board's pulp business. In the mechanical forest industry, Metsä Wood's LVL and plywood business enjoyed higher profitability, boosted by the increasing sales prices in the second half of the year. The sawn timber market peaked in the first half of the year, with demand and prices returning to the level of the long-term trend in the fourth quarter. The demand for Metsä Tissue's tissue and greaseproof papers normalised after the post-pandemic fluctuations, remaining at a strong level. The high energy costs posed a challenge to profitability, but we managed to partly transfer their impact to our product prices.

In changes affecting the global politics and economy, strong long-term customer relationships, combined with efficient operations across the value chain, create a firm foundation for profitability. Metsä Group is committed to continuous improvement in all areas of sustainable business. We are a signatory to the 2003 Global Compact initiative and have pledged to comply with the initiative's Ten Principles concerning human rights, labour,

the environment and anti-corruption. Renewable raw materials, and the products made from them resource efficiently to meet people's daily needs, are part of the solution to global climate and environmental challenges. We must continuously raise our ambitions concerning the state of the environment. We must move from limiting ecological damage or preserving the status quo to operations that improve living environments and habitats.

### Continuous development work

Metsä Group is committed to developing sustainable business based on northern wood. This requires our production units to be modernised so we can also promote resource efficiency in our production. In 2022, a new-generation sawmill, featuring new technology in operations and quality control, started up in Rauma. The sawmill is integrated into the pulp mill, which offers significant synergies in energy use and logistical efficiency. The energy production of the Husum pulp mill was renewed in the review period. The investment, initiated in December, will move the entire integrated mill closer to energy self-sufficiency. In Äänekoski, operations continued at the demo plant producing the Kuura® textile fibre. A demo plant producing the hot-pressed Muoto® fibre packaging, a joint project with Valmet, started up in the same mill area. The new Muoto product will also help replace fossil materials and improve the material efficiency of packaging. The investment decision on expansion of the Mariestad tissue paper mill was also made. The new LVL mill in Äänekoski is currently under preparation. Metsä Board has initiated a pre-engineering process for the folding boxboard mill investment in Kaskinen. The Group is also renewing its information systems. The investment in the ERP system began in 2021, and its first phase was deployed at the end of 2022. The project, running until 2025, will gradually improve the Group's operational efficiency and ability to create new data-based functions for business control and customer service, for example.

These and many other development projects, combined with the management of extensive, ongoing business operations, require competent and committed personnel. Metsä Group wants to support long careers and enable its employees to continuously develop their competence and duties. Good and fair operations in the workplace community create an environment in which people



**” We must move from limiting ecological damage to operations that improve habitats.**

feel good and cope at work, and are committed to achieving good results. We promote diversity, inclusion and equality in our workplace communities by identifying development needs and adopting development measures in our way of working.

### Our success is based on our owner-members' efforts to promote forestry

We are living in an era of global climate change and biodiversity loss. It is understandable that the interest in forest-related matters has continued to be strong, and that opinions critical of commercial forest use are highlighted. In Finnish forestry, attention to nature values has been an inherent part of forest management. Managers of family-owned forests, including most of our owner-members, have shouldered their responsibility for maintaining the good state of forests and improving it across generations. The volume of wood

growing in Finnish forests has increased by 1.5 billion cubic metres to 2.5 billion cubic metres in the last 50 years. This development has been achieved by taking good care of forests and securing the preconditions for growth. We have protected larger areas, learned to better identify the habitats of threatened species, and developed forestry measures based on new knowledge. We must continue in the same vein. Let's ensure the growth of trees in Finnish forests, see to the restoration of habitats, and contribute to maintaining Finland's wellbeing. The diverse role of forests must be jointly discussed from different perspectives using facts to find increasingly better solutions.

Ilkka Härmälä  
President and CEO

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# Highlights of 2022

**Our business was extremely successful in 2022, and we achieved our best ever result. Our billion-euro investments progressed as planned. We also continued our efforts to safeguard biodiversity and promote new innovations.**



## Investing in the future

The new pine sawmill in Rauma started up in the autumn of 2022. It is the world's most advanced sawmill, with a value of approximately EUR 260 million. The renewed tissue paper machine started up in Mänttä in Finland and the new recovery boiler and turbine of the Husum pulp mill started up in Sweden in 2022.

The new bioproduct mill in Kemi reached full height in 2022. When completed in the autumn of 2023, the mill will be the largest wood-processing facility in the northern hemisphere, with a value of EUR 2.02 billion. The expansion of paperboard capacity in Kemi will be completed at the same time as the bioproduct mill. The 200,000-tonne capacity expansion at the Husum folding boxboard

mill, carried out over 2021–2024, has progressed according to plan.

The investment decision on the renewal and expansion of the Mariestad tissue paper mill in Sweden was made after the review period. Metsä Group is also exploring the option of constructing a tissue paper mill in Great Britain.

The pre-engineering of the Kerto® LVL mill in Äänekoski and the pre-engineering of a new folding boxboard mill in Kaskinen, progressed as planned.



## Quality competitions boost operations

Metsä Group follows the international EFQM model to develop its operations. In 2022, Metsä Fibre took part in the global EFQM competition and became the first Finnish company to receive the Global Award 7 Diamonds rating. Metsä Board won the Finnish Circular Economy Award and the Finnish Quality Award, presented by Excellence Finland. The company was chosen as Finland's best organisation. Metsä Forest and Metsä Tissue were also recognised for their high-quality operations.

## New options for wood

The demo plant producing new kinds of 3D fibre products started up in Äänekoski in the spring of 2022. The renewable and recyclable Muoto products are made from Metsä Group's own wood fibres and are a good alternative to plastic in products such as food packaging.

The Kuura textile fibre, currently in the research and development stage in Äänekoski, strengthened its position in the sustainability assessment of environmental organisation Canopy. The positive results achieved guide the development of Kuura, opening doors to a sustainable textile industry.



## From apprentice to professional

Metsä Group recruited around 65 new specialists through apprenticeship training to its production units across Finland. The broad education offers a solid foundation for multiskilled forest industry professionals.

## Support for universities

In late 2021 and early 2022, we donated a total of nearly EUR 1.5 million to eight universities. Depending on the university, the donations were allocated to the fields of technology, natural science, and agriculture and forestry.



## New biodiversity initiatives

To safeguard biodiversity, we will refrain from purchasing those deciduous trees that are rare in forests. This complements our ecological sustainability programme, which annually introduces new concrete measures for the improvement of forest biodiversity. We safeguard the biodiversity of non-commercial forests through our nature programme that provides funding for projects related to topics such as wetlands, watercourses, pollinator habitats and new water conservation methods.

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# Sustainable growth strategy

**We use northern wood to produce recyclable products for the everyday use of millions of people. We invest in growth, resource efficiency, new bioproducts and a fossil free future. We promote the sustainable use of wood.**

Our mission is to create value for forests by converting northern wood into products for everyday life, using our raw materials as efficiently as possible. We focus on wood supply and forest services, wood products, sawn timber, pulp, paperboard, and tissue and greaseproof papers. The essence of Metsä lies in our unique company structure – our various complementary business operations cover much of our value chain from forest to home. Our parent company, Metsäliitto, is a cooperative owned by more than 90,000 Finnish forest owners. Our main market areas are Europe, Asia and North America.

Following considerable restructuring, Metsä Group is now in a phase of a strong profitable growth. We are investing in production and further developing our current products, as well as innovating to find sustainable new business opportunities. The value of our completed, ongoing and planned investments since 2015 is nearly seven billion euros. Long-term development and growth require us

to include all the pillars of sustainability in our operations. As our production increases, we strengthen forest growth and biodiversity. Our investments are always a step towards lower-emission production.

## Growth from megatrends

Our operating environment is changing rapidly. **Population growth, urbanisation, climate change, biodiversity loss and digitalisation** are some of the most powerful phenomena of the 2020s. They challenge our operations and provide us with opportunities for growth. Our owner-members' sustainably managed forests create a stable foundation for sustainable business. Profitable growth calls for industrial efficiency, an ability for renewal and a strong market position in all our business operations.

## Our operating principles

In 2022, we updated our strategy based on recent outlooks for the business environment. Matters important to sustainable and profitable growth were formulated into operating principles, which serve as the basis for developing all our business operations.

1. We increase the value of our owner-members' forests.
2. We implement sustainability objectives and an ethical corporate culture.
3. We develop our personnel's core competences.
4. We grow profitably with our customers.
5. We improve industrial efficiency.
6. We renew products and services.
7. We strengthen our competitive commercial position through a careful selection of markets and customers.
8. We make full use of common, efficient business processes, Group Services and synergies.
9. We use capital efficiently for investments.



## Purpose

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

## Vision

To be the preferred partner in developing sustainable business.

## Values

- Reliability
- Cooperation
- Renewal
- Responsible profitability

Wood-based products play an important role in achieving a low-carbon economy and combating climate change. Our renewable products are sustainable choices:

Wood products ensuring long-term carbon storage for construction.

Light and strong packaging boards as an alternative to plastic.

Pulp and other bioproducts as raw material for renewable materials.

Cleaner every day with tissue and greaseproof papers.

Forest management services ensuring vitality and greater value for forests.

## Investments create growth

### COMPLETED AND ONGOING INVESTMENTS

#### 2016–2019

Metsä Wood's plywood and Kerto LVL investments

#### 2017

Bioproduct mill in Äänekoski

#### 2020

Demo plant for the Kuura textile fibre in Äänekoski

#### 2022

- Demo plant for the Muoto fibre product in Äänekoski
- Renewal of the tissue paper machine in Mänttä
- New sawmill in Rauma
- Recovery boiler investment for the pulp mill in Husum

#### 2023

- Bioproduct mill and renewal of the liner-board mill in Kemi
- Expansion of the Husum paperboard mill
- Expansion of the Mariestad tissue paper mill

### PLANNED POTENTIAL INVESTMENTS

- Kerto LVL mill in Äänekoski
- Paperboard mill in Kaskinen
- Renewal of the fibre line at the Husum pulp mill
- Further investments in tissue paper production
- Textile fibre and 3D fibre product mills

Metsä Group has completed, underway or planned investments of more than EUR seven billion since 2015.

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# The cooperative creates a strong foundation for sustainable operations

Our ownership base and business structure differentiates us from our competitors. The co-operative's owner-members provide us with access to substantial volumes of premium wood raw material, which creates a solid basis for our operations and development. We are actively looking for opportunities to grow profitably and sustainably, and to create value for all our stakeholders through our operations.

## Resources

### People and partnerships

- Approximately 9 200 employees in 28 countries
- 142 apprentices and trainees
- Active cooperation with local communities and educational institutions

### Raw materials and supply chain

- More than 90 000 owner-members in the cooperative guarantee the availability of wood
- The owner-members hold roughly half of Finland's private-forests (i.e. some 5.3 million ha)
- 34 million m<sup>3</sup> wood procured
- 85% of the wood we use comes from Finland, and 15% from elsewhere in Northern Europe
- The wood we use is entirely traceable, and 89% of the wood is certified
- Each part of the wood is used efficiently and for the most valuable purpose
- In addition to wood procurement, nearly EUR 5 billion in other raw material purchases from around 700 suppliers

### Operations

- 35\* production units in 8\* countries
- 35 TWh total energy consumption
- 20 m<sup>3</sup>/produced tonnes water intaken

### Economic capital

- Total liquidity EUR 2,555.3 million
- Equity ratio 60.6%
- Net gearing ratio 3.1%
- Capital employed EUR 7,158.1 million
- Investments EUR 1 500.4 million
- Research and development EUR 31.1 million

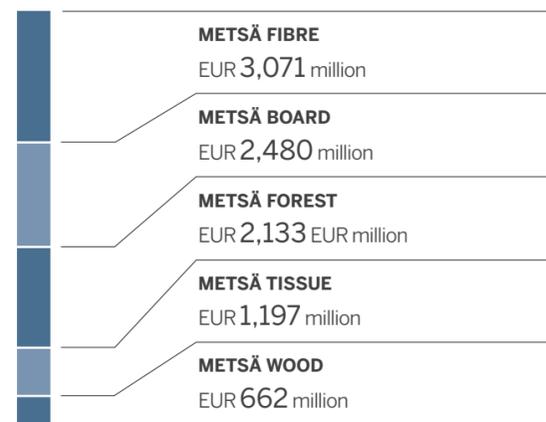
## Business model

### Our business

We are an internationally operating Finnish forest industry company. We manufacture fossil free products from responsibly managed, renewable wood. We invest in growth, the development of new bio-based products and a fossil free future. Our parent company Metsäliitto is a cooperative owned by more than 90,000 Finnish forest owners.

### METSÄ GROUP'S SALES 2022

EUR 6,980 million



Comparable operating result EUR 1,276 million

Comparable ROCE 19.5%

\* Sawmill operations in Russia has been shut down in spring 2022.

## Outputs

### Sustainable products and services

- Extensive, sustainable forest management services for forest owners
- We plant an average of four seedlings for every tree harvested in regeneration fellings. In 2022 we delivered 34 million seedlings to forest owners in Finland
- Wood products store carbon throughout their lives
- The raw materials used in our products processed from northern wood are 99.6% fossil free
- Pulp is used to make recyclable papers and paperboards for the needs of the world's population
- Fresh fibre paperboard is a safe choice for food packaging
- Tissue and greaseproof papers make everyday life easier and improve hygiene
- We produce 27.7 TWh renewable energy
- Deliveries to 110 countries

### Emissions and waste

- 90% of the fuels used in our production are renewable
- 99% of the water we use is returned to the waterways after purification
- All raw materials utilised efficiently: 96% of our production side streams are used as materials or energy
- Our emissions into the air include 1,083,000 t of fossil-based carbon dioxide emissions (Scopes 1 and 2)

→ Read more on page 16

## Impacts

### Environmental impact

- We use wood from forests that grow more than they are used
- We safeguard nature's biodiversity
- We reduce the fossil-based carbon dioxide emissions and water consumption
- We promote the circular economy using side streams efficiently and producing recyclable products

### Social impact

- EUR 720.6 million paid as wages, salaries and benefits to employees worldwide
- We create approximately 15,000 jobs indirectly in Finland. The impact is realised especially in rural areas
- 90% of our employees have a permanent contract, serving on average 15 years, and their engagement rate is 94.4%
- 98% of our suppliers are committed to our Supplier Code of Conduct

### Economic impact

- EUR 689 million to Finnish forest owners from wood sales
- EUR 410 million to Finnish harvesting, transport and forest management entrepreneurs
- EUR 101 million proposed profit distribution to Metsäliitto Cooperative's owner-members (to be confirmed at the Metsäliitto Cooperative's Representative Council in April 2022)
- The value of exports from our Finnish mills is EUR 4.3 billion, equivalent to approximately 5% of Finnish exports
- Taxes borne by Metsä Group in year 2022, amounted to EUR 421.8 million, 325.4 million in Finland, 59.0 million in Sweden and 37.4 million in other countries

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# Sustainability management at Metsä Group

**Our strategy builds on sustainability, which is part of everything we do. The foundation of sustainability is laid in our day-to-day operations. Metsä Group is committed to a sustainable future.**

**Governance and management**

Metsä Group's parent company Metsäliitto Cooperative is owned by more than 90,000 Finnish forest owners. The cooperative's Board of Directors is the highest governing body managing the Group's sustainability. The Board approves and is responsible for Metsä Group's sustainability targets. Sustainability matters related to well-being fall under the purview of the Board of Directors' HR Committee, and in other respects, of the Audit Committee. Progress made in the strategic sustainability targets is reported to the Board quarterly. The management method is evaluated as part of the general management practices. The targets and operating principles are updated in case there are any changes in the operating environment, for example, that warrant a reaction. Risk management is an essential aspect of our normal business planning and management. It is part of daily decision-making, the monitoring of operations and internal control, and it promotes the targets set by the company and ensures that they are met. Risks and their development are reported to the Audit Committee of the cooperative's Board of Directors on a regular basis. The most significant risks and uncertainties that the company is aware of are described in the Board of Directors' report.

**Targets for 2030**

We have set ourselves ambitious strategic sustainability targets for 2030. In 2022, based on a materiality analysis, we identified the key sustainability topics for Metsä Group and updated our targets to match the changing business environment. We determined the sustainability matters essential to us and our stakeholders to ensure our sustainability efforts focused on our strategy, business and the most important topics to our stakeholders. Our sustainability targets cover our entire value chain, and we have defined indicators for each target, the results of which are discussed in this report.

**Change arises in daily activities**

The realisation of our strategic 2030 sustainability targets is reviewed quarterly in Metsä Group's Sustainability Management Team, composed of the directors in charge of sustainability matters in each of the business areas and in Group Services. The

management team ensures that the work towards the targets progresses as planned, taking corrective action when necessary. The management team is supported by a working group made up of the entire Group's sustainability experts. The working group convenes once a month, driving the practical sustainability projects forward.

In 2022, sustainability was included in the annual personal goals of every Metsä Group employee. The potential rewards will be paid in March 2023. For the President and CEO, the maximum level of remuneration available in the short-term incentive system in 2022 was 93.75% of the annual base salary, taking into account Metsä Group's EBIT multiplier. The reward is based on Metsä Group's operating result (weighting 50%) and the strategic targets, including the sustainability targets, defined by the Board of Directors (weighting 50%), as well as the realisation of Metsä Group's EBIT multiplier. For other members of the Executive Management Team, the maximum level of remuneration available in the short-term incentive system in 2022 was 75% of the fixed annual base salary, taking into account Metsä Group's EBIT multiplier. The reward is based on the company's operating result (weighting 50%) and the strategic targets, including the sustainability targets, defined by the Board of Directors (weighting 50%), as well as the realisation of Metsä Group's EBIT multiplier.

**Our key stakeholders**

- The Group's own personnel
- Local communities
- The cooperative's owner-members and other forest owners
- Owners
- Associations and political decision makers
- Customers and consumers
- Business networks
- Media
- Authorities and legislators
- Investors and analysts
- Research organisations, universities and schools
- Subcontractors and suppliers

→ You can read more about our stakeholder work on our website [metsagroup.com](https://metsagroup.com)



**International transparency is important**

In addition to laws and regulations, we are committed to complying with international commitments that guide our activities. We are a signatory to the 2003 Global Compact initiative and have pledged to comply with the initiative's Ten Principles concerning human rights, labour, the environment and anti-corruption. Our day-to-day activities are guided by the global UN Sustainable

Development Goals (SDGs). Our sustainability 2030 goals specifically support the UN goals outlined above. Our annual sustainability report is comprehensive in content. We report comprehensively on our activities in accordance with the Global Reporting Initiative (GRI) standards, where applicable to us, and the report is verified.

**METSÄ GROUP'S SUSTAINABILITY GOVERNANCE MODEL**

Metsäliitto Cooperative Board of Directors	Metsä Group's President and CEO	Metsä Group's business areas' Boards of Directors or Metsäliitto Cooperative Board of Directors	The heads of Metsä Group's business areas	The owner of Metsä Group's sustainability process, SVP
<ul style="list-style-type: none"> <li>• Approves Metsä Group's sustainability objectives and is responsible for the achievement of the objectives within Metsä Group</li> </ul>	<ul style="list-style-type: none"> <li>• Presents the sustainability targets to Metsäliitto Cooperative Board of Directors and is responsible for the implementation of the approved objectives.</li> <li>• Approves the Sustainability Report.</li> <li>• Decides on sustainability commitments.</li> </ul>	Approves each business area's own sustainability objectives and is responsible for their realisation within the business units.	<ul style="list-style-type: none"> <li>• Are responsible for the achievement of the sustainability objectives of their respective business areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Is responsible for monitoring and reporting on Metsä Group's sustainability targets.</li> <li>• Prepares sustainability initiatives with the process's management team, the process director and a network of experts.</li> </ul>
<b>The progress of the sustainability objectives is monitored on a quarterly basis</b>				

# Progress towards our 2030 sustainability targets

In 2022, we did well in our biodiversity targets to increase the amount of decaying wood in commercial forests. To mitigate climate change, we reduced fossil carbon dioxide emissions from our mills. We fell short of our target for wood products that store carbon long-term, affected by discontinued operations and the global situation. We were also not on target in terms of establishing new forests. We reduced water use per tonne produced through a number of practical measures and found new uses for by-products that used to go to landfill.

Employees felt that our work has moved in a more ethical direction and the issue is still considered very important. There were also areas for improvement, such as equal treatment, reporting unethical behaviour and addressing grievances. Safety at work improved slightly from the previous year thanks to persistent preventive work. In the area of supply chain responsibility, we achieved good results by focusing on more rigorous compliance with the procurement process. Traceability of raw materials improved for critical raw materials, but the overall metric deteriorated due to fluctuating raw material costs.

TARGET	TARGET 2030	REALISED 2022	PROGRESS 2022	UN SDG
<b>E – ENVIRONMENT</b>				
<b>Securing biodiversity</b>				
Retention trees at regeneration sites	100%	95%	■	13, 15
Four high biodiversity stumps in harvesting sites	90%	90%	■	13, 15
<b>Mitigating climate change and reducing emissions</b>				
Fossil-based carbon dioxide emissions (Scope 1)	0 t	623,800 t	■	13
Regeneration area and young stand management compared to 2018	+30%	2.8%	■	13, 15
The amount of carbon stored in products compared to 2018	+30%	-12.4%	■	8, 13
Share of fossil free raw materials and packaging materials	100%	99.6%	■	9
<b>Sustainable production and efficient use of resources</b>				
Reducing process water usage (m <sup>3</sup> /tonne produced) compared to 2018	-25%	-7.4%	■	6
Utilising side streams	100%	96%	■	12
<b>S – SOCIAL</b>				
<b>Sustainable corporate culture</b>				
Ethic index in ethics barometer	100%	85.2%	■	5, 8
<b>Accident free working environment</b>				
Frequency of accidents at work (TRIF) per million hours worked	0	6.7	■	8
<b>G – GOVERNANCE</b>				
<b>Sustainable supply chain</b>				
Suppliers' commitment to the Supplier Code of Conduct, % of spend	100%	98%	■	8, 12
Compliance evaluation passed, % of spend	100%	93%	■	12
Sustainability evaluation passed, % of spend	100%	48%	■	12
Traceability of raw materials, % of spend	100%	91.9%	■	9

Progress in 2022 compared to the previous year.  
 Above target (significant progress) ■  
 On target (progress according to plan) ■  
 Below target (no progress or worse) ■

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# Material topics

We focus our sustainability work on the most important i.e. material topics for us and our stakeholders. Based on the materiality assessment, we identified the seven sustainability themes, which will guide our sustainability work and sustainability 2030 targets. The themes represent and support Metsä Group's whole business and take into account impacts throughout our value chain.

The process used for the materiality assessment consisted of three stages: identifying the most material sustainability topics, arranging them in order of importance and strengthening them.

The identification of sustainability topics was implemented with the help of trends, sustainability frameworks and standards, regulatory requirements and Metsä Group's strategy. In addition, interviews were used to identify the views of Metsä Group's management and specialists, as well as the expectations of our important stakeholders towards us.

The identified topics were put in order of importance in a workshop for Metsä Group's management, involving an assessment of

the significance of positive and negative impacts and risks both on the company's business and the surrounding society, people and nature (double materiality). The material topics selected as the most relevant are important for more than one area and present both risks and opportunities.

At the same time, we updated our sustainability indicators for 2030. The indicators that support the targets describe the activities we are doing to reduce or increase our impacts.

Metsäliitto Cooperative's Board of Directors confirmed the material topics and the sustainability 2030 targets in the beginning of the year 2023.

OUR UPDATED SUSTAINABILITY THEMES AND SUSTAINABILITY 2030 TARGETS

TOPIC	IMPACTS	INDICATORS FOR SUSTAINABILITY 2030 TARGETS
<b>E – ENVIRONMENT</b>		
<b>1. Securing biodiversity and ecologically sustainable forestry</b>	With biodiversity actions, we strengthen the living conditions needed by species and preserve valuable habitats.	100% of regeneration felling sites have retention trees 100% of harvesting sites have high biodiversity stumps 0% young stand management have only spruce remaining 10,000 actions to enhance biodiversity
<b>2. Mitigating climate change and reducing emissions</b>	We mitigate climate change by reducing fossil carbon 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) 100% fossil free raw materials and packaging materials +30% forest regeneration and young stand management (ha, compared to 2018) +50% forest fertilization (ha, compared to 2018) +30% share of continuous cover forestry in peatlands +30% amount of carbon stored in wood products (ha, compared to 2018)
<b>3. Sustainable production and efficient use of resources</b>	We will use natural resources efficiently and reduce waste.	-35% water consumption per tonne of production (m <sup>3</sup> /t, compared to 2018) -10 units' improvement in energy efficiency (Energy Efficiency Index, compared to 2018) 0 t of waste sent to landfills
<b>S – SOCIAL</b>		
<b>4. Doing the right thing and respecting each other</b>	We do the right thing - respect each other and value diversity.	100% implementation of ethics barometer measures 100% anonymous recruitment for open recruitment >30% women in management positions
<b>5. Promotion of occupational safety and well-being</b>	We promote safety throughout the value chain.	0 accidents at work (TRIF) AAA job satisfaction among personnel
<b>G – GOVERNANCE</b>		
<b>6. Innovativeness and open-minded cooperation and 7. The impact of forest-based bioeconomy for society</b>	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 partner

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**Our operations are based on the sustainable use of raw materials and resource-efficient production that enables us to reduce our operations' environmental impacts. We reduce our fossil carbon dioxide emissions and safeguard biodiversity. The wood products we produce serve as long-term carbon storage. We aim to produce entirely fossil free products that replace materials made of fossil raw materials.**

Metsä Group's environmental management is based on our environmental policy, the principles of environmental management and our certified ISO 14001 and ISO 9001 management systems. These ensure that we operate in accordance with the environmental permits, minimise our environmental impact and reduce emissions. The authorities monitor our mills' compliance with the environmental permits.

We engage in open dialogue on our environmental impact and its minimisation with the authorities and other stakeholders such as our raw material suppliers, customers and local residents.

We monitor the development of energy efficiency and report on it in accordance with the ISO 50001 standard and national requirements. We have participated in the Energy Efficiency Agreements since 2017.

In our investments and process development, we use the best available technology (BAT) and develop new solutions and operating methods to further reduce our mills' emissions and environmental impacts.

**Emissions and impact monitoring**

In addition to reliably measuring and reporting our emissions, we monitor our mills' environmental impacts. We examine our impacts on the surrounding waterbodies, groundwater, fish, fauna and air quality. Noise level measurements are carried out regularly at all our mills. We also participate in other local nature observations.

Environmental monitoring helps us observe potential long-term changes caused by our operations. While emissions reductions can be detected quickly, it often takes longer before the impacts on the environment can actually be verified.

**New innovations from development**

In 2022, Metsä Group launched strategic research programmes to identify new fossil free raw materials and develop new products based on side streams. Metsä Group's R&D teams and procurement personnel, supported by other operations, actively promoted joint research and development projects with our raw material and material suppliers, universities, research institutions and other partners. Metsä Group's innovation company Metsä Spring continues to support Woodio, Montinutra and Innomost, three start-up companies that utilise Metsä Group's side streams.

**The circular economy is part of our work**

The circular economy is more than enhanced waste management and recycling. We use raw materials, energy and water as efficiently as possible. However, no operator can build a circular economy alone. We conduct and expand cooperation on many fronts. In June 2022, Metsä Group joined the Ellen MacArthur Foundation's global circular economy network. The network offers companies, developers, universities and influencers opportunities to cooperate and promote the circular economy. Dialogue with policymakers is key to developing the operating environment.



**Material and energy streams**

**Metsä Group has 35\* production sites in eight\* countries. We have set sustainability targets for each material flow. We produce more wood-based energy than we use.**

**Inbound material and energy streams**

	<b>Wood-based raw materials</b>
	Wood, 1 000 m <sup>3</sup> ..... <b>25,405</b> (25,850)
	Purchased pulp, 1,000 t ..... <b>79</b> (93)
	Recovered paper, 1,000 t ..... <b>312</b> (335)
	<b>Other raw materials 1,000 t</b>
	Process chemicals ..... <b>56</b> (49)
	Coatings, binders and pigments ..... <b>321</b> (322)
	Packaging materials ..... <b>92</b> (130)
	<b>Purchased energy TWh</b>
	Fossil fuels ..... <b>2.6</b> (2.7)
	Wood-based fuels ..... <b>1.2</b> (1.2)
	Electricity ..... <b>2.5</b> (2.7)
	Heat ..... <b>0.34</b> (0.56)
	<b>Water intake 1,000 m<sup>3</sup></b>
	Surface water ..... <b>393,873</b> (407,986)
	Groundwater ..... <b>954</b> (961)

**Outbound material and energy streams**

	<b>Products</b>
	Pulp and BCTMP, 1,000 t ..... <b>4,344</b> (4,356)
	Mechanical wood products, 1,000 m <sup>3</sup> ..... <b>2,295</b> (2,605)
	Paperboard, 1,000 t ..... <b>1,890</b> (1,920)
	Tissue papers, 1,000 t ..... <b>559</b> (542)
	Greaseproof papers, 1,000 t ..... <b>60</b> (55)
	Other bioproducts (tall oil and turpentine), 1,000 t ..... <b>138</b> (139)
	Utilised by-products, 1,000 t ..... <b>219</b> (242)
	<b>Produced wood-based renewable energy TWh</b>
	Bioenergy used in own production ..... <b>25</b> (25)
	Sold bioenergy ..... <b>2.7</b> (3.1)
	<b>Waste 1,000 t</b>
	Utilised waste ..... <b>482</b> (421)
	Landfill waste ..... <b>30</b> (50)
	Hazardous waste ..... <b>2.4</b> (3.2)
	<b>Emissions to air 1,000 t</b>
	Biogenic carbon (CO <sub>2</sub> ) ..... <b>10,040</b> (9,916)
	Fossil carbon (CO <sub>2</sub> , Scope 1&2) ..... <b>1,083</b> (1,153)
	Nitrogen oxides (as NO <sub>2</sub> ) ..... <b>6.8</b> (7.0)
	Sulphur (as SO <sub>2</sub> ) ..... <b>0.75</b> (0.74)
	Particles ..... <b>0.81</b> (0.79)
	<b>Discharges to water</b>
	Waste water flow, 1,000 m <sup>3</sup> ..... <b>136,022</b> (145,884)
	Chemical oxygen demand (COD), t ..... <b>42,416</b> (43,330)
	Biological oxygen demand (BOD), t ..... <b>1,260</b> (1,443)
	Phosphorus (P), t ..... <b>49</b> (53)
	Nitrogen (N), t ..... <b>551</b> (601)
	Total suspended solids, t ..... <b>3,465</b> (3,340)
	Absorbable organic halogen (AOX) t ..... <b>408</b> (401)

\* Sawmill operations in Russia has been shut down in spring 2022.

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# E S G Safeguarding biodiversity

**We aim to safeguard and strengthen biodiversity by offering more of the conditions required by species and preserving valuable habitats.**

## Indicators and progress

Our goal for 2030 is that we leave retention trees on all our regeneration harvesting sites and make four high biodiversity stumps per hectare in 90% of our thinning and regeneration harvesting sites.

**RETENTION TREES**  
at regeneration sites, %



In 2022, the retention tree count for regeneration sites was 95% (94). Forest owners have been actively informed about the positive biodiversity benefits of retention trees and biodiversity stumps. They have decided to increase the number of them.

**HIGH BIODIVERSITY STUMPS**  
in harvesting sites, %



In 2022, in 90% (88) of our wood sales, high biodiversity stumps were left in the forest.

## Our operations

### Biodiversity measures in commercial forests

We take care of the biodiversity of commercial forests in many ways. Forest certification can be used to demonstrate that the forest has been managed sustainably and responsibly. We use international forest certification systems PEFC (Programme for the Endorsement of Forest Certification, PEFC/02-31-03) and FSC® (Forest Stewardship Council®, FSC-C014476). We have also launched an ecological sustainability programme to regularly develop new ways to improve forest growth, biodiversity and water protection. The programme helps us keep forests healthier and more vibrant.

### Decaying wood increases the number of species in forests

High biodiversity stumps and retention trees increase the amount of decaying wood in forests. A high biodiversity stump is a trunk that is cut off at a height of a few metres and left to decay in the forest. Retention trees are usually left in bigger groups, and their undergrowth is left in place to serve as a protective thicket. Making high biodiversity stumps is voluntary for forest owners, and it is agreed separately in connection with wood trade. According to a survey completed in 2022, high biodiversity stumps increase the number of species living in decaying wood compared to situations in which they are not left in the forest.

We leave protective thickets for animals at different stages of forest management. Protective thickets are created by leaving brush and small trees untouched in the clearing that precedes felling. They are small untended thickets that provide shelter and food for birds and mammals, thereby securing the habitats of forest-dwelling species. Protective thickets are primarily placed in connection with retention trees, high biodiversity stumps and decaying wood.

### We take care of threatened species and increase the their number

Herb-rich forests are not common in Finland, but they are home to nearly half our threatened forest species. We recommend to forest owners that herb-rich forests be treated on the species' terms, with most suitable management measure, and with voluntary protection for the best sites. From 2022, we will review our owner-members' herb-rich forests and intensify our guidance for their management.

Every natural tree species maintains a considerable number of species that depend on it. Metsä Group use spruce, pine and birch, as well as aspen with a diameter of less than 40 centimetres. Sturdy aspen and other broadleaved trees that are sparsely found in forests, such as the great willow, bird cherry, rowan and aspen, will be left in the forest. They are key tree species that support a diverse range of living organisms.

Mixed cultivation produces forests that are more sustainable, more diverse and grow better than single-species forests. Mixed cultivation increases biodiversity by establishing the forest initially as a mixed forest and ensuring that sufficient amount of silver birch and other broad-leaved trees are left on the site in addition to pine and spruce.

### Protection of valuable nature sites

Metsä Group's FSC® nature site service helps focus the protection required by the FSC on the sites most valuable in terms of nature. FSC® forest certification requires that at least 5% of the surface area of forestland on certified forest estates is permanently excluded from forestry use. The owner of an estate that does not contain suitable protection sites can choose to protect ordinary forestland or protect the required number of hectares on leased land provided by Metsä Group.

→ Read more about the ecological sustainability programme, high biodiversity stumps and nature conservation in the sustainability section of Metsä Forest's website.

### Biodiversity measures outside commercial forests

We annually provide financial support to development projects conducted outside Finnish commercial forests that have a regional impact, promote biodiversity and improve the condition of waterbodies. The projects may involve waterfowl habitats and wetlands, watercourses, small waterbodies and shores, the habitats of pollinators, or new water conservation methods. Projects are chosen for Metsä Group's nature programme once a year.

To date, we have selected 16 sites and supported them with approximately EUR 600,000 overall. The next decisions will be made in the summer of 2023, and the related application period will end in May 2023.

→ Read more about the nature programme in the sustainability section of our website.

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# E S G Mitigating climate change and reducing emissions

**We mitigate climate change by reducing our fossil carbon dioxide emissions, minimising the environmental impact of our products and ensuring that carbon is bound in forests and stored in products made of wood.**

**Indicators and progress**

Our goal is to use only bio-based fuels and avoid all fossil carbon dioxide emissions (CO<sub>2</sub>) in our production by the end of 2030.

**FOSSIL-BASED CARBON DIOXIDE EMISSIONS (CO<sub>2</sub>) t**



In 2022, fossil-based carbon dioxide emissions (Scope 1) from our mills were 623,800 t (652,000). Emissions continued to fall thanks to more efficient operations.

Our aim is that forests bind carbon efficiently. We support this by increasing the forest regeneration area and the area covered by young stand management by 30% by the end of 2030 compared to 2018.

**AREA OF REGENERATION AND MANAGEMENT OF YOUNG STANDS**



In 2022, the area of reforestation and management of young stands was at total of 2.8% (3.8) higher compared to a level of 2018.

We aim to increase the amount of carbon stored in long-lived products by 30% compared to 2018.

**THE AMOUNT OF CARBON STORED IN PRODUCTS %**



In 2022, our products stored less carbon -12.4% (-1.2) compared to the previous year.

The closure of the Kyrö sawmill and the discontinuation of Metsä Svir sawmill in Russia reduced sawn timber production volume. The new Rauma sawmill was only in operation for three months in 2022.

Our goal is that by 2030, we will not use fossil oil-based raw materials or packaging materials in the products we produce. Instead, we will seek suitable bio-based replacements for them.

**FOSSIL FREE RAW MATERIALS %**



In 2022, 99.6% (99.6) of the raw materials and packaging materials used in our products that do not contain components derived from fossil oil. Ongoing research and development work aims to increase the fossil free share in the coming years.

**Our operations**

**Reducing fossil carbon dioxide emissions**

In 2022, our direct fossil carbon dioxide emissions (Scope 1) were 623,800 t (652,000). Our fossil carbon dioxide emissions from purchased electricity and heat (Scope 2) were 458,800 t (509,000) according to the market-based calculation method and 459,400 t (470,000) according to the location-based method. The specific emissions of fossil-based carbon dioxide (Scopes 1 & 2) have declined by 25% (21) per tonne produced compared to 2018. As the mills' energy efficiency has improved, the need for purchased energy has decreased, thus contributing to a reduction in emissions. As a rule, all our future investments are designed to be fossil free and have the lowest possible emissions. We are constructing a fossil free bioproduct mill in Kemi, which enables us to take a major step towards our fossil free goals.

The new Rauma sawmill started in autumn 2022 and will further improve the efficiency of operations. The pulp mill next to the sawmill receives wood chips as raw material directly from the sawmill and the heat demand of the sawmill is covered with the surplus heat of the pulp mill.

**Reducing water and air emissions**

Most of our air emissions originate in the combustion process at pulp mills and power plants. Our emissions mainly consist of carbon dioxide (CO<sub>2</sub>), sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and particles. Small amounts of reduced sulphur compounds (TRS) are also emitted from pulp mills.

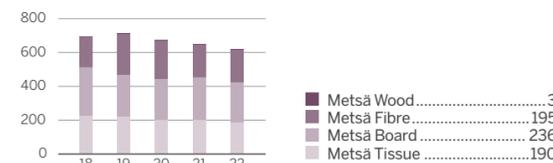
Air emissions can be reduced by controlling the combustion processes and cleaning flue gases despite our production increasing. Our emissions causing acidification (SO<sub>2</sub>, NO<sub>x</sub>) decreased by 2% from 2021. Our emissions of particles increased by 8% and reduced sulphur compounds (TRS) by 13% from the 2021 level.

Due to isolated incidents, some of our mills have had challenges with emissions. Emissions to air are broken down by mill in the business-specific tables from page 40 onwards.

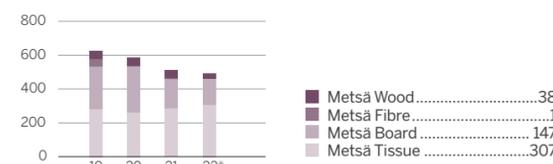
Our wastewater discharges mainly consist of nutrients (phosphorus and nitrogen) and organic substances, measured as chemical oxygen demand (COD) and biological oxygen demand (BOD), and of suspended solids. The wastewaters of pulp production also contain organic chlorine compounds (AOX), sodium and sulphates. Our emissions into waterways have continued to decline as a result of both reduced water use and efficient processes.

In 2022, for example, phosphorus (P) decreased by 9% and nitrogen (N) by 9% from 2021 levels. Emissions to water are broken down by mill in the business-specific tables from page 40 onwards.

**FOSSIL CO<sub>2</sub> EMISSIONS by business area (Scope 1), 1 000 t**

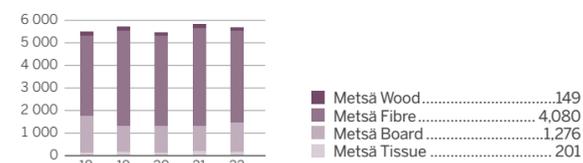


**FOSSIL CO<sub>2</sub> EMISSIONS by business area (Scope 2, marked-based) 1 000 t**

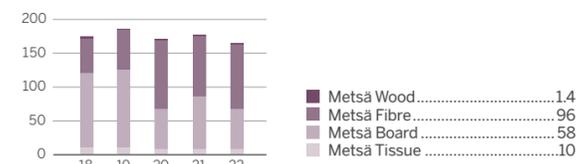


\* Includes 35,000 t of internal Scope 2 emissions

**ACIDIFICATION (SO<sub>2</sub> EQUIVALENT) by business area, t**



**EUTROPHICATION (P EQUIVALENT) by business area, t**





**EXCEPTIONAL EMISSIONS AT OUR MILLS**

BUSINESS AREA	Mill	Time of incident	Incident	Corrective action
Metsä Board	Äänekoski	8/2022	The reduction of suspended solids at the wastewater treatment plant failed to meet the permit condition	Review and adjustment of flocculant input
Metsä Board	Kyro	9/2022	The monthly permit limit for phosphorus was exceeded	Adjustment of the aeration and process at the wastewater treatment plant
Metsä Board	Kyro	10/2022	The monthly permit limit for phosphorus and suspended solids was exceeded	More precise adjustments to the process during the mill's maintenance shutdown
Metsä Board	Tako	11/2022	The water fraction discharged into the waterway had too high a concentration of suspended solids in November	Probably a sampling error. More accurate sampling
Metsä Fibre	Joutseno	3/2022	The permit limit for wastewater was exceeded due to an escape of suspended solids	Nutrient dosage increase and load optimisation at the wastewater treatment plant
Metsä Fibre	Joutseno	5/2022	The permit limit for wastewater was exceeded due to an escape of suspended solids	Repair of equipment disruptions
Metsä Fibre	Joutseno	5/2022	Rate of treatment of weak odorous gases was below the monthly permit limit	Changes in operating methods in connection with the maintenance shutdown
Metsä Fibre	Äänekoski	6/2022	Rate of treatment of weak odorous gases was below the monthly permit limit	Change in operating method
Metsä Fibre	Kemi	7/2022	The chlorine concentration of relief gas from the chlorine dioxide plant exceeded the permit limit	Process optimisation
Metsä Fibre	Joutseno	8/2022	The chlorine concentration of relief gas from bleaching exceeded the permit limit	Process adjustments and repair of mechanical fault
Metsä Fibre	Äänekoski	8/2022	Monthly raw water overrun	Excessive water usage due to a reporting error
Metsä Fibre	Äänekoski	12/2022	The odour concentration discharged into the air from the biogas plant exceeded the permit limit	The type of activated carbon used in the exhaust filters was changed
Metsä Fibre	Kemi	2022	The recovery boiler's annual permit limit for NOx exceeded	Process optimisation
Metsä Tissue	Mänttä	4/2022	The permit limit for suspended solids exceeded	Improved control of municipal stormwater
Metsä Wood	Punkaharju	Q1/2022	The quarterly permit limit for COD exceeded	Improved control at wastewater treatment plant

**We report any deviations in emissions without delay**

We analyse all disruptions and exceptional situations and determine corrective actions to prevent their recurrence. In 2022, no events that would have caused significant environmental impacts and resulted in claims, compensation or considerable media attention occurred at our mills.

All the events that exceeded monthly, quarterly or annual permit limits, along with their corrective actions, are described in the table above. The authorities were notified, and the corrective actions were implemented in all cases.

**Reducing emissions with partners**

We encourage our suppliers to set targets for reducing their emissions to mitigate climate change. This is also accounted for in supplier assessments and audits, as well as the Supplier Code of Conduct.

In 2022, we especially assessed the emissions reduction targets set by our transport and warehousing suppliers. We also recommended many raw material suppliers to set emissions reduction targets in accordance with the Science Based Targets initiative and collected information about the emissions of our raw material suppliers.

We reduce logistics emissions through efficient route planning and by minimising transport distances, optimising filling rates and favouring rail connections on specific routes.

At the Kemi bioproduct mill and Rauma sawmill, transport from the production mills to the port is done by maximising the load size of the transport units and using fossil free fuels.

We also consider the carbon footprint of our purchased raw materials and supply chain. Our role in the circular economy for fibre materials is to produce premium fresh fibre material for the markets. Our products are lightweight and resource-efficient, and help reduce the carbon footprint. For example, in 2022, the pre-engineering of the Kaskinen folding boxboard mill focused on lightening products.

**Carbon bound in forests**

The indicator for newly established forest area indicates the area of post-felling forest regeneration and reforestation. The faster and better the reforestation begins, the sooner the forest begins to bind carbon from the atmosphere. We use cultured seeds and seedlings of our domestic tree species whenever these are available. Bred trees grow 10–30% better than naturally generated trees. In 2022, cultured seeds and seedling material accounted for 94% of our regeneration material.

Young stand management ensures that stands remain vital, and growth is focused on the best trees. We use wood to produce products that store carbon and replace fossil materials.

➔ Read more about establishing a new forest and young stand management on Metsä Forest's website in the Wood Trade and Forest Management Services section.

**Carbon stored by wood products**

The carbon that growing trees bind is stored in wood products and buildings throughout their life-cycle. Our wood products – such as Kerto LVL, plywood and sawn timber – are material-efficient, store carbon for a long time and replace fossil products.

We invest in new production units to increase the production of long-lived wood products. Our new pine sawmill started up in Rauma in 2022. It produces approximately 750,000 m<sup>3</sup> of pine sawn timber annually. The ecosystem formed by the sawmill and pulp mill uses materials and energy efficiently.

We are also planning the construction of a new Kerto® LVL mill in Äänekoski. The project would be implemented in phases during 2023–2026. The new mill's annual production capacity would be 160,000 m<sup>3</sup>. This means an increase of approximately 50% to our current Kerto LVL capacity.

We discontinued the operations of the Svir sawmill, our only production unit in Russia, and wood supply from Russia in 2022. We also ended our product deliveries to Russia and Belarus. In Finland, sawmill operations in Kyrö ended in 2022.

**Fossil free products**

Raw materials and packaging materials made of fossil oil account for a very small share of our products. Nevertheless, we are actively working to find solutions to reduce their use or replace all of them with more sustainable alternatives. We have chosen three themes for our Metsä Group-wide strategic development programme for R&D and procurement to support the transition to entirely fossil free raw materials.

1. We will create a systematic monitoring scheme for the share of fossils in all the materials we use. Based on the data provided by our material suppliers, it will enable us to demonstrate that our products are fossil free.
2. We will carry out test runs with new raw materials at our mills, which will also support our raw material suppliers' development of fossil free raw materials.
3. We will conduct packaging material tests on an industrial scale and monitor the needs of our customers and the global markets. This will enable us to produce sustainable packaging based on recycled and bio-based raw materials to protect our products.

In 2022, we conducted several mill test runs with new raw materials and other materials, including latexes and coatings for paperboards, glues and coatings for wood products, and wrappings protecting our products. The test runs provided us with a great deal of information about the materials' usability in our products and their packaging, and their suitability for our process equipment.

➔ To learn more about fossil free products, visit the sustainability section of our website.

**LOGISTICS MODES 2022**  
share of total logistics by spend, %



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# ESG Efficient resource use and sustainable production

**We minimise the environmental impacts of production and reduce the amount of waste.**

**Indicators and progress**

Our goal is to reduce process water use (m<sup>3</sup>/tonne produced) by 25% compared to 2018.

**PROCESS WATER USAGE PER PRODUCT TONNE %**

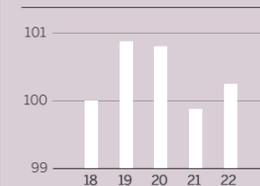


In 2022, our water use will decrease by 7.4% (5.4).

Systematic and persistent work at several mills has reduced water use.

Our goal is to reduce the index by 10 units by the end of 2030 compared to 2018 (100). We monitor the development in our mills' energy efficiency with an energy efficiency index. The index is calculated as all the electricity, heat and fuel used by production relative to the volume of production.

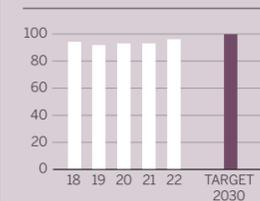
**ENERGY EFFICIENCY INDEX**



In 2022, the index increased to 100.3 (99.8). The energy efficiency figures for 2022 still reflect the impact of the corona pandemic years, when the sharing of best practices and energy audits that are key to energy efficiency work could not be carried out in mills. In addition, pulp mills, as the largest production units, increased specific energy consumption due to production limitations.

We aim to use all our production side streams by the end of 2030. Side streams consist of non-hazardous process waste and by-products generated during production, such as the ash used in fertilisers.

**UTILISATION OF SIDE STREAMS %**



In 2022, 96% (93) of the side streams were utilised, of which about half was used for energy production. We utilize side streams primarily as raw material and secondarily as energy.

The utilisation of side streams was increased, for example, because all ashes were delivered to reuse (2021: 85)

**Our operations**

**Making more efficient use of process water**

Water is an essential resource for the forest industry. Process water use is a key indicator of our environmental performance. We have set targets for the water use of individual companies and mills, which are monitored regularly.

**We use water most for cooling**

As most of our production units are in areas with abundant surface water resources, the availability of water is usually not a problem for our mills. However, efforts to optimise water use are part of the circular economy, energy efficiency and the minimising of emissions.

Production processes account for around a third our water use, and the rest is used for cooling purposes. The cooling water circulates in a separate system and does not need to be treated.

However, the cooling water has a local warming effect on the waterbodies to which it is returned.

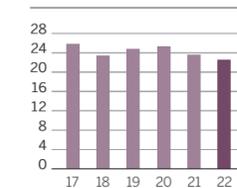
The removed process water is returned to waterbodies after careful treatment. The reduction in water use also has a positive impact on the operations of the wastewater treatment plant. However, in some cases, the functioning of the process and the hygiene requirements for the end product set a limit to minimum water use. In 2022, several mills reduced the volume of waste water and the wastewater treatment plants improved treatment results.

Waste water volumes and water use are broken down by mill in the business-specific tables from page 40 onwards.

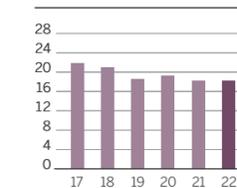
Our operations are designed so that they do not impact other parties' rights to use or access water.

➔ Read more about our water use in sustainability section of our website.

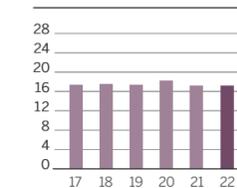
**PROCESS WATER USAGE, METSÄ FIBRE**  
m<sup>3</sup>/t



**PROCESS WATER USAGE, METSÄ BOARD**  
m<sup>3</sup>/t



**PROCESS WATER USAGE, METSÄ TISSUE**  
m<sup>3</sup>/t



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**Performance through renewable energy**

In 2022, 88% (87) of the energy used in our production was fossil free (Scopes 1 and 2). Wood-based fuels accounted for 90% (90) of the fuels used at the mills (Scope 1). The used renewable biofuels consist mainly of wood-based production side streams and harvesting residue.

Our total primary energy consumption in 2022 was 35 TWh (35). Our mills' wood-based renewable fuel production was 25 TWh (26), of which 22 TWh (25) was used in our own processes.

Metsä Tissue launched an energy efficiency programme in 2021, which reactivated systematic energy efficiency activities. The measures were highly successful and tightened the specific energy use of the business to a 2.5% reduction during 2022. Even so, the energy crisis hit the mills in Central Europe particularly hard. Energy costs were monitored daily at the mills and production curtailment measures were taken when energy prices rose above the critical threshold.

In the energy crisis, Metsä Group's self-sufficiency in energy has been evident. In Finland, Metsä Group's own biomass fuels have ensured continuity of operations in energy production. In addition, any energy that has been saved reduces the amount of fuel used in our own energy production units, i.e. increases the amount of fuel sold out.

The surplus of wood-based fuels from mill processes and forestry, such as bark, is sold to external partners. In some cases, it makes sense for transport to sell our waste to power plants operating near our mills or for another use. In 2022, we sold 2.7 TWh of wood-based fuel, which replaced fossil fuels and reduced carbon dioxide emissions by 0.7 (0.8) million tonnes.

→ Read more about our energy efficiency on our website.

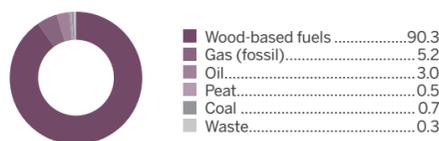
**PRIMARY ENERGY CONSUMPTION 2022** (Scope 1 and 2) GWh



**SHARE OF BIOFUELS OF THE FUELS USED IN PRODUCTION 2022** (Scope 1), %

Metsä Wood	98
Metsä Fibre	96
Metsä Board	83
Metsä Tissue	21
<b>Metsä Group</b>	<b>90</b>

**FUEL CONSUMPTION IN PRODUCTION 2022** (Scope 1), %



**ENERGY CONSUMPTION BY ENERGY SOURCE 2022** GWh



**ENERGY CONSUMPTION 2022**

Energy consumption, GWh (primary energy)	34,910
Energy consumption, GWh (GRI, end use)	29,195

**Aiming for the full utilisation of production side streams**

Our production process generates by-products and waste from industry and energy production. In addition, varying amounts of construction and demolition waste, hazardous waste and municipal waste are generated from activities such as offices, process control rooms and canteen operations. Reducing the amount of process waste is part of our production efficiency.

Through effective sorting practices and skilled personnel, we also ensure that other waste fractions are minimised and diverted for reuse.

Some of our mills have their own waste management area or landfill site, where operations are subject to environmental permits. The environmental impact of our own waste disposal sites is minimised in accordance with environmental permits. Some of our waste is delivered to external waste management companies with environmental permits for recovery or disposal. We ensure the responsibility of waste management operators in supply contracts.

Our side streams – such as wood-based waste and by-products, sludge, ashes and lime fractions – are used in civil engineering and landscaping, fertilisers, a variety of chemicals industry applications, and in energy production. In 2022, 96% of these side streams were utilised. The volume of process waste directed to landfill decreased by 38% compared to 2021.

Our biggest process waste fractions are green liquor dregs and ash that cannot be used as fertiliser. However, in 2022, we were able to utilise all the ash categorised as waste. 100% utilisation of

the ashes was realised when the Kreuzau mill in Germany was able to utilise the ashes for the manufacture of cement as a result of the development work instead of placing them in landfill.

Green liquor dregs make up about 93% of our process waste sent to landfill. Green liquor dregs are a fraction generated in the chemical recovery of the pulp mill. So far, there has been no established use for them. We are actively seeking new ways to use the dregs by conducting our own research and participating in jointly funded university research projects. In 2022, green liquor dregs from our mills were used in civil engineering.

Metsä Group is also studying and developing various new ways to use lignin, sawdust and bark, and other wood-based side streams from the forest industry that are currently used as renewable fuels. Metsä Fibre and Veolia have initiated a long-term partnership that aims to convert the crude methanol generated as a side stream at the Äänekoski bioproduct mill into commercial biomethanol.

**Soil improvement fibres for fields**

In 2022, we promoted the use of fibre sludge resulting from the treatment of process water for soil improvement. Soil improvement fibres increase the humus content of soil, enhance microbial activity in the soil, and reduce erosion and nutrient runoff. The use of soil improvement fibres is an efficient way to protect waters, as it can reduce phosphorus runoff from fields by as much as half.

**BY-PRODUCTS AND WASTE 2022**  
total approximately 734,000 t



**BY-PRODUCTS, t** **2022**

By-product for fertilising and soil improvement (lime, ash, sandy bark)	98,043
By-product for industrial use (lime dust, ash, de-inking sludge)	93,045
By-product for fuel (de-inking sludge, sandy bark)	28,179
<b>Total</b>	<b>219,267</b>

**WASTE FOR UTILISATION AND OTHER DISPOSAL, t**

	On-site	Off-site	Total
<b>PROCESS WASTE (NON-HAZARDOUS WASTE)</b>			
Material utilisation	32,670	85,279	117,950
Energy use	208,390	143,385	351,775
Landfill	29,456	199	29,656
<b>OTHER NON-HAZARDOUS WASTE</b>			
Material utilisation	132	11,043	11,175
Energy use	1	960	961
Landfill	196	287	483
<b>HAZARDOUS WASTE</b>			
Material utilisation	-	693	693
Energy use	-	273	273
Incineration without energy benefit	-	1,003	1,003
Landfill	-	14	14
Other disposal*	-	382	382

\* Disposal and treatment of waste other than landfilling. This amount also includes repackaging and pre-treatment prior to disposal operations.

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# It's great to be at work

We want to ensure that our values are visible in the daily lives of all our employees, and that we treat each other respectfully. We are committed to developing a responsible corporate culture that ensures safety, diversity, equality and inclusion.

## Indicators and progress

<p>Our goal is for the ethics index, which is a measure of our business ethics, to be 100% by 2030.</p>	<p><b>RESPONSIBLE CORPORATE CULTURE:</b> Ethics barometer, %</p>	<p>In 2022 ethics index was <b>85.2%</b> (84.4)</p>
<p>We use the Pulse survey to monitor the development of staff satisfaction and ethics.</p>	<p>Of those who responded to the 2022 survey*</p> <p><b>3.2/4.0</b> would recommend our company as a good place to work.</p> <p><b>3.4/4.0</b> felt our company operated ethically.</p>	
<p>Our goal is to have at least 25% of our managers (Vice President or above) be women by 2025.</p>	<p>In 2022, women accounted for <b>21%</b> (20) of management.</p>	
<p>We promote awareness of diversity, equality and inclusion with an e-learning course, which we require all our employees to complete.</p>	<p>By the end of 2022 <b>95%</b> (94) of our personnel had completed the e-learning course on diversity, equality and inclusion.</p>	

\*The result is an average of the four surveys conducted over the year.



## Our operations

### Our common principles

Our work is guided by Metsä Group's values, our Code of Conduct and our personnel and equality policies. In our Metsä For All vision, we undertake to promote diversity, equality and inclusion in our company and its sphere of influence. We have defined the key areas and goals of development, making the vision more real for the coming years.

➔ Read more about the Metsä for All vision on the Careers in Forests section of our website.

### Our competent professionals

No major changes took place in our headcount. The employee turnover rate increased from the previous year, totalling 12.2%. We hired 817 new permanent and 1,417 fixed-term employees, 784 of whom were summer workers. In Finland, we received 1,383 (982) applications for apprenticeship training offered at 12 (8) of our sites.

We retained a good level in Universum's student and professional surveys and in T-Media's survey of employer reputation. We ranked 7<sup>th</sup> (5) in the student survey's natural sciences area, which was the best in our industry. In the field of technology, we ranked

as the 16<sup>th</sup> (17) most attractive employer. In the survey for professionals, our ranking dropped from the previous year. We were 16<sup>th</sup> (9) in the natural sciences and 54<sup>th</sup> (45) in technology.

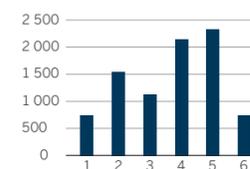
In addition to the annual personnel survey and ethics barometer, we launched a Pulse survey to measure our development in personnel satisfaction and ethics. The survey results were good for both ethics and personnel satisfaction, but there is also room for improvement. The Pulse survey is one of Metsä Group's indicators that we use every quarter to monitor the implementation of our strategy.

### Promoting workplace wellbeing

The early intervention model has been widely introduced in our countries of operation. Workplace wellbeing remained good during the coronavirus pandemic, and the pandemic restrictions were lifted in the summer of 2022.

Among other things, the coronapandemic affected our ways of working and methods of competence development as we have continued to organise meetings and training remotely. We chose competence development as a company-wide strategic focus area and began planning development academies to support it.

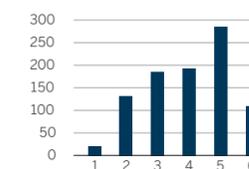
**NUMBER OF EMPLOYEES AND EMPLOYMENT TYPE 2022** by business area



**Permanent**

1 Wood supply and forest services.....	747
2 Metsä Wood .....	1,546
3 Metsä Fibre .....	1,130
4 Metsä Board .....	2,154
5 Metsä Tissue .....	2,333
6 Metsä Group others.....	753

**NUMBER OF EMPLOYEES AND EMPLOYMENT TYPE 2022** by business area



**Temporary**

1 Wood supply and forest services.....	22
2 Metsä Wood .....	131
3 Metsä Fibre .....	186
4 Metsä Board .....	193
5 Metsä Tissue .....	284
6 Metsä Group others.....	110

**PERSONNEL BY COUNTRY** (FTE 31.12.2022)



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KEY PERSONNEL DATA, Metsä Group in total	2022	2021	2020	2019	2018
Number of employees <sup>1)</sup>	9,155	9,533	9,213	9,265	9,310
Share of permanent employees, %	90.3	91.2	92.1	91.9	91.9
Share of full-time employees, %	96.4	96.4	97	97	96
Average age	44.3	44.5	44.7	44.8	44.7
Average years served	14.8	15.1	15.8	16.3	16
Training hours (total)	121,591	101,905	76 476	123 756	
Average training hours per employee (entire personnel)	12.7	-	-	-	-
Average training hours per employee (women)	15.1	-	-	-	-
Average training hours per employee (men)	11.9	-	-	-	-
Average training hours per employee (blue collars)	10	-	-	-	-
Average training hours per employee (white collars)	16.8	-	-	-	-
Employee turnover rate, % <sup>2)</sup>	12.2	6.8	6.2	8.3	6.5
Share of men and women, %	76 / 24	77 / 23	77 / 23	78 / 22	77 / 23
Share of women in management, % <sup>3)</sup>	16.9	20	21.6	19.2	21.8
Share of women in executive management (VP, SVP, CEO), % <sup>5) 7)</sup>	21.0	19.9	18.1		

KEY PERSONNEL DATA by business area 2022	Metsä Forest	Metsä Wood	Metsä Fibre	Metsä Board	Metsä Tissue	Metsä Group others
Number of employees <sup>1)</sup>	745	1,590	1,297	2,248	2,449	826
Share of permanent employees, %	97.1	92.2	85.9	91.8	89.1	87.3
Share of employees working full time	98.8	96.1	96.7	96.6	95.9	95.6
Average age	44.5	43.5	43.9	45.8	44.4	42.4
Average years served	14.4	13.1	14.5	17	16	9.1
Training hours	12,920	9,025	31,772	35,245	15,225	17,405
Employee turnover, % <sup>2)</sup>	21.3	14.8	19.5	7.8	7.8	11.5
Ratio between men/women, % <sup>3)</sup>	80 / 20	75 / 25	84 / 16	78 / 22	81 / 19	46 / 54
Share of women in management, % <sup>3)</sup>	29	0	23	25	9	12 <sup>4)</sup>
Share of women at senior management VP, SVP, CEO, % <sup>5)</sup>	12.5	21.1	15	25	13.9	26.2
Summer workers	59	112	157	279	159	18
Employees within the scope of collective agreements	74.5	80.7	78.7	75.4	92.8	10.8
Number of people recruited	71	165	113	207	172	89
Number of employees temporarily laid off	3	341	0	0	0	43
Number of people made redundant <sup>6)</sup>	110	40	132	32	7	24
Number of people affected by restructuring of business and co-operation negotiations	21	712	179	100	35	96

<sup>1)</sup> Full-time equivalent (FTE) on 31 Dec 2022.  
<sup>2)</sup> The figure includes redundancies caused by restructuring of business.  
<sup>3)</sup> Management includes Board of Directors, Executive Management Team and business areas' management teams.  
<sup>4)</sup> Metsä Group's Management Team  
<sup>5)</sup> Incl. MI DErmo  
<sup>6)</sup> 69% of redundancies are related to discontinuation of business operations in Russia.  
<sup>7)</sup> 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.

In Finland, Metsä Group concluded company-specific collective agreements for the chemical and mechanical forest industry and Forestry Experts (METO). These led to the launch of measures to renew and improve work jointly with personnel representatives. Individual collective agreements were negotiated for Metsä Group's companies in Finland to harmonise and improve the terms and conditions of employment of Metsä Group's personnel and to create a model for renewing work jointly with personnel representatives. In Finland, the management teams of all mills include personnel representatives, and paid family leave was increased to provide both parents with more equal opportunities to care for their child.

**Ethics barometer measures a culture of doing the right thing**

We conduct our personnel survey and our ethics barometer focusing on responsible corporate culture in alternate years. The barometer measures our employees' perception of the ethics of our operations: what we are doing right, and where we still have room for improvement. Our second ethics barometer was conducted in 2022. The ethics index, indicating the barometer results, was 85.2% (84.4). We aim for 100% by 2030. The ethics index is determined based on the answers to the key questions of the barometer's five sections. The ethics barometer received responses from more than 5,500 employees, which is more than 58% (66) of our personnel.

According to the results, positive development had been made in nearly every section of the barometer. Awareness has improved, the employees consider the topic important, and the company operates ethically. Areas with the greatest room for improvement include the equal treatment of employees and a culture in which employees dare to report unethical activities, and in which misconduct is addressed. The risk of financial misconduct did not come up in the barometer results.

**Measures to ensure we do the right thing**

The results of the ethics barometer were reviewed at all our sites during 2022, and every site defined development measures to address the concerns raised. A total of 139 local

and function-specific measures to be carried out in 2023 were recorded. We also launched the following group-wide development measures:

1. Our entire personnel will receive training in the core content of our Code of Conduct through a revised e-learning course
2. In training for managers, there will be more emphasis on addressing misconduct and encouraging the reporting of ethical concerns
3. Anonymous recruiting will be adopted as the primary recruiting method
4. The transparency of recruiting will be increased by publishing all vacancies internally, except for vacancies that involve successor planning
5. Local workshops will be arranged to promote the Metsä For All vision

[→ Learn more from G section.](#)

**Aiming for an equal and inclusive workplace that appreciates a diverse personnel**

We are committed to promoting an equal culture in which there is no room for discrimination, and everyone is accepted and can succeed at work. We encourage our employees to develop their own thinking and the entire forest sector in a more equal direction.

We use the ethics barometer and our equality goals to measure our progress in becoming a workplace in which personal characteristics such as gender, age, sexual orientation, disability, ethnic background or nationality are considered strengths.

The Metsä For All vision, published in 2021, further boosts our ambition for diversity, equality and inclusion. The most significant of our measures promoting equality is the deployment of our vision through communication and workshops for local management. Determining the challenges and development measures of individual sites is part of the activities. The workshops will continue during 2023.

In 2022, we introduced anonymous recruiting as our primary recruiting method, we revised our job titles to make them gender-neutral, and launched a mentoring programme for future

REMUNERATION DATA 2022 <sup>1)</sup> compensation per production country	Finland	Germany	Slovakia	United Kingdom	Poland	Sweden
Ratio of annual total compensation for organisation's highest paid individuals (highest 1%) to median annual total compensation <sup>2)</sup>	4.5	3.0	3.3	4.7	5.0	3.3
Ratio of percentage increase of highest individual salaries (highest 1%) to average percentage increase	1.4	0.0	1.0	0.7	0.2	0.6
Ratio of annual total compensation of women to men, based on comparable average job grades index <sup>3)</sup>	1.0	1.0	0.9	0.9	1.0	0.9

<sup>1)</sup> Including 33% of the whole personnel, 89% of white-collar personnel  
<sup>2)</sup> Compensation includes full-time base salary  
<sup>3)</sup> Weighted average of women's total salary compared to men's total salary in the same job grade.

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leaders. Moreover, diversity, equality and inclusion are now included as a separate module to all Metsä Group's supervisor and leadership training.

Metsä Group's equality goals guide our operations. In 2022, women accounted for 21% (20) of top management, the goal being 25% by 2025. A total of 95% (94) of our employees has completed the e-learning course on diversity, equality and inclusion aimed at the entire personnel (performance percentages by business area on page 34).

**Human rights as part of a responsible corporate culture**

We respect human rights in everything we do. We are aware that we can further the realisation of human rights through our own actions. 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 rectifying any shortcomings brought to light and to adopt corrective measures collaboratively. We discuss human rights in our e-learning courses focusing on the Code of Conduct, sustainability, and diversity, equality and inclusion, which are intended for the entire personnel.

In our own operations, an emphasis on safety at work and the development of diversity, equality and inclusion were important practical measures in enforcing human rights in 2022.

Moreover, the Metsä Group Supplier Code of Conduct requires suppliers to fulfil their human rights responsibilities. In 2022, 98% (96) of our purchases complied with the requirements. No cases of human rights violations related to our operations or subcontracting chain were brought to our attention in 2022.

→ Read more about equality on our website from Careers section.

SAFETY AND WELL-BEING DATA Metsä Group total	2022 <sup>1)</sup>	2021	2020	2019	2018
Sickness absenteeism, % <sup>2)</sup>	5	4.2	4.0	4.4	4.0
Work accident absenteeism, % <sup>2)</sup>	0.10	0.08	0.14	0.14	0.10
Accident rate LTA1F <sup>3)</sup>	5.2	5.4	5.1	5.9	6.4
Registered occupational diseases, no. of cases	2	4	5	6	2
Work related fatalities, no. of cases	1 <sup>4)</sup>	0	0	1 <sup>4)</sup>	2
TRIF <sup>5)</sup>	6.7	8.1	8.7	17	19.8
LTA severity rate <sup>6)</sup>	19.8	12.6	21.3	20.0	-
High consequence injuries <sup>7)</sup>	4	1	1	-	-

<sup>1)</sup> Incl. Hangö Stevedoring in January and February.  
<sup>2)</sup> % of theoretical working time.  
<sup>3)</sup> LTA1 = Accidents at work resulting at least one day of sick leave per million worked hours.  
<sup>4)</sup> External employee.  
<sup>5)</sup> TRIF is reported from 2018. 2020 is not totally comparable to previous years, due to updated instructions on reporting TRI.  
<sup>6)</sup> LTA severity rate is reported from 1.1.2019 on.  
<sup>7)</sup> High Consequence Injuries is reported from 2020.

SAFETY AND WELL-BEING DATA by business area	Metsä Forest		Metsä Wood		Metsä Fibre		Metsä Board		Metsä Tissue	
	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Sickness absenteeism, % <sup>2)</sup>	2.2	1.6	5.9	4.1	5.2	4	4.9	4.1	6.2	5.7
Work accident absenteeism, % <sup>2)</sup>	0.03	0.01	0.13	0.07	0.15	0.19	0.07	0.08	0.14	0.07
Accident rate LTA1F <sup>3)</sup>	2	2	11.2	8.8	3.9	7.6	5.4	7	3.1	3.1
Registered occupational diseases, no. of cases	0	0	2	2	0	0	0	2	0	0
Work related fatalities, no. of cases	0	0	0	0	1	0	0	0	0	0
TRIF	6.1	6.0	12.7	12.5	5.2	10.2	6.7	9.8	3.4	5
LTA severity rate	11.3	6.3	9.0	8.0	9.3	11.7	15	12.3	64.4	23.8
High consequence injuries <sup>4)</sup>	0	0	1	0	1	0	0	1	2	0

<sup>1)</sup> Incl. Hangö Stevedoring in January and February.  
<sup>2)</sup> % of theoretical working time.  
<sup>3)</sup> Accidents at work resulting in at least one sick leave day per million working hours.  
<sup>4)</sup> High consequence Injuries is reported from 2020.

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**Promoting safety**

**We investigate all accidents and near miss cases. We encourage our personnel for preventive safety work. The same safety requirements apply also to our partners.**

**Indicators and progress**

We aim for zero accidents by 2030.

**ACCIDENT-FREE WORK ENVIRONMENT, TRIF O**



In 2022, the total recordable injury frequency (TRIF) was **6.7** (8.1)

The result indicates that our development curve is moving in the right direction, and that our efforts are taking us closer toward our long-term goal of zero accidents.

**Promoting safety at work**

Our safety leadership focuses on preventive risk and hazard identification. We comply with Metsä Group's safety processes, standards and instructions. Together they form the Metsä Group's safety management system, in which the requirements are the same for our personnel and to our partners.

We monitor the implementation and development of our safety work. We report safety observations, carry out safety walks and personal risk assessments, and investigate all accidents and hazardous situations. All employees working in Metsä Group receive safety induction related to work environment safety hazards.

→ Read more about safety at work on our website in the Safety and well-being at work section.

**Towards our long-term safety goal of zero accidents**

In 2022, our main focus in safety was implementing our safety standards. With unified requirements we ensure safe work conditions throughout the Group. The implementation of safety standards had a positive impact in occupational safety: In 2022, the TRIF (Total Recordable Injury Frequency) of our own personnel was 6.7 (8.1). Unfortunately the severity of lost time accidents (LTA1s) increased to 19.8 (12.6), indicating that work for safety must be continued to identify and eliminate serious hazards.

To help us achieve our target of zero accidents, we determined the focus areas of long-term safety for Metsä Group and our business areas in 2022. Jointly agreed actions across business area's will guide our safety development, determine key targets and improve the predictability in our safety work. Our shared – and ambitious – goal, zero accidents, requires our entire personnel's commitment to safety in the coming years.

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# ESG Sustainability is the prerequisite for profitable business

**We aim to nurture a culture of doing the right thing, and we address shortcomings across our value chain.**

## Indicators and progress

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

At the end of 2022,	November 2022, and
<b>55%</b>	<b>97%</b> (98)
of our personnel had completed the Code of Conduct e-learning course published in	had completed its previous version.

## Our operations

### Sustainable business management

Metsä Group's values and Code of Conduct guide our operations. In addition to the applicable legislation, we are committed to sustainability and to promoting a culture of doing the right thing. We measure our achievement of such a culture with our ethics barometer, which is discussed in greater detail in section S. We expect all our suppliers to commit to the Metsä Group Supplier Code of Conduct or to their own equivalent code.

To ensure the sustainability of our suppliers, customers and other partners – both new and old – we exercise appropriate

caution and conduct third-party due diligence as part of the Know Your Business Partner process.

Following Russia's military aggression in Ukraine, we have ended our deliveries to Russia and Belarus and discontinued our production and wood supply in Russia. Our operations have been guided by compliance with the applicable regulations and an overall assessment of business ethics.

[→ Read more on our website About us section.](#)

SUSTAINABILITY E-LEARNING COURSES participation %	Code of Conduct <sup>1)</sup>	Code of Conduct <sup>1) 2)</sup>	Sustainability	Equality (DEI) <sup>3)</sup>
Metsä Forest	100	60	95	99
Metsä Wood	98	41	94	97
Metsä Fibre	99	53	92	98
Metsä Board	100	70	94	98
Metsä Tissue	94	52	72	90
Metsä Group Others	93	56	89	93
<b>Metsä Group total</b>	<b>97</b>	<b>55</b>	<b>87</b>	<b>95</b>

<sup>1)</sup> Incl. external companies: MI Demo (Metsä Group), Mäntän Energia (Metsä Tissue), Kumpuniemen Voima (Metsä Wood), Silva Shipping (Metsä Fibre).

Code of Conduct previous version.

<sup>2)</sup> New Code of Conduct was published in November 2022.



### Regular training on the Code of Conduct

We provide our employees with regular training on business ethics. In November 2022, we released our revised Code of Conduct e-learning course, which covers Metsä Group's key ethical principles and illustrates best practices related to sustainable business through examples and exercises. Our shared principles guide the sustainability of our operations, and our goal is for all our employees to complete the Code of Conduct training.

### We monitor our business sustainability with our ethics barometer

Our ethics barometer, conducted for the second time in 2022, measures our employees' views of the progress made in ethical operations from various perspectives, including the sustainability of business practices. One of our development measures involves training for managers, where more emphasis will be placed on the importance of addressing misconduct and encouraging the reporting of ethical concerns. According to the barometer results, misconduct, corruption, conflicts of interest, attempts to inappropriately influence partners' decision making and privacy breaches were not considered significant risks.

### A Compliance and Ethics Channel open to all

We encourage our employees and stakeholders to report any breaches of legislation and ethical concerns they detect. They can report their observations to their supervisor, local management, HR or the Compliance Committee, or through the Compliance and Ethics Channel.

The Compliance and Ethics Channel is open to both our personnel and our stakeholders. Reports can be submitted in ten languages, and anonymously if required. The Channel's technical implementation is handled by our 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 were brought to our attention in 2022.

### We investigate all misconduct and ethical concerns brought to our attention

All violations and suspected infringements brought to the company's attention through the Compliance and Ethics Channel or in some other manner are investigated. The investigations are steered by the Compliance Committee, composed of the directors

in charge of Metsä Group's legal affairs, Compliance and Internal Auditing. The committee's tasks include 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 by the EU's Whistleblowers Directive have been taken into account in our operating countries regarding the Compliance and Ethics channel, the investigation of matters reported, and the protection of whistleblowers.

In 2022, Metsä Group received a total of 32 (55) reports of non-compliance leading to an investigation. The non-compliance cases 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 cases.

In 2022, we became aware of one confirmed incident of corruption, which was reported to the police for investigation. None of the cases concerned the use of child labour or other human rights violations, except for allegations of discrimination and accidents resulting in personal injury. Some of the cases investigated were reported to the authorities, others led to court proceedings, and the rest were investigated internally.

In October 2021, the European Commission conducted inspections in Metsä Fibre, a subsidiary of Metsä Group, as part of a wider EU level antitrust investigation of companies active in the pulp sector. The investigation continued in 2022. Metsä Fibre is cooperating fully with the European Commission authorities. The inspections and ongoing investigation do not mean that the companies are guilty of anticompetitive behaviour and as such do not indicate the outcome of the investigation.

### NON-COMPLIANCE INVESTIGATIONS

Metsä Forest	7
Metsä Wood	6
Metsä Fibre	5
Metsä Board	6
Metsä Tissue	6
Metsä Group Others	2
<b>Metsä Group total</b>	<b>32</b>

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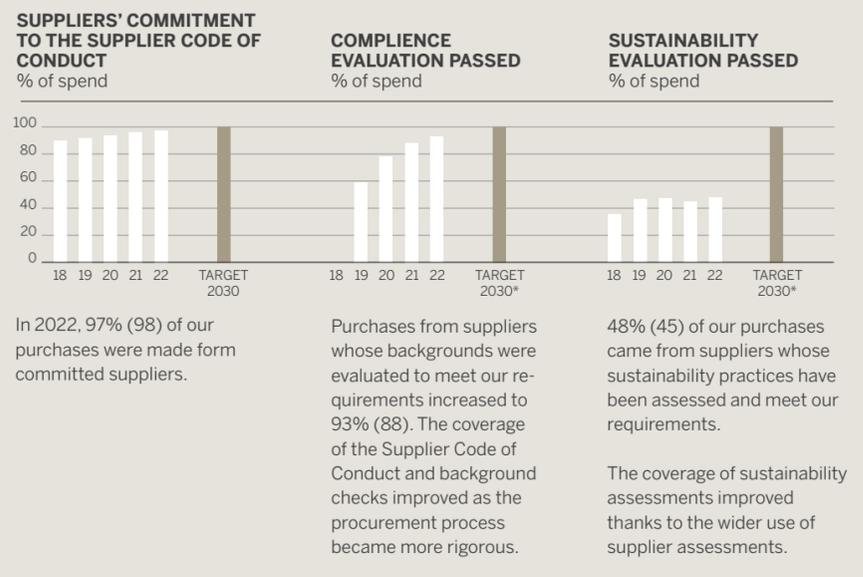
**Governance**

# ESG Sustainability throughout the supply chain

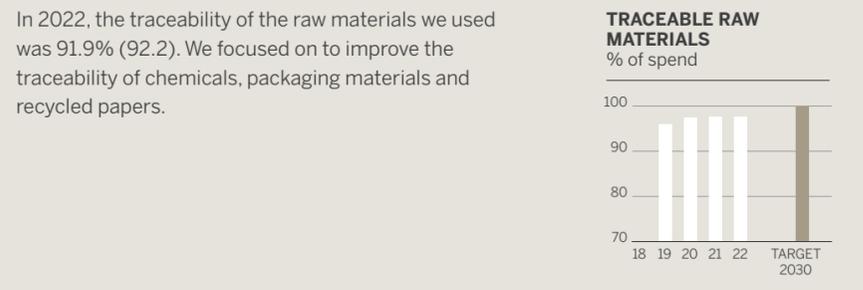
We always want to know where our raw materials come from and with whom we cooperate across our value chain. We are a large operator and support the spread of sustainable practices in our procurement by favouring suppliers whose sustainability has been confirmed.

## Indicators and progress

We aim for a sustainable supply chain evaluated based on the scope of the Supplier Code of Conduct and sustainability assessments.



Full traceability of the origin of our raw and packaging materials.



## Our operations

### Long-term development promoting the supply chain sustainability

To ensure the sustainability of our suppliers, we conduct risk analyses, background checks, and supplier assessments and audits. We require all our suppliers to commit to the Metsä Group Supplier Code of Conduct or to have their own equivalent code. We also discuss sustainability with our key suppliers, provide development suggestions and monitor their realisation.

### Wood supply and other procurement

We use wood from northern European forests as our main raw material. In 2022, we procured 34 million cubic metres (35.3) of wood, of which 25.4 (26.1) was used at our own mills. We have wood supply organisations in Finland, Sweden, Estonia, and Latvia. In addition to wood purchases, we make other purchases totalling nearly five billion euros from roughly 13,000 suppliers. Most of our suppliers are European. We use local suppliers whenever possible. In 2022, we purchased 89% (89) of products and services from countries in which we have production units.

### SHARE OF CERTIFIED WOOD BY BUSINESS AREA 2022 %

Metsä Wood	92.2
Metsä Fibre	91.2
Metsä Board	82
Metsä Tissue*	90.7
<b>Metsä Group total</b>	<b>89.3</b>

\* certified pulp

### WOOD PROCUREMENT BY COUNTRY 2022 % (share m³)



\* On 3 March 2022, Metsä Group discontinued its purchases of Russian and Belarusian wood and sawmill chips.

### ALL PURCHASED 2022 % of spend



### PURCHASES BY SUPPLIERS' COUNTRY 2022 %



### RAW MATERIALS 2022 by weight, % dry tonnes



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### We ensure the traceability of raw materials

The wood we use is traceable and comes from certified forests or forests that meet the requirements of controlled origin. In 2022, 89.3% (88.2) of the wood we consumed had been certified in accordance with international forest certification schemes – PEFC (Programme for the Endorsement of Forest Certification, PEFC/02-31-03) or FSC® (Forest Stewardship Council®, FSC-C014476).

We use the PEFC and FSC chains of custody to ensure the controlled origin of the wood we use. We procure all the wood used by Metsä Group's production units. We also supply wood to selected customers. All the countries from which we procure wood have issued legislation requiring forests to be renewed after harvesting.

Wood and pulp account for 96% of our raw material consumption, and we also know the origin of the pulp we buy. We also compile data on the origin of process, basic and coating chemicals, and recycled paper and packaging materials. The traceability of raw materials and packaging materials, covering 91.9% (92.2) of our purchases.

The safety of our products is based on the safety of our raw materials. Product safety is essential, especially in direct food contact applications. In our supplier background checks, we ensure that by using raw materials provided by our suppliers, we can make products that meet the relevant statutory requirements and our own strict product safety requirements.

### Audits and assessments

We ensure the sustainability of wood supply with risk analyses of individual countries and suppliers and by determining the origin and supply chains of wood. We require our wood suppliers to commit to our wood sustainability requirements through a contract, a wood origin appendix and a self-declaration policy that includes our environmental and sustainability requirements and the obligations of the timber supplier and the forest owner. We also conduct audits to monitor the implementation of wood certification requirements. They help us ensure that the delivered wood meets our environmental and sustainability requirements.

We have adopted a revised audit model for our other purchases. No serious defects were detected in our audits and assessments, but we did provide numerous recommendations. In some cases, we required the supplier to develop their operations – for example, to improve their business ethics, risk management or safety at work.

In 2022, 93% (88) of non-wood raw material purchases came from suppliers whose background was checked in accordance with the Know Your Business Partner process. We reduce risks related to trade sanctions, corruption, money laundering, human rights and various irregularities by conducting background checks of our partners and terminating cooperation with them if required. New suppliers are screened before they are selected. These checks uncovered a few deviations related to sanctions and suspected criminal activities. We terminated cooperation in all these cases.

In 2022, we also surveyed the sustainability of our service and investment subcontracting chains. We evaluated the coverage and content of our logistics suppliers' climate goals. We also clarified our sustainability requirements for suppliers. To ensure that supplier assessments are conducted increasingly systematically, we now link them to our supplier classification and the approval of new suppliers.

Number of audits and assessments in 2022	Metsä Group	Independent third party
Audits and assessments of wood suppliers and entrepreneurs	192 (204)	13 (17)
Audits of other suppliers	3 (0)	25 (29)
Assessments of suppliers' sustainability practices	97 (10)	33 (34)

## We make a difference as part of society

We are the only international forest industry company with a cooperative structure, and our social impact concerns various stakeholders. We want to be a fair and open neighbour to society around us and work closely with our stakeholders. We actively participate in international, European and national industry and trade organisations. We are a trusted counterpart for industry associations, legislators and policymakers. We follow global activities closely and attempt to respond to the issues and challenges raised by our stakeholders.

### Main memberships in third-party organisations

- Bio-based Industries Consortium (BIC)
- The Bioenergy Association of Finland
- Ellen MacArthur Foundation
- Confederation of European Paper Industries (CEPI) and 4evergreen alliance
- European Tissue Symposium (ETS)
- Forest-based Sector Technology Platform (FTP)
- Forest Stewardship Council (FSC)
  - FSC International and FSC Finland
- Finnish Chamber of Commerce and International Chamber of Commerce (ICC)
- National forest industry federations:
  - Finnish Forest Industries Federation (FFIF)
- Programme for the Endorsement of Forest Certification (PEFC) International
- Federation of the Finnish Woodworking Industries
- The Swedish Forest Industries and the German Pulp and Paper Association (VDP)

### Taxes

Metsä Group'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 Group's operations, our economic contribution to surrounding society is material.

Metsä Group is committed to following international transfer pricing guidelines and local tax laws and regulations in all of its operating countries. The majority of Metsä Group's management, production and other functions are located in Finland, thus most of the corporate taxes are paid in Finland.

Based on our Group Tax Policy Metsä Group'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 Group's cooperation with tax authorities is transparent and active. In Finland Metsä Group participates in enhanced cooperation with the Finnish Tax Administration.

Metsä Group considers also our subcontractors' due tax compliance important. For example, in the Kemi bioproduct mill project and Rauma sawmill project, Metsä Group used a specific proactive grey economy prevention programme.

Tax issues are managed by Metsä Group's tax function and taxes are in the scope of the Board of Directors' Audit Committee's regular follow-up.

Taxes borne, MEUR	Finland		Sweden		Other countries			Total
	2022	2021	2022	2021	2022	2021	2022	2021
Corporate income taxes	208.5	128.6	27.3	21.9	6.4	22.3	242.1	172.8
Employer's social charges	105.9	99.7	24.2	23.9	24.5	23.2	154.6	146.8
Operational taxes	8.5	9.2	7.6	5.6	5.2	4.9	21.3	19.7
Other taxes	2.5	2.1	0.0	0.0	1.3	1.3	3.8	3.4
<b>Total</b>	<b>325.4</b>	<b>239.6</b>	<b>59.1</b>	<b>51.4</b>	<b>37.4</b>	<b>51.7</b>	<b>421.8</b>	<b>342.7</b>

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## Metsä Forest

Country	Estonia	Finland	Latvia	Russia	Sweden	Others	Total
<b>PERSONNEL</b>							
Number of employees <sup>1)</sup>	28	623	38	54	3	0	<b>745</b>
TRIF	0	5.4	0	12.4	0		<b>6.1</b>
LTA1 <sup>2)</sup>	0	1.8	0	4.1	0		<b>2</b>
Sickness absenteeism, % <sup>3)</sup>	2.1	1.7	1.4	4.5	0		<b>2.2</b>
<b>WOOD PROCUREMENT</b>							
1 000 m <sup>3</sup>	1,131	28,769	762	521 <sup>4)</sup>	2,750	13	<b>33,954</b>
<b>MANAGEMENT SYSTEM</b>							
ISO 9001	x	x	x	x	x		
ISO 14001	x	x	x	x	x		
ISO 45001		x					
<b>CHAIN OF CUSTODY</b>							
PEFC	x	x	x	x	x		
FSC	x	x	x	x <sup>5)</sup>	x		

<sup>1)</sup> Full-time equivalent on 31 December 2022

<sup>2)</sup> Lost-time accident 1 frequency rate. Accidents at work resulting to at least one day sickleave, excluding the day of the accident.

<sup>3)</sup> % of theoretical working time

<sup>4)</sup> Includes all wood procurement from Russia. Wood supply from Russia stopped in spring 2022

<sup>5)</sup> FSC Chain of Custody certificate suspended 8.4.2022.

## Metsä Wood

Mill	Pärnu	Lohja <sup>4)</sup>	Punkaharju <sup>4)</sup>	Suolahti <sup>4)</sup>	Äänekoski	Boston	King's Lynn	Widnes	Others <sup>5)</sup>	Total
COUNTRY	ESTONIA	FINLAND	FINLAND	FINLAND	FINLAND	UK	UK	UK		
<b>PERSONNEL</b>										
Number of employees <sup>1)</sup>	188	113	428	367	27	231	38	75	123	<b>1,590</b>
TRIF	15.7	19.8	17.2	14.9	0	8.1	19	0		<b>11.2</b>
LTA1F <sup>2)</sup>	15.7	19.8	12.9	13.3	0	8.1	19	0		<b>11.2</b>
Sickness absenteeism, % <sup>3)</sup>	5.8	5.5	7.2	7.1	2.8	4.1	3.5	7.1		<b>5.9</b>
<b>PRODUCTIONS, 1 000 m<sup>3</sup></b>										
Wood products	plywood	Kerto <sup>®</sup> LVL	Kerto LVL and plywood	plywood	veneer	further processing	further processing	further processing		
Production	36,388	85,334	222,254	164,638	57,964	154,05	70,418	44,054		<b>835,101</b>
<b>MANAGEMENT SYSTEM</b>										
ISO 9001	x	x	x	x	x	x	x	x		
ISO 14001	x	x	x	x	x	x	x	x		
ISO 45001	x	x	x	x	x	x	x	x		
ISO 50001	x <sup>6)</sup>	x	x	x	x					
<b>CHAIN OF CUSTODY</b>										
PEFC	x	x	x	x	x	x	x	x		
FSC	x	x	x	x	x	x	x	x		
<b>EMISSIONS TO AIR, t</b>										
Biogenic carbon (CO <sub>2</sub> )	0	39,235	84,716	99,708	0	0	0	0		<b>223,659</b>
Fossil carbon (CO <sub>2</sub> )	0	1,714	365	647	0	106	0	226		<b>3,058</b>
Sulphur (SO <sub>2</sub> )	0	0.96	1.9	0.210	0	0	0	0		<b>3.1</b>
Nitrogen oxides	0	15	92	101	0	0	0	0		<b>208</b>
Particles	0	2.2	2.3	39	0	0	0	0		<b>44</b>
<b>DISCHARGES TO WATER, t</b>										
Chemical oxygen demand (COD)	0	2.0	61	7	1	0	0	0		<b>70</b>
Biological oxygen demand (BOD)	0	0.30	31	16	0	0	0	0		<b>48</b>
Total phosphorus	0	0.01	0.03	0.01	0	0	0	0		<b>0.05</b>
Total nitrogen	0	0.04	0.1	0.1	0	0	0	0		<b>0.24</b>
Total suspended solids	0	0.3	1.2	0.9	0	0	0	0		<b>2.4</b>
<b>WATER USE, 1 000 m<sup>3</sup></b>										
Water intake	19	150	262	1,226	20	0	10.0	0		<b>1,683</b>
Waste water flow	11	55	27	53	8	0	0	0		<b>154</b>
<b>WASTE AND SIDE STREAMS, t</b>										
Utilised by-products and waste	37	2,953	2,041	15,232	98	1,255	463	187		<b>22,266</b>
Landfill waste	0	0	0	0	10	0	0	0		<b>10</b>
Hazardous waste	212	370	184	178	0	4	0	22		<b>970</b>

<sup>1)</sup> Full-time equivalent on 31 December 2022

<sup>2)</sup> Lost-time accident 1 frequency rate. Accidents at work resulting to at least one day sickleave, excluding the day of the accident.

<sup>3)</sup> % of theoretical working time

<sup>4)</sup> Emissions, water use and wastes: Lohja includes 51% of Lohjan Biolämpö, Punkaharju ja Suolahti includes 100% power plants' emissions.

<sup>5)</sup> Includes personnel from sales operations and management. Personnel figures of Others are included in Metsä Wood's total figures.

<sup>6)</sup> Pärnu ISO 50001 certification audit in 2022

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**Metsä Fibre**

Mill	Joutseno	Kemi	Rauma	Äänekoski	Kyrö	Lappeenranta	Merikarvia	Rauma	Renko	Vilppula	Svir	Others	Total
COUNTRY	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	RUSSIA		
<b>PERSONNEL</b>													
Number of employees <sup>1)</sup>	132	214	123	189	9	69	68	75	74	103	21	220	<b>1,297</b>
TRIF	4.2	3.1	0	12.2	24.6	0	24.4	0	7.7	0	0		<b>5.2</b>
LTAIF <sup>2)</sup>	4.2	3.1	0	9.2	24.6	0	16.3	0	0	0	0		<b>3.9</b>
Sickness absenteeism, % <sup>3)</sup>	5	6.3	6.9	5.2	4.8	4.5	6.6	3.9	7.3	6.7	4.6		<b>5.2</b>
<b>PRODUCTION</b>													
Chemical pulp (1,000 t)	603	583	580	1,169									<b>2,934</b>
Sawn timber (1,000 m <sup>3</sup> )					118	226	209	40	286	540	40 <sup>5)</sup>		<b>1,459</b>
<b>MANAGMENT SYSTEM</b>													
ISO 9001	x	x	x	x	x	x	x		x	x	x		
ISO 14001	x	x	x	x	x	x	x		x		x		
ISO 50001	x	x	x	x	x	x	x		x	x	x		
ISO 45001	x	x	x	x	x	x	x		x	x	x		
ISO 22000	x	x	x	x									
<b>CHAIN OF CUSTODY</b>													
PEFC	x	x	x	x	x	x	x		x	x	x		
FSC	x	x	x	x	x	x	x		x	x	x		
<b>EMISSIONS TO AIR, t</b>													
Biogenic carbon (CO <sub>2</sub> )	1,483,135	1,436,201	1,337,557	3,327,980	5,897	29,167	22,728	0	30,540	87,039	7,323		<b>7,767,567</b>
Fossil carbon (CO <sub>2</sub> )	30,594	68,081	64,441	28,913	187	25	553	0	751	1,332	66		<b>194,943</b>
Sulphur (SO <sub>2</sub> ) <sup>4)</sup>	233	42	23	67	0.0	0	0.040	0	1.0	16	0.03		<b>382</b>
Nitrogen oxides	1,039	1,104	892	1,960	0	52	19	0	14	41	16		<b>5,137</b>
Particles	119	120	136	37	0	4.9	13	0	5	12	0.8		<b>448</b>
Total reduced sulphur (TRS)	7.1	21	17	6.9									<b>52</b>
<b>DISCHARGES TO WATER, t</b>													
Adsorbable organic halogen (AOX)	93	54	82	130	0	0	0	0	0	0	0		<b>359</b>
Chemical oxygen demand (COD)	7,236	7,115	9,141	7,633	0.21	0.03	0.3	0	0	0.66	5.2		<b>31,131</b>
Biological oxygen demand (BOD)	143	106	97	137	0	0.01	0.01	0	0	0.01	0.71		<b>484</b>
Total phosphorus	9.2	3.9	3.8	5.9	0	0	0	0	0	0	0		<b>23</b>
Total nitrogen	96	110	57	80	0	0	0	0	0	0	0		<b>343</b>
Total suspended solids	1,017	443	202	168	0	0	0	0	0	0	3		<b>1,833</b>
<b>WATER USE, 1,000 m<sup>3</sup></b>													
Water intake	66,413	40,155	18,995	149,468	0	16	10	0	35	84	109		<b>275,283</b>
Waste water flow	15,303	16,788	13,947	20,048	4	1	6	0	0	13	314		<b>66,424</b>
<b>WASTE AND SIDE STREAMS, t</b>													
Utilised by-products and waste	82,218	42,427	27,143	59,401	1,603	5,824	905	2,000	708	446	9,551		<b>232,226</b>
Landfill waste	10,076	8,977	7	10,254	0	0	18	0	0	0	3		<b>29,334</b>
Hazardous waste	74	25	38	55	0	3	0	0	16	2	0		<b>214</b>

<sup>1)</sup> Full-time equivalent on 31 December 2022  
<sup>2)</sup> Lost-time accident 1 frequency rate. Accidents at work resulting to at least one day sickleave, excluding the day of the accident.  
<sup>3)</sup> % of theoretical working time  
<sup>4)</sup> For the Kyrö, Merikarvia and Lappeenranta sawmills, the load discharged to the water body is the calculated load from urban water.  
<sup>5)</sup> The operation of the sawmill has been shut down in the spring of 2022.

**Metsä Board**

Mill	Joutseno	Kaskinen	Kemi	Kyro	Simpele	Tako	Äänekoski	Husum	Others <sup>4)</sup>	Total
COUNTRY	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	SWEDEN		
<b>PERSONNEL</b>										
Number of employees <sup>1)</sup>	54	84	128	143	273	193	192	693	488	<b>2,248</b>
TRIF	0	6.7	9.1	7.8	6.3	21	6.1	6		<b>6.7</b>
LTAIF <sup>2)</sup>	0	6.7	4.5	7.8	4.2	18	6.1	4.3		<b>5.4</b>
Sickness absenteeism, % <sup>3)</sup>	7	3.1	4.5	5.1	4.6	7.2	6.4	6		<b>4.9</b>
<b>PRODUCTION, 1 000</b>										
Chemical pulp (1 000 t)	357	370						683		<b>1,409</b>
Sawn timber (1 000 m <sup>3</sup> )			393	185	288	208	239	577		<b>1,890</b>
<b>MANAGMENT SYSTEM</b>										
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 / FSSC 22000	ISO 22000	ISO 22000	ISO 22000 FSSC 22000	ISO 22000 FSSC 22000	ISO 22000 FSSC 22000	ISO 22000	ISO 22000 FSSC 22000	ISO 22000 FSSC 22000		
<b>CHAIN OF CUSTODY</b>										
PEFC	x	x	x	x	x	x	x	x		
FSC	x	x	x	x	x	x	x	x		
<b>EMISSIONS TO AIR, t</b>										
Biogenic carbon (CO <sub>2</sub> )	0	168,978	0	118,611	177,268	1,072	0	1,484,972		<b>1,950,901</b>
Fossil carbon (CO <sub>2</sub> )	26,969	8,307	6,884	16,873	43,301	70,545	0	63,158		<b>236,037</b>
Sulphur (SO <sub>2</sub> ) <sup>4)</sup>	0	29	0	53	81	0.03	0	255		<b>418</b>
Nitrogen oxides	14	103	3	81	126	48	0	851		<b>1,226</b>
Particles	10	8	0	5	1.6	0	0	260		<b>285</b>
Total reduced sulphur (TRS)	0	0	0	0	0	0	0	60		<b>60</b>
<b>DISCHARGES TO WATER, t</b>										
Adsorbable organic halogen (AOX)	0	0	0	0	0	0	0	50		<b>50</b>
Chemical oxygen demand (COD)	679	892	264	154	225	166	512	7,476		<b>10,368</b>
Biological oxygen demand (BOD)	5.4	40.3	29.8	11	26.8	45.4	165	323		<b>647</b>
Total phosphorus	0.34	1.6	1.3	1.1	1.2	1.2	0.63	15		<b>23</b>
Total nitrogen	3.6	14	31	13	9.1	0.6	10	90		<b>172</b>
Total suspended solids	40	123	124	78	40	29	95	988		<b>1,517</b>
<b>WATER USE, 1 000 m<sup>3</sup></b>										
Water intake	6,414	13,821	9,625	4,292	27,372	3,803	0	44,640		<b>109,967</b>
Waste water flow	563	2,999	7,706	3,026	4,514	2,469	2,890	34,573		<b>58,740</b>
<b>WASTE AND SIDE STREAMS, t</b>										
Utilised by-products and waste	21,410	20,493	5,800	23,900	23,110	5,833	11,232	57,749		<b>169,527</b>
Landfill waste	0	5	101	4	0	0	54	0		<b>163</b>
Hazardous waste	42	293	4	24	87	58	27	424		<b>960</b>

<sup>1)</sup> Full-time equivalent on 31 December 2022  
<sup>2)</sup> Lost-time accident 1 frequency rate. Accidents at work resulting to at least one day sickleave, excluding the day of the accident.  
<sup>3)</sup> % of theoretical working time  
<sup>4)</sup> 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.

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**Metsä Tissue**

Mill	Mänttä <sup>7)</sup>	Düren	Kreuzau	Raubach	Krapkowice	Zilina	Katrinefors	Nyboholm <sup>5)</sup>	Pauliström	Others <sup>6)</sup>	Total
COUNTRY	FINLAND	GERMANY	GERMANY	GERMANY	POLAND	SLOVAKIA	SWEDEN	SWEDEN	SWEDEN		
<b>PERSONNEL</b>											
Number of employees <sup>1)</sup>	428	141	445	249	309	301	330		169	77	<b>2,449</b>
TRIF	1.3	12.7	1.4	0	9	3.9	1.7		3.5		<b>3.4</b>
LTAIF <sup>2)</sup>	1.3	12.7	1.4	0	7.2	3.9	1.7		3.5		<b>3.1</b>
Sickness absenteeism, % <sup>3)</sup>	4.9	9.2	8.4	7.3	6.2	5.3	5.1		5.5		<b>6.2</b>
<b>PRODUCTION, 1 000 t</b>											
Tissue papers	92	0	139	60	56	78	78	29	28		<b>559</b>
Greaseproof papers	21	38	0	0	0	0	0	0	0		<b>60</b>
<b>MANAGEMENT SYSTEM</b>											
ISO 9001	x	x	x	x	x	x	x	x	x	x	
ISO 14001	x	x	x	x	x	x <sup>4)</sup>	x	x	x	x	
ISO 50001	x	x	x	x	x	x	x	x	x	x	
ISO 45001	x	x	x	x	x	x	x	x	x	x	
ISO 22000/BRC/IFS	ISO22000	BRC,IFS	BRC,IFS	BRC,IFS	BRC	BRC					
<b>CHAIN OF CUSTODY</b>											
PEFC	x	x	x	x	x	x	x	x	x	x	
FSC	x	x	x	x	x	x	x	x	x	x	
<b>EMISSIONS TO AIR, t</b>											
Biogenic carbon (CO <sub>2</sub> )	0	0	9,468	0	0	0	59,796	16,238	12,466		<b>97,968</b>
Fossil carbon (CO <sub>2</sub> )	12,998	20,310	69,833	22,181	22,570	12,295	14,919	6,367	8,290		<b>189,763</b>
Sulphur (SO <sub>2</sub> )	0	0	60	0.02	2.0	0.06	2.5	0.70	0.80		<b>66</b>
Nitrogen oxides (NO <sub>2</sub> )	6.5	11	67	1	13	11	36	23	24		<b>193</b>
Particles	0	0	0.30	0	28	0.50	0.5	3.90	5.2		<b>38</b>
<b>DISCHARGES TO WATER, t</b>											
Chemical oxygen demand (COD)	144	6	346	135	26	54	101	13	26		<b>850</b>
Biological oxygen demand (BOD)	26	2.4	22	5.5	2.2	7.5	9	1.8	4.2		<b>81</b>
Total phosphorus	0.55	0.12	1.1	0.28	0.58	0.38	0.17	0.03	0.05		<b>3.2</b>
Total nitrogen	17	0	0	0	7.0	0	11.4	0.9	0.80		<b>37</b>
Total suspended solids	48	2.4	22	5.5	2.3	7.5	19	2.5	4.0		<b>113</b>
<b>WATER USE, 1 000 m<sup>3</sup></b>											
Water intake	3,730	1,002	3,622	708	717	763	2,421	660	272		<b>13,895</b>
Waste water flow	4,213	238	2,198	555	499	751	1,536	551	163		<b>10,704</b>
<b>WASTE AND SIDE STREAMS, t</b>											
Utilised waste	39,394	667	100,193	40,938	31,139	27,245	34,094	1,344	2,094		<b>277,107</b>
Landfill waste	0	0	0	0	292	338	1	0	0		<b>631</b>
Hazardous waste	64	61	19	1	2	32	20	3	17		<b>220</b>

<sup>1)</sup> Full-time equivalent on 31 December 2022  
<sup>2)</sup> Lost-time accident 1 frequency rate. Accidents at work resulting to at least one day sickleave, excluding the day of the accident.  
<sup>3)</sup> % of theoretical working time  
<sup>4)</sup> ISO 14001 standard includes the Energy Efficiency System (EES)  
<sup>5)</sup> Nyboholm mill's personnel figures are included in Pauliström mill's figures.  
<sup>6)</sup> Includes personnel of others than mill locations  
<sup>7)</sup> Includes all the personnel in Finland

To the Management of Metsäliitto Osuuskunta (Metsä Group)

**Independent practitioner's limited assurance report**

We have been engaged by the Management of Metsäliitto Osuuskunta (Metsä Group) (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 Report).

**Selected sustainability information**

The information within the scope of assurance (hereinafter the Selected sustainability information) is the following:

- The figures and information indicated as in scope of the assurance in the Company's Report's GRI-index; and
- The EU taxonomy KPIs for climate change mitigation and climate change adaptation as disclosed in the Company's Board of Directors' report

**Management's responsibility**

The Management of Metsä Group 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, (collectively "Reporting criteria").

The Management of Metsä Group 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 three site visits in Finland (one video interview and two on-site).
- 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 Group'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 Group for our work, for this report, or for the conclusions that we have reached.

Helsinki, 21<sup>th</sup> February 2023

**PricewaterhouseCoopers Oy**

Mikael Niskala  
Partner  
ESG Reporting & Assurance

Karsten Westerling  
Partner, KHT

## METSÄ GROUP

Annual and Sustainability Report 2022

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## Scope of the report

Metsä Group comprises Wood supply and forest services, Metsä Wood, Metsä Fibre, Metsä Board and Metsä Tissue. Our reporting covers the whole Group, including production, warehousing and sales units. Sustainability reporting follows the same principles of consolidation as our Financial Statements.

Metsä Group reports its sustainability performance at the Group, business area and product levels. The Sustainability Report 2022 has been prepared according to the Global Reporting Initiative (GRI) 2021 - standards. We have selected the indicators most relevant to our operations, products and stakeholders, based on an assessment of the most significant sustainability issues for the company and its stakeholders.

The report covers major permit violations, claims, compensations and topics related to the Group that have gained public attention or may have caused a reputational risk in environmental or human resource management, or ethical business practices.

The Sustainability Report 2022 presents Metsä Group's approach to sustainability management and detailed performance indicators. The Group's subsidiaries Metsä Board and Metsä Fibre publish individual annual reports with brief presentations on sustainability work. The sustainability performance data in this report and claims based on the data have been externally assured by an independent third party, on page 45.

#### Measurement techniques for environmental data

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

- Only material flows to and from industrial sites are included.
- Discharges to water through external wastewater treatment plants (typically municipal) are taken into account assuming an 85% reduction for COD. Emissions of BOD, phosphorus and suspended solids are calculated according to the flow with the following residual concentrations: BOD 10 mg/l; total phosphorus 0.5 mg/l; and total suspended solids 10 mg/l. The total nitrogen emission is regarded as zero, because there is surplus nitrogen in municipal wastewaters, and the reduction of our BOD binds nitrogen to biomass, reducing the plant's total nitrogen emission.

- The emissions from external wastewaters treated at our wastewater treatment plants are excluded. The allocation of emissions between internal and external inflows is carried out assuming theoretical COD reductions for each inflow, which are then corrected according to the real COD reduction for the whole plant. Other emissions are allocated according to the flow.
- Energy consumption is expressed as primary energy consumption and final energy consumption (calculated according to GRI definition for total energy consumption). Primary energy consumption is the amount of fuel used for the energy production.
- For purchased electricity it is calculated by using 40% efficiency for fuel combustion, 33% for nuclear energy and 100% for hydro, wind and solar energy. The total energy of purchased heat is determined according to actual fuel consumption.
- When calculating final energy consumption according to GRI methodology the efficiency loss is not included. The final energy consumption is calculated as the sum of used fuels, self-generated hydropower, purchased heat and electricity. Sold heat and electricity amount is subtracted.

Environmental impacts, acidification and eutrophication are calculated by multiplying impact-causing emissions by coefficients. Acidification is expressed as sulphur dioxide equivalents. The coefficient for sulphur dioxide (SO<sub>2</sub>) is 1, and for nitrogen oxide (NO<sub>x</sub>) 0.7. Eutrophication is expressed as phosphorus equivalents. The coefficient for total phosphorus is 1; for BOD 0.0088; for total nitrogen 0.14; and for NO<sub>x</sub> 0.0041. The greenhouse effect only consists of carbon dioxide emissions and has a coefficient of 1. The biogenic CO<sub>2</sub> emission coefficient for wood-based fuels of 396 tonnes CO<sub>2</sub>/GWh has been used.

In unit-specific data, discharges from wastewater plants serving several mills are allocated to units using the methodology explained above. Emissions from power plants are allocated to mills, which use the energy from those power plants. In this allocation, the use of 1 MWh of electricity is twice the value compared to the use of 1 MWh of heat.

Waste volumes are reported including moisture. Waste figures include volumes for final disposal (incl. material/energy recovery, landfill, and hazardous waste disposal). Part of this volume comes straight from the mill process, and a part is from the temporary storage. Waste volumes from mill process to temporary storage are not included.

CO<sub>2</sub> emissions are calculated for Scope 1 and Scope 2. Scope 1 CO<sub>2</sub> emissions cover emissions from the production units. Direct emissions from the production of purchased heat and electricity together comprise Scope 2 emissions. Since 2020, Metsä Group started to calculate Scope 2 purchased electricity according to the GHG Protocol by using gross purchases. Scope 2 CO<sub>2</sub> emission calculation consists of two methods. The market-based method uses electricity supplier-specific emission coefficients completed with the national residual mix emission coefficients for non-tracked purchased electricity. The location-based method uses the total supplier mix emission coefficients by country. Coefficients for total supplier mix and residual mix are taken from the AIB (Association of Issuing Bodies) European Residual Mixes report.

#### Techniques in measuring HR data

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

- The coverage of the personnel data is nearly 100%, except number of employees, safety and well-being key figures, training hours and coverage of code of conduct, where Kumpuniemen Voima is included, and the coverage is 100%
- The number of employees is reported as full-time equivalent (FTE). The sickness absenteeism % and work accident absenteeism % are calculated per theoretical working hours. The lost time accident frequency rate (LTA1F) includes all accidents at work that have resulted in at least one disability day. The LTA1F is calculated as: lost time accidents at work per million worked hours. Only accidents involving Metsä Group's personnel are included in the TRIF and LTA1F indicator.
- The share of women in management includes women who are in the position of VP, SVP and CEO and whose IPE classification is 58 or above.

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**GRI content index**

Metsä Group's Sustainability Report 2022 has been prepared by the Global Reporting Initiative (GRI) -2021 standard. Material topics have been selected based on materiality analysis. This table details where you can find more information on GRI-compliant information. The indicators marked in the table have been certified by PricewaterhouseCoopers Ltd. They are confirmed that the report complies with the criteria of the Global Reporting Initiative standards.

STATEMENT OF USE	Metsä Group has reported the information cited in this GRI content index for the period 1.1.–31.12.2022 with reference to the GRI Standards.			
GRI STANDARD	DISCLOSURE	LOCATION	OMISSION	ASSURED
GRI 1	GRI 1: FOUNDATION 2021			
GRI 2: General Disclosures 2021	2-1 Organizational details	Back cover		✓
	2-2 Entities included in the organization's sustainability reporting	Sustainability reporting follows the same principles of consolidation as our Financial Statements.		✓
	2-3 Reporting period, frequency and contact point	1 Jan – 31 Dec 2022, annual, back cover inlet		✓
	2-4 Restatements of information	p. 28, 30		✓
	2-5 External assurance	p. 48		✓
	2-6 Activities, value chain and other business relationships	p. 8–9, 36–38		✓
	2-7 Employees	p. 28–31		✓
	2-8 Workers who are not employees		Information not available.	
	2-9 Governance structure and composition			✓
	2-10 Nomination and selection of the highest governance body	p. 164–167		✓
	2-11 Chair of the highest governance body	p. 165		✓
	2-12 Role of the highest governance body in overseeing the management of impacts	p. 165		✓
	2-13 Delegation of responsibility for managing impacts	p. 12–13		✓
	2-14 Role of the highest governance body in sustainability reporting	p. 12–13		✓
	2-15 Conflicts of interest	Metsä Group Code of Conduct, Working order of the Board of Directors of Metsäliitto Cooperative		✓
	2-16 Communication of critical concerns	p. 165		✓
	2-17 Collective knowledge of the highest governance body	p. 166		✓
	2-18 Evaluation of the performance of the highest governance body	p. 164–165		✓
	2-19 Remuneration policies	Metsä Group Remuneration Report 2022 p. 2–3		✓
	2-20 Process to determine remuneration	p. 12–13 and Metsä Group Remuneration Report 2022 p.2–3		✓
	2-21 Annual total compensation ratio	p. 12–13 and Metsä Group Remuneration Report 2022 p. 7		✓
	2-22 Statement on sustainable development strategy	p. 12–13, 61–62		✓
	2-23 Policy commitments	p. 63		✓
	2-24 Embedding policy commitments	p. 12–13		✓
	2-25 Processes to remediate negative impacts	p. 61–63		✓
	2-26 Mechanisms for seeking advice and raising concerns	p. 34–35		✓
	2-27 Compliance with laws and regulations	p.13, 16, 34		✓
	2-28 Membership associations	p. 39		✓
	2-29 Approach to stakeholder engagement	p. 12, 16, 39		✓
	2-30 Collective bargaining agreements	We comply with local collective agreements and legislation		✓

GRI STANDARD	DISCLOSURE	LOCATION	OMISSION	ASSURED
GRI 3: Material Topics 2021	3-1 Process to determine material topics	p. 15		
	3-2 List of material topics	p. 15		
	3-3 Management of material topics	p. 15		✓
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	p. 8–9		✓
	201-2 Financial implications and other risks and opportunities due to climate change	p. 61–63		✓
	201-3 Defined benefit plan obligations and other retirement plans	p. 87–88, 91		✓
	201-4 Financial assistance received from government	p. 55		✓
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	p. 4, 7, 8, 56, 64		✓
	203-2 Significant indirect economic impacts	p. 9		✓
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	p. 37		✓
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	Anti-corruption has been taken into account in Metsä Group's policies, which are risk-based in both scope and content. Key policies and supplementary guidelines are Metsä Group's Code of Conduct, Procurement Policy (internal) and Supplier Code of Conduct. Metsä Group's policies are regularly trained to employees and management. The obligation to participate in these trainings is defined on a risk basis.		✓
	205-2 Communication and training about anti-corruption policies and procedures	p. 34–35		✓
	205-3 Confirmed incidents of corruption and actions taken	p. 35		✓
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	p. 35		✓
<b>GRI 3: MATERIAL TOPICS 2021 Sustainable production and efficient use of resources (3–3 managemet of topic, p.15–17, 9)</b>				
GRI 207: Materials 2016	301-1 Materials used by weight or volume	p. 37		✓
	301-2 Recycled input materials used	p. 27		✓
	301-3 Reclaimed products and their packaging materials	Information not available.		
<b>GRI 3: MATERIAL TOPICS 2021 Sustainable production and efficient use of resources (3–3 managemet of topic, p.15, 26)</b>				
GRI 302: Energy 2016	302-1 Energy consumption within the organization	p. 26		✓
	302-3 Energy intensity	p. 26		✓
	302-4 Reduction of energy consumption	Energy efficiency actions completed year 2022 saved total energy of 708321 GJ.		✓
<b>GRI 3: MATERIAL TOPICS 2021 Sustainable production and efficient use of resources (3–3 managemet of topic, p.15–17, 25)</b>				
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	p. 25		✓
	303-2 Management of water discharge-related impacts	p. 25		✓
	303-3 Water withdrawal	p. 8–9, 40–44		✓
	303-4 Water discharge	p. 8–9, 40–44		✓
	303-5 Water consumption		All the water taken from the water sources to production uses has been consumed in the production and process activities during the reporting year 2022. As during previous years the are no storing of water except for the normal tank and basin levels, which is normal operation for a production facility.	✓
<b>GRI 3: MATERIAL TOPICS 2021 Securing biodiversity and ecologically sustainable forestry (3–3 managemet of topic, p.15–16, 18, 20)</b>				
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas		Information not available.	
	304-2 Significant impacts of activities, products and services on biodiversity	s. 17, 24–25 All the wood we buy meets FSC controlled wood requirements. One of the requirements is that no high conservation value areas are compromised. We have PEFC Chain of Custody and FSC Chain of Custody certification systems that have been verified by an independent third party.		✓

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GRI STANDARD	DISCLOSURE	LOCATION	OMISSION	ASSURED
GRI 304: Biodiversity 2016	304-3 Habitats protected or restored	p. 19 and Nature management programme 2022 (a list of actions on the website)		✓
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations		Information not available. The number of IUCN Red list species or the national conservation list has not been inventoried in the area affected by the operations. The known habitats of endangered species are taken into account in operations.	
GRI: MATERIAL TOPICS 2021 Mitigating climate change and reducing emissions (3-3 managemet of topic, p.15-16)				
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	p. 21		✓
	305-2 Energy indirect (Scope 2) GHG emissions	p. 21		✓
	305-3 Other indirect (Scope 3) GHG emissions		Information unavailable.	
	305-4 GHG emissions intensity	p. 20-21		✓
	305-5 Reduction of GHG emissions	p. 20-21		✓
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	p. 21		Information on VOC emissions not available. There are no permit limits for VOC emissions in national legislation or in the environmental permits of the plants. VOC emissions are not regulated and are not considered to be significant emissions under GRI 305-7 that should be included in the report. VOC emissions are only subject to monitoring requirements.
GRI 3: MATERIAL TOPICS 2021 Mitigating climate change and reducing emissions (3-3 managemet of topic, p.15-16)				
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	p. 27		✓
	306-2 Management of significant waste-related impacts	p. 27		✓
	306-3 Waste generated	p. 27		✓
	306-4 Waste diverted from disposal	p. 27		✓
	306-5 Waste directed to disposal	p. 27		✓
GRI 3: MATERIAL TOPICS 2021 The impact of forest-based bioeconomy for society (3-3managemet of topic, p. 15, 38)				
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	p. 38		✓
	308-2 Negative environmental impacts in the supply chain and actions taken	p. 38		
GRI 3: MATERIAL TOPICS 2021 Promotion of occupational safety and well-being (3-3 managemet of topic, p.15, 29)				
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	p. 29-30	Information not available. The number of people recruited is not reported at group level with a more detailed breakdown. The need for a breakdown will be assessed in the future.	✓
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	All our employees have the same benefits		✓
GRI 3: MATERIAL TOPICS 2021 Treating each other with respect and doing the right thing (3-3 managemet of topic, p.15, 30)				
GRI 402: Labor/Management Relations 2016	402-1 Minimum notice periods regarding operational changes	We comply with local agreements and legislation		✓
GRI 3: MATERIAL TOPICS 2021 Promotion of occupational safety and well-being (3-3 managemet of topic, p.15, 29)				
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	p.33	More information available on intranet.	
	403-2 Hazard identification, risk assessment, and incident investigation	p. 33	The process has not been disclosed due to its extensive operational model. Information available on intranet.	
	403-3 Occupational health services	p. 28-33	Not all data have been published due to the large amount of information.	
	403-4 Worker participation, consultation, and communication on occupational health and safety	p. 28-33	Not all data have been published due to the large amount of information.	
	403-5 Worker training on occupational health and safety	p. 28-33	Not all data have been published due to the large amount of information.	
	403-6 Promotion of worker health	p. 28-33	Not all data have been published due to the large amount of information.	
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	p. 28-33	Not all data have been published due to the large amount of information.	
	403-8 Workers covered by an occupational health and safety management system	p. 33, The OHS safety management system covers all staff. The HSEQ reporting system partially covers employees, e.g. head office and support functions are not covered. Reporting information is not published.		
	403-9 Work-related injuries	p. 32	Not all the information required by GRI 403-9 have been reported. We do not report: 403-9: a iv and v, b and c. All work related accidents are recorded.	✓
	403-10 Work-related ill health	p. 32	All information required by GRI 430-10 have not been reported. All work-related illnesses are recorded. We only report on 403-10 a ii i.e. occupational diseases registered.	✓

GRI STANDARD	DISCLOSURE	LOCATION	OMISSION	ASSURED
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	p. 30		✓
	404-2 Programmes for upgrading employee skills and transition assistance programmes	p. 28, 34. Not applicable. We have information on intranet.		
	404-3 Percentage of employees receiving regular performance and career development reviews	All our employees		✓
GRI 3: MATERIAL TOPICS 2021: Treating each other with respect and doing the right thing (3-3-managemet of topic, p. 15, 29-31, 35)				
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	p. 30		✓
	405-2 Ratio of basic salary and remuneration of women to men	Coverage lower than required by the GRI. Metsä Group follows only by country, p. 31		✓
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	p. 35		✓
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk			
GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	No cases reported during 2022		
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programmes	Local communities in all factories are consulted during the planning and decision-making stages of licensed activities.		✓
	413-2 Operations with significant actual and potential negative impacts on local communities	Environmental permits and their risk assessment		✓
GRI 3: MATERIAL TOPICS 2021 The impact of forest-based bioeconomy for society (3-3-managemet of topic, p. 15, 38)				
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	p. 38		✓
	414-2 Negative social impacts in the supply chain and actions taken	p. 38		
GRI 415: Public Policy 2016	415-1 Political contributions	None were made 2022		✓
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	p. 38		✓
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	No cases reported during 2022. All production used for food packaging is assessed		✓
GRI 417: Marketing and Labeling 2016	417-1 Requirements for product and service information and labeling	No cases reported during 2022		✓
	417-2 Incidents of non-compliance concerning product and service information and labeling	All products have information labels as required by law.		✓
	417-3 Incidents of non-compliance concerning marketing communications	No cases reported during 2022		✓
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	Metsä Group has not received any complaints from outside parties nor regulatory bodies during 2022 regarding breaches of customer privacy. Metsä Group has group-wide privacy policies, guidelines and trainings as well as robust data security measures in place in order to ensure the careful and confidential processing of customer data in a lawful manner.		✓
METSÄ GROUP INDICATORS				
Securing biodiversity				
MG 1	Retention trees at egeneration sites	p. 18-19		
MG 2	High biodiversity stumps at harvesting sites	p. 18-19		
MG 3	Regeneration area and young stand management	p. 20, 23		
Mitigating climate change and reducing emissions				
MG 4	Carbon stored in products	p. 20, 23		
MG 5	Share of fossil free raw and packaging materials	p. 20, 23		

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Metsä Group's sales were EUR 7 billion and operating result nearly EUR 1.3 billion. Investments progressed as planned.

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\* part of the Report of the Board of Directors

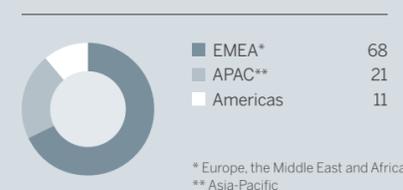
## Key figures

### SALES

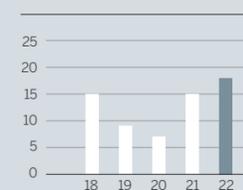
EUR million



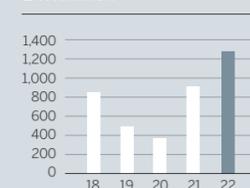
### SALES BY MARKET AREA



### COMPARABLE OPERATING RESULT



### COMPARABLE OPERATING RESULT



### COMPARABLE ROCE



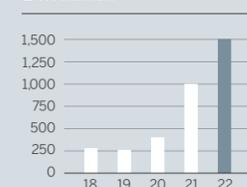
### EQUITY RATIO



### NET GEARING RATIO



### TOTAL INVESTMENTS



### PERSONNEL



## METSÄ GROUP

The parent company Metsäliitto Cooperative is composed of more than 90,000 Finnish forest owners.

Sales  
EUR 7 billion

### METSÄ FOREST

**OWNERSHIP**  
Metsäliitto Cooperative  
100%

### METSÄ WOOD

Wood products

Metsäliitto Cooperative  
100%

### METSÄ FIBRE

Pulp and sawn timber

Metsäliitto Cooperative  
50.1%  
Metsä Board 24.9%  
Itochu Corporation 25.0%

### METSÄ BOARD

Paperboard

Metsäliitto Cooperative  
50.2% (68.2% of votes)  
The company is listed  
on Nasdaq Helsinki

### METSÄ TISSUE

Tissue and greaseproof papers

Metsäliitto Cooperative  
100%

**METSÄ SPRING** Innovation company

# Report of the Board of Directors 2022

## Sales and result

EUR million	2022	2021	2020
Sales	6,980.2	6,017.0	5,054.9
EBITDA	1,636.4	1,213.7	679.3
- comparable EBITDA	1,564.4	1,211.2	670.9
Operating result	1,301.9	873.6	375.8
- comparable operating result	1,276.4	913.8	367.7
% of sales	18.3	15.2	7.3
Result before taxes	1,269.8	831.7	330.1
Result for the period	998.7	657.0	262.2

Metsä Group's sales in January–December 2022 were EUR 6,980.2 million (1–12/2021: 6,017.0). Sales increased, mainly due to the sales prices of pulp, which were higher than in the previous year.

The comparable operating result was EUR 1,276.4 million (913.8), or 18.3% (15.2) of sales. The increase in the operating result is explained by the rise in the sales prices of pulp, among other things.

Exchange rate fluctuations after hedging had a negative effect of approximately EUR 142 million on the operating result of the review period compared to the previous year.

Items affecting the comparability of the operating result in January–December totalled EUR 25.6 million (-40.2). Of these, EUR -79.6 million is related to the discontinuation of Russian business operations, EUR 79.3 million to the divestment of the holding in Finsilva Oyj, EUR 19.2 million to the sale of the share capital of Oy Hangö Stevedoring Ab to Euroports Finland Oy, EUR 9.2 million to the sale of shares in Suomen Metsäsäijotus Oy, EUR 6.5 million to the sale of a land area unrelated to business operations, EUR -5.9 million to the impairment recognised in the assets of the Kyrö sawmill, EUR -5.5 million to the reorganisation of Metsä Board's customer service and supply chain management, and EUR 3.3 million to the sale of shareholdings.

Metsä Group's operating result (IFRS) was EUR 1,301.9 million (873.6). The share of the results of associated companies and joint ventures was EUR -4.8 million (-2.2), financial income was EUR 7.3 million (1.0), exchange rate differences in financing were EUR -4.6 million (-3.7), and financial expenses totalled EUR 30.1 million (36.9).

The result before taxes was EUR 1,269.8 million (831.7), and taxes including changes in deferred tax liabilities totalled EUR 271.1 million (174.7). The Group's effective tax rate was 21.4% (21.0). The result for the review period was EUR 998.7 million (657.0).

The return on capital employed was 19.9% (15.5), and the return on equity was 19.0% (15.1). The comparable return on capital employed was 19.5% (16.2), and the comparable return on equity was 18.9% (16.0).

%	2022	2021	2020
Return on capital employed	19.9	15.5	7.2
- comparable ROCE	19.5	16.2	7.1
Return on equity	19.0	15.1	6.8
- comparable ROE	18.9	16.0	6.6

## Balance sheet and financing

	2022	2021	2020
Equity ratio	60.6	61.1	57.2
Net gearing ratio	3	-4	4
Interest-bearing net liabilities, EUR million	177	-185	168

Metsä Group's liquidity has remained strong. Total liquidity at the end of December was EUR 2,555.3 million (31 December 2021: 3,126.2). This consisted of EUR 1,265.0 million (1,334.5) in liquid assets and investments, and EUR 1,290.3 million (1,791.8) in off-balance sheet committed credit facility agreements.

The Group's liquidity reserve is complemented by uncommitted commercial paper programmes and credit facilities amounting to EUR 161.4 million (31 December 2021: 161.5) and by undrawn pension premium (TyEL) funds amounting to EUR 392.5 million (31 December 2021: 371.4). The EUR 1,000 million debt financing of Metsä Fibre's Kemi investment is composed of a EUR 500 million 10-year loan, of which 80% is guaranteed by Finnvera; a EUR 200 million 10-year loan, of which 95% is guaranteed by the Swedish Export Credit Agency EKN; a EUR 200 million 15-year loan granted by the EIB; and a EUR 100 million five-year green loan agreed with eight banks. Of the loans, EUR 309 million have been drawn, and EUR 700 million remain undrawn.

Net cash flow from operations was EUR 1,226.8 million (1,023.0). A total of EUR 17.7 million in working capital was tied up (released: 21.6). The addition of EUR 70.6 million in trade and other receivables as well as the addition of EUR 217.5 million in inventories increased working capital. The addition of EUR 270.4 million in trade payables and other liabilities decreased working capital.

The Group's equity ratio at the end of December was 60.6%, and its net gearing was 3.1% (31 December 2021: 61.1 and -3.8 respectively). Net interest-bearing liabilities were EUR 177.0 million (31 December 2021: -184.7). At the end of December, the equity ratio of the parent company Metsäliitto Cooperative was 86.4%, and net gearing was -27.9% (31 December 2021: 86.8 and -20.9, respectively).

In March 2022, Metsäliitto Cooperative acquired Metsä Board Corporation's series B shares from the market for a total value of EUR 19.6 million and at an average price of EUR 8.00 per share based on an authorisation by the Board of Directors. In November and December 2022, it acquired Metsä Board Corporation's series B shares for a total value of EUR 41.7 million and at an average price of EUR 8.42 per share based on an authorisation by the Board of Directors. EUR 5.2 million of this amount

## METSÄ GROUP

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was paid in January 2023. In addition, Metsä Board Corporation acquired its series B shares from the market in October–November 2022 for a total value of EUR 7.8 million and an average price of EUR 7.82 per share.

In January–December, Metsäliitto Cooperative's members' capital increased by a total of EUR 73.9 million (126.5). The value of participation shares grew by EUR 4.9 million (9.6) and that of Metsä1 additional shares by EUR 828.2 million, including EUR 679.8 million of A additional shares converted to Metsä1 additional shares on 1 January 2022. A additional shares decreased by EUR 741.1 million, and this figure included the aforementioned conversion of A additional shares to Metsä1 additional shares. The value of additional shares B declined by EUR 18.1 million (-6.4).

## Personnel

	2022	2021	2020
Personnel, average	9,587	9,619	9,392
Personnel expenses, EUR million	720.6	680.4	615.0
Personnel at year end	9,155	9,533	9,213
- based in Finland	5,135	5,329	5,055

In January–December, Metsä Group had an average of 9,587 employees (9,619). Personnel expenses were EUR 720.6 million (680.4). At the end of December, the Group employed 9,155 people (31 December 2021: 9,533), of whom 5,135 (5,329) were based in Finland and 4,020 (4,204) abroad. The parent company Metsäliitto Cooperative employed 2,106 people at the end of December (31 December 2021: 2,074). The year-over-year decrease in employees was mainly due to the discontinuation of operations in Russia and at the Kyrö sawmill, as well as the sale of Hangö Stevedoring.

The turnover of permanent employees was 12.2% (6.8), and the average duration of employment for the whole personnel was 14.8 years (15.1). Personnel expenses totalled EUR 720.6 million (680.4), of which paid salaries and remuneration, including share-based payments, were EUR 491.0 million (462.7).

Resource plans are made in preparation of future retirements and investment plans. If required, Metsä Group initiates apprenticeship training and invests in job rotation and competence development.

The "Statement on non-financial information" section contains further information about personnel development measures and safety at work.

## Changes in Metsä Group's management

Juha Jumppanen, EVP of Metsä Forest, who is in charge of Metsä Group's wood supply and forest services, and Jaakko Anttila, EVP of Metsä Wood, were appointed to Metsä Group's Executive Management Team as of 1 August 2022. They report to Ilkka Hämälä, President and CEO of Metsä Group. Juha Mäntylä, a member of Metsä Group's Executive Management Team, continued in the special assignments defined by the President and CEO until the end of 2022, when he retired.

## Members

At the end of December, Metsäliitto Cooperative had 91,607 members (31 December 2021: 92,534). During January–December, 2,416 new members joined the Cooperative, and 3,343 members cancelled their memberships. At the end of December, the forest area owned by the members totalled 5.335 million hectares (31 December 2021: 5.229).

## Capital expenditure

EUR million	2022	2021	2020
Total investments	1,500.4	994.2	400.5
% of sales	21.5	16.5	7.9
Total investments in Finland	1,249.4	768.4	226.1

Metsä Group's total investments in January–December totalled EUR 1,500.4 million (994.2), of which investments in owned property, plant and equipment were EUR 1,440.0 million (964.6), and investments in leased property, plant and equipment were EUR 28.0 million (23.3). Total investments include EUR 32.5 million (6.2) of acquired business operations.

Metsä Board's total investments amounted to EUR 304.1 million (220.2), of which investments in own property, plant and equipment were EUR 278.1 million (216.1) and investments in leased property, plant and equipment were EUR 26.1 million (4.1).

The most significant investment projects are covered in more detail under section "Business Development".

## Business development

The planning of Metsä Wood's new Kerto® LVL mill in Äänekoski is progressing. The local detailed plan for the Henttalanmäki area became legally binding, and applications for an environmental permit and a building permit for the mill were submitted in the second half of the year.

In 2019, Metsä Board launched a pre-engineering project for the first phase of the Husum pulp mill's renewal. It comprised a new recovery boiler and turbine, which came online in December 2022. At the end of the financial period, investments in the project totalled approximately EUR 370 million. The overall project investments are expected to be EUR 380 million. The deployment of the new recovery boiler and turbine will reduce energy and maintenance expenses, improve energy efficiency and reduce the duration of annual maintenance shutdowns at the Husum integrated mill. The investments are expected to improve Metsä Board's annual cash flow by approximately EUR 35 million and at least half of the amount is expected to materialize 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.

In 2021, Metsä Board initiated a development programme for the Kemi paperboard mill, which produces white top kraftliner, to increase the annual production capacity of white top kraftliner by around 40,000 tonnes. The value of the development investment is expected to exceed the original estimate of EUR 67 million due to the increase in the level of costs. 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 a year. The development programme will reduce the mill's water use by 40% and energy use by 5% per tonne of paperboard produced.

Metsä Board will increase its annual folding boxboard production capacity by 200,000 tonnes at the Husum integrated mill in Sweden. Following the investment, the capacity of folding boxboard machine BM1 will be 600,000 tonnes per year. Full production capacity is expected to be reached in 2025. The value of the investment is approximately EUR 210 million. It will take place in 2021–2024, with an emphasis on 2022 and 2023. The investment is expected to increase Metsä Board's annual sales by approximately EUR 200 million and improve its 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, which are still partly being planned, is EUR 20–30 million. The investments mainly involve new warehouse capacity and are expected to be completed in 2023.

Metsä Board announced it was initiating pre-engineering for the construction of a new folding boxboard mill with an annual capacity of around 800,000 tonnes in the Kaskinen mill area. The pre-engineering phase encompasses technical design, the design of infrastructure and logistics solutions, and tendering for the main machinery procurement. As part of the pre-engineering phase, an environmental impact assessment was launched in January 2023. The possible investment decision could be made in 2024 at the earliest.

The construction of Metsä Fibre's new pine sawmill in Rauma began in May 2020, and the sawmill moved from test production runs to continuous sawn timber production at the end of the third quarter. The value of the investment was EUR 260 million. The unit's annual production capacity is 750,000 cubic metres of pine sawn timber. The sawn timber produced in Rauma is sold primarily to Europe and Asia. The sawmill will reach full production capacity in 2023.

On 11 February 2021, Metsä Fibre made an investment decision on the construction of the Kemi bioproduct mill. The value of the investment is EUR 2.02 billion. The construction phase will last approximately two and a half years. The work remaining in the construction phase is mainly finishing work. Installation is at its busiest, and test runs and other testing are also underway. The bioproduct mill will start up in the third quarter of 2023. The mill will produce some 1.5 million tonnes of softwood and hardwood pulp a year as well as numerous other bioproducts. The new mill will replace the current pulp mill in Kemi, which has reached the end of its life-cycle.

In February 2023, Metsä Tissue decided to increase its production of fresh fibre tissue paper at the Mariestad mill in Sweden. The value of the investment, to be implemented in 2023–2025, is approximately EUR 370 million. The investment is described in greater detail under "Events after the review period".

Metsä Tissue renewed the tissue paper machine at the Mänttä mill, which improved the machine's energy and production efficiency considerably and increased the mill's production capacity.

## Business areas

### Wood Supply and Forest Services

The sales of Wood Supply and Forest Services, i.e., from Metsä Forest, in January–December totalled EUR 2,133.3 million (1–12/2021: 2,022.9), and the comparable operating result was EUR 23.7 million (36.4).

Wood Supply and Forest Services	2022	2021
Sales, EUR million	2,133.3	2,022.9
EBITDA, EUR million	28.2	46.9
- comparable EBITDA	31.5	46.9
Operating result, EUR million	-10.9	36.4
- comparable operating result	23.7	36.4
% of sales	1.1	1.8
Comparable ROCE, %	13.8	20.2
Total investments, EUR million	171	7.2
Personnel at end of period	745	852

Sales increased due to the slightly higher wood prices. The operating result was weakened by the winding down of the Russian wood supply organisation in 2022.

In Finland, the wood trade in private forests was slow in early 2022 but picked up towards the end of the year, nearly reaching the previous year's level. Log prices took a downwards turn after increasing early in the year. Pulpwood prices saw an exceptional increase in 2022. Weather conditions were excellent for harvesting all year. In the Baltic Sea region, demand for pulpwood in particular increased due to the cessation of imports from Russia and the energy crisis in Central Europe. Metsä Forest replaced Russian wood especially with Finnish and Swedish wood, while reducing purchases in the Baltics.

During the review period, Metsä Forest bought all grades of wood across Finland through both standing and delivery sales. Purchase volumes remained at nearly the same level as in the previous year, and demand focused mainly on felling sites to be harvested when the ground had thawed. The purchasing of energy wood focused on crown wood. The majority of wood in Finland was purchased from members of Metsäliitto Cooperative. In the thinning trade, the share of felling sites that were priced based on stem volume increased faster than the target. The sales of forest services were excellent. Customer feedback from forest owners broke a new record.

Metsä Forest paid a double bonus for wood purchased from the thinning sites of owner-members between 1 May and 31 August 2022. An early delivery bonus was paid for wood from delivery sales delivered by owner-members between 15 September and 15 December 2022, and a double bonus was paid for wood from delivery sales purchased from owner-members between 1 November 2022 and 31 January 2023.

Metsä Forest's deliveries to customers' production units and preparations for the wood supply of Metsä Group's Rauma sawmill and Kemi bioproduct mill progressed as planned. In January–December, Metsä Forest delivered a total of 33.9 million cubic metres (35.3) of wood to its customers. Approximately 87% of this was delivered to Finland's industrial sector.

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A total of 52% of the wood acquired by Metsä Forest from private forest owners was purchased through digital means. In the sales of forest management services, the figure was 59%. During the review period, Metsä Forest established a new Kajaani procurement district, deployed a new application, based on artificial intelligence and machine learning, for estimating growing stock data, and announced it was developing an AI application for its personnel and owner-members to help identify storm and insect damage.

In addition, the ecological sustainability programme was expanded by the decision to only purchase pine, spruce and birch, as well as aspen with a diameter less than 40 centimetres, in Finland.

### Wood Products Industry

The sales of the Wood Products Industry, i.e., Metsä Wood, in January–December were EUR 662.3 million (1–12/2021: 580.1), and the comparable operating result was EUR 54.8 million (18.6).

Wood Products Industry	2022	2021
Sales, EUR million	662.3	580.1
EBITDA, EUR million	76.3	38.9
- comparable EBITDA	76.3	38.9
Operating result, EUR million	54.8	18.6
- comparable operating result	54.8	18.6
% of sales	8.3	3.2
Comparable ROCE, %	15.8	5.7
Total investments, EUR million	19.2	28.9
Personnel at end of period	1,590	1,658

In 2022, Metsä Wood's sales improved by 14% from the comparison period. The sales of engineered wood products increased by 26%, and the sales in euros of the UK business increased by 5%. Delivery volumes decreased across all product categories and in the UK business. Sales prices rose significantly across all product categories.

The profitability of business operations improved significantly from the previous year thanks to strong demand in all product categories and across the main markets. However, increased raw material, energy and logistics prices and challenges in the availability of birch logs negatively affected profitability. The availability of birch logs was affected by the ending of deliveries from Russia, leading to curtailments of birch plywood production at the Punkaharju and Suolahti mills in April. Due to the slowdown in the market situation at the end of the year, production of spruce plywood was limited in December. The coronavirus pandemic also caused disruptions in production and the supply chain in the early part of the year.

The weak market situation in the UK converting business continued in the last quarter of the year, and the full-year operating result decreased significantly from the previous year.

Metsä Wood and Quant Finland renewed their maintenance partnership contract in February. The contract covers the production units in Pärnu in Estonia, and in Lohja, Punkaharju, Suolahti and Äänekoski in Finland.

In the UK business, the number of employees was reduced in the second half of the year to match weaker demand in the market. In addition, cooperation negotiations were initiated in the UK in December with a view to closing the Grangemouth site.

### Pulp and Sawn Timber Industry

The sales of the Pulp and Sawn Timber Industry, i.e., Metsä Fibre, totalled EUR 3,070.7 million (1–12/2021: 2,628.1), and the comparable operating result was EUR 894.1 million (648.2).

Pulp and Sawn Timber Industry	2022	2021
Sales, EUR million	3,070.7	2,628.1
EBITDA, EUR million	978.9	772.5
- comparable EBITDA	1,013.3	772.5
Operating result, EUR million	845.5	613.7
- comparable operating result	894.1	648.2
% of sales	29.1	24.7
Comparable ROCE, %	35.0	32.6
Total investments, EUR million	1,065.0	650.7
Personnel at end of period	1,297	1,384

The sales and operating result increased year on year, mainly due to the higher market prices of pulp, but also because of the US dollar strengthening against the euro.

The delivery volume of Metsä Fibre's pulp was 2,880,000 tonnes (3,058,000). The average sales prices of Metsä Group's long-fibre pulp increased in the first three quarters of the year and took a downwards turn in the last quarter. The sales prices of long-fibre pulp increased by 27% from the previous year and those of short-fibre pulp by 39%.

Market pulp deliveries increased year over year. Growth was mainly seen in hardwood pulp and unbleached pulp. Global deliveries of softwood pulp decreased due to restrictions in logistics and unplanned production losses of various pulp producers. Pulp deliveries to Europe increased, while those to China decreased. In China, domestic demand for paper and paperboard was affected by the decline in economic growth caused by coronavirus restrictions.

The total delivery volume of Metsä Fibre's sawmills was 1,476,000 cubic metres (1,677,000). The volume of sawn timber production was affected by the operations of the Svir pine sawmill in Russia being wound down in March 2022 and the closure of the Kyrö pine sawmill in the third quarter. The average prices of Metsä Group's pine sawn timber increased by 5% from the previous year, and those of spruce sawn timber decreased by 8%.

Sawn timber deliveries were at a good level in all the main markets in the first half of the year but became weaker in the autumn due to the slowdown in renovations and independent construction.

Metsä Fibre integrated the maintenance operations of its production facilities into its own organisation through a business transfer agreed with Caverion in May. The maintenance of the company's pulp mills, and the Rauma sawmill was previously outsourced to Oy Botnia Mill Service Ab. In connection with the change, Metsä Fibre sold its Botnia Mill Service shares to Caverion.

The change negotiations initiated at the Kyrö sawmill in March 2022 were concluded in the second quarter, and the sawmill's production of sawn timber was wound down in August. The operations of the Svir sawmill in Russia were wound down in early March 2022 due to Russia's attack on Ukraine.

### Paperboard Industry

The sales of the Paperboard Industry, i.e., Metsä Board, in January–December were EUR 2,479.6 million (1–12/2021: 2,084.1). The comparable operating result was EUR 520.7 million (386.6). Folding boxboard accounted for 57% (57) of sales, while 25% (25) of sales came from white kraftliner, 15% (13) from market pulp and 3% (5) from other operations.

Paperboard Industry	2022	2021
Sales, EUR million	2,479.6	2,084.1
EBITDA, EUR million	614.6	466.0
- comparable EBITDA	602.8	472.2
Operating result, EUR million	531.5	375.9
- comparable operating result	520.7	386.6
% of sales	21.0	18.6
Comparable ROCE, %	20.9	18.7
Total investments, EUR million	304.1	220.2
Personnel at end of period	2,248	2,389

Total deliveries of paperboards were 1,817,000 (1,922,000) tonnes, of which 68% was delivered to the EMEA region, 28% to the Americas, and 4% to the APAC region. The changes in delivery volumes were due to the record sales volumes in the comparison period, the planned increase in inventories in the early part of the year, and the decrease in demand for consumer products in the second half of the year. Metsä Board's deliveries of market pulp were 503,000 (496,000) tonnes, of which 70% was delivered to the EMEA region and 30% to the APAC region.

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 addition, wood costs increased due to higher 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. Fixed costs also increased. Metsä Board's overall costs increased by approximately 20% from the previous year. Unused emissions allowances were sold for a total of approximately EUR 29 million during the year (10–12/2021: EUR 21 million). The associated company Metsä Fibre's share of Metsä Board's comparable operating result in January–December was EUR 174.7 million (123.0).

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).

### Tissue and Greaseproof Papers

The sales of tissue and greaseproof papers, i.e., Metsä Tissue, in January–December totalled EUR 1,197.0 million (1–12/2021: 946.7). The comparable operating result was EUR -3.4 million (-9.7).

Tissue and Greaseproof Papers	2022	2021
Sales, EUR million	1,197.0	946.7
EBITDA, EUR million	41.7	35.9
- comparable EBITDA	41.2	35.9
Operating result, EUR million	-3.0	-9.7
- comparable operating result	-3.4	-9.7
% of sales	-0.3	-1.0
Comparable ROCE, %	-0.4	-1.6
Total investments, EUR million	50.6	63.3
Personnel at end of period	2,449	2,480

The low operating result in January–December was mainly due to high raw material and energy costs, which increased significantly over the year.

The full-year sales volumes of tissue paper products were slightly higher than in the previous year due to the increase in the volume of products for professional use. The sales of greaseproof papers continued to be strong. The operating result took a positive turn in the last quarter, but annual price increases could not adequately meet the continued rapid increase in costs.

The tissue paper business is energy intensive, and the extremely high energy prices made for a challenging business environment. In 2022, the company announced temporary production shutdowns at its mills in Central Europe due to spikes in energy prices. During the year, the company adopted several measures to strengthen its competitiveness and secure the deliveries of hygiene products to its markets.

## Research and development

Metsä Group's research, development and innovation operations focus on the development of high value-added products made from northern wood and the promotion of industrial efficiency in line with the circular economy.

In 2022, research and development costs totalled EUR 31.1 million (30.0), or 0.4% (0.5) of sales. The costs include direct expenses, excluding depreciations and operational investments. The research and development costs of MI Demo Oy, the joint venture of Metsä Spring and Itochu, totalled EUR 3.8 million (2.9).

EUR million	2022	2021
R&D expenses	31.1	30.0
% of sales	0.4	0.5

The goal of our research and development work is to create new products and services, exploit new technologies and ensure the competitiveness of Metsä Group's current business operations. Examples of the results published in 2022 include an AI-based solution for determining growing stock data, developed by Metsä Forest; Metsä Fibre's cooperation agreement on biomethanol refining in Äänekoski; several packaging solutions that use Metsä Board's paperboard, and Metsä Wood's

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investments in hybrid construction making use of concrete and wooden elements.

Research and development operations also play an important role in the achievement of Metsä Group's sustainability objectives. In 2022, Metsä Group set up five R&D programmes, which involve broad cooperation across business areas and with various partners. The programme themes are related to fossil free raw materials, coatings, side streams, fibre products and the optimal use of northern wood.

Metsä Group engages in active cooperation with universities, research institutes, the suppliers of technical solutions and high-growth companies. Metsä Group donated EUR 160,000 to Aalto University, the University of Eastern Finland, the University of Jyväskylä, LUT University, Tampere University and Åbo Akademi. The donations will be allocated to the universities' fields of natural science, agriculture and forestry, and technology. Metsä Group is also active in both national and the EU's research and development networks. The innovations and development programmes of these networks and partners play a key role in the development of new processes and products.

Metsä Group, alongside Fortum, continues research and the building of innovation ecosystems as a co-driver of the EUR 50 million ExpandFibre cooperation project, which advances the circular bioeconomy. The cooperation aims to develop technologies and business concepts to produce textile fibres and other new bioproducts from pulp made from straw and wood. At the end of the year, the ExpandFibre innovation ecosystem comprised over eighty organisations.

Metsä Group's innovation company Metsä Spring is tasked with finding and developing new forest-based bioeconomy and circular economy business concepts in cooperation with partners. Metsä Spring invests competence and funds in business ideas that renew the Group's ecosystem over the long term. The demo plant owned by MI Demo, a joint venture of Metsä Spring and Itochu, uses a direct dissolution method to produce Kuura, a wood-based textile fibre, from paper pulp. The new method is more environmentally friendly than current production methods.

Alongside the technology verification phase, Metsä Spring is running numerous textile fibre research projects as part of the ExpandFibre project. Metsä Spring and Valmet's joint 3D fibre product demo plant was completed and inaugurated in Äänekoski in 2022. The demo plant is now testing and developing a production method for a new kind of Muoto® packaging. This wood-based fibre product could replace packaging made of plastic and aluminium. The demo plant's inauguration and the announcement of the Muoto brand were among the year's highlights. Metsä Spring continued to support its portfolio companies Montinutra, Innmost and Woodio in various ways. The goal is to commercialise new bioproducts and increase production. In early 2022, Metsä Group was nominated Finland's most start-up friendly company in 2021.

## Metsä Tissue

Metsä Tissue uses fresh fibre as the main raw material for its tissue paper products. Recycled fibre is also used in production, but the availability and quality of recycled fibres have declined rapidly. Metsä Tissue's fresh fibre strategy plays an important role in improving the energy efficiency of production, and its research and development operations focus on supporting the strategy. In Germany, one of the Kreuzau tissue paper mill's paper machines was converted from recycled fibre production to fresh

fibre production in the autumn of 2022. In 2022, Metsä Tissue accelerated the transition to fresh fibre in other markets as well.

In addition, Metsä Tissue worked with an external partner to assess the life-cycle and environmental footprint of pulp used in tissue paper production.

## Metsä Fibre

Metsä Fibre continued to develop new fibre-based products in the ExpandFibre joint research project, focusing on topics like the development of biocomposite fibres, and studied the use of new chemical solutions in fibre processing. Metsä Fibre is developing new fibre products for both existing and new applications and value chains. With regard to the development of future pulp technology, the company continued its long-term project aiming for a bioproduct mill with zero wastewater discharges in collaboration with partners.

In February, Metsä Fibre and Veolia signed a long-term partnership agreement on the refining of crude methanol generated at the Äänekoski bioproduct mill into commercial biomethanol. Veolia decided to invest in the construction of a refinery to be integrated into the Äänekoski bioproduct mill. The refinery is scheduled to come online in 2024.

## Metsä Wood

Metsä Wood's research and development focused on large strategic projects such as the replacement of fossil raw materials, more efficient use of wood raw material, and the investigation of new products and technologies. Metsä Wood is looking for new fossil free alternatives for both glues and various coatings and surface treatment agents.

In 2022, Metsä Wood's production carried out several test runs on new glue alternatives and studied and tested many other chemicals. Metsä Wood also conducted test runs related to a more efficient and optimised use of the raw material base, especially in Kerto® LVL products. The company also continues to investigate the expansion of its product portfolio in both plywood and Kerto LVL products. It has developed new hybrid elements that combine wood and concrete in cooperation with its partners. The core of a concrete sandwich wall element, for instance, has been replaced with a Kerto LVL panel. This reduces the construction's carbon footprint without changes to the current construction method. The hybrid elements aim to introduce wood construction to urban areas and high-rise buildings, for example, to an increasing degree.

Metsä Wood launched a new plywood product, Metsä Wood DURAFORM®, adding an increasingly durable product to its range of plywood products for concrete formwork. Metsä Wood's digital services continue to be actively developed. The company created user-friendly tools and published span tables for the quick pre-dimensioning of Kerto LVL products in multiple construction solutions, accounting for local construction methods. The company also released a carbon storage calculator for its products and revised Wood Academy, its e-learning platform. Available in several languages, the e-learning courses deal with different products and their features and suitability for different uses.

## Metsä Forest

In line with its strategy, Metsä Forest continued its active development efforts to improve the ecological sustainability and economic profitability of forest management. Other focal areas included improvements

to the customer experience, the enhancement of forest operations, the improvement of quality management and the development of partnerships.

The company was actively involved in the industry's joint research and development projects. A new and widely approved research-based method was introduced for determining the volume of pulpwood based on dynamic green density models in connection with mill measurements. The company also initiated a multi-year project to renew the wood reception system at mills.

Over the year, Metsä Forest developed and introduced a new method for determining growing stock data using artificial intelligence. The method produces increasingly accurate growing stock data without the need for a visit to the forest. More accurate data enable the wood's processing value to be optimised more comprehensively. The company also continued to actively develop pricing methods for the wood trade.

Metsä Forest continued its cooperation with Natural Resources Institute Finland to determine the biodiversity impacts of high biodiversity stumps. Research results were obtained on the impacts that high biodiversity stumps have on species, and further information was gained on the way in which the number, characteristics and location of high biodiversity stumps affect species.

Metsä Forest also published a new policy on wood purchases from commercial forests and an operating model in line with the policy, according to which it only purchases pine, spruce and birch, as well as aspen with a diameter less than 40 cm. Other tree species are left in the forest to increase biodiversity. The policy is part of the ecological sustainability programme launched in 2020. Metsä Forest also defined Group-wide principles for forest use and management, which have been published on the company's website.

The company carried out significant projects renewing its ERP solution and wood supply planning system. Because of this, other software development was less extensive. However, Metsä Forest initiated a renewal project for the mobile application of its Metsäverkko service. The first version of the new application will be released in the spring of 2023. Preparations for the wood supply of the sawmill that started up in Rauma and the bioproduct mill under construction in Kemi progressed as planned. The company developed new operating models for wood measurement, transport and storage. The development of new driver training concepts and student recruitment models continued in cooperation with educational institutions and the authorities. The work resulted in a model that helps the company's partners find and recruit new drivers. The ISO 45001 standard for health and safety at work, previously introduced in Finland, was also deployed in Metsä Forest's subsidiary in Latvia.

## Metsä Board

Metsä Board's R&D operations focus on the recyclability of paperboards and on ensuring and developing compostability. In the circular economy for fibre packaging material, the company's task is to provide markets with premium fresh fibre paperboards as resource-efficiently as possible, help replace fossil-based materials and reduce the carbon footprint of packaging.

It continues to focus on reducing the weight of paperboard and developing recyclable protective coating for food packaging. Reducing the weight 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 enabling a reduced carbon footprint. The goal is to have a mill with fossil free production and significantly lower wood, energy and water consumption per tonne of folding boxboard produced compared to current production units.

In the biobarrier programme launched in 2021, research continued on new products that reduce the use of plastic. Several alternatives are being tested in the laboratory, and some of them have proceeded to production testing.

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

## Statement on non-financial information

### Business model

Metsä Group consists of Metsäliitto Cooperative, its two businesses Metsä Forest and Metsä Wood, and the cooperative's subsidiaries Metsä Fibre, Metsä Board and Metsä Tissue. At the end of 2022, Metsäliitto Cooperative held around 50% of the listed company Metsä Board's shares and around 68% of the votes. Metsäliitto Cooperative's holding in Metsä Fibre's shares is approximately 50%. Metsä Tissue is a fully-owned subsidiary of Metsäliitto Cooperative. Owned by more than 90,000 forest owners, Metsäliitto Cooperative is the parent company of Metsä Group.

Through the cooperative's owner-members, Metsä Group has access to a considerable reserve of premium-quality wood raw material, providing operations with a stable, long-term foundation. Metsä Group's business operations focus on wood supply and forest services, wood products, pulp, fresh fibre paperboards, and tissue and greaseproof papers. Its mills are located in Finland, Sweden, Estonia, Poland, Slovakia, the United Kingdom and Germany. The Group's main market area is Europe, and it pursues growth especially in North America, Asia and Oceania. Approximately 68% of sales are derived from the EMEA region, with 21% of sales derived from the APAC region and 11% from the Americas. Metsä Group employs approximately 9,200 persons (9,500) in about 30 countries.

Metsä Group is committed to promoting sustainability and mitigating climate change. Metsä Group operates resource-wisely, according to the principles of the circular bioeconomy. Sustainability is a strategic part of the management of the Group and its business areas' operations and their continuous improvement. Metsä Group's values and Code of Conduct guide its sustainability management and help ensure that its business is conducted ethically. The Code of Conduct covers, among other things, matters related to the personnel and social responsibility, respecting human rights and the company's anti-corruption and anti-bribery activities, the prevention of misconduct, sustainable forest management in its entirety, and environmental matters related to operations.

The cooperative's Board of Directors is the highest governing body in the administrative structure managing sustainability. It approves the policies and long-term strategic sustainability objectives steering the company's operations and internal controls. It is also responsible for ensuring that the Group's objectives are achieved. The President and CEO is responsible for the strategic management of sustainability. The business areas' boards of directors or the cooperative's Board of Directors

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approve, and are responsible for, the sustainability objectives in each business area. The sustainability process management team is responsible for the implementation of sustainability measures and their monitoring within business areas and support functions. The Group's Sustainability Report contains an extensive account of its sustainability management, development and results.

In 2022, Metsä Group used materiality analysis to identify the main sustainability focus areas and updated its sustainability objectives so that they correspond to the changing operating environment.

Based on Metsä Group's materiality analysis, the main material themes for sustainability are:

MATERIAL THEMES	
E – Environment	Safeguarding biodiversity and the ecological sustainability of the use of forests
	Mitigating climate change and reducing emissions
	Resource efficiency and sustainable production
S – Social	Respecting everyone and doing the right thing
	Promoting safety and well-being at work
G – Governance	The significance of forest-based bioeconomy to society
	Innovation and open-minded cooperation

KEY FIGURES FOR THE SUSTAINABILITY OBJECTIVES:	2022	2021	2020
<b>E – ENVIRONMENT</b>			
<b>Securing the biodiversity of forests</b>			
Leaving retention trees on felling sites (%); target for 2030: 100%	95	94	94
Leaving high biodiversity stumps on thinning and regeneration sites (%); target for 2030: 90%	90	88	84
Share of certified wood used by the Group	89	88	87
<b>Mitigating climate change and reducing emissions</b>			
Fossil free mills, share of fossil free fuels; target: 100%	90	90	90
Increasing the amount of carbon stored in forests, target in 2018–2030: +30%	2.8	3.8	0
Growth in forest regeneration areas (%)	2.0	-3	-11
Growth in young stand management areas (%)	3.7	13	14
Increasing the amount of carbon stored in products, growth in the amount of wood products; target in 2018–2030: +30%	-12.4	-1.2	-8.9
Fossil free raw materials and packaging materials; target for 2030: 100%	99.6	99.6	99.6
<b>Resource efficiency and sustainable production</b>			
Increasing the efficiency of process water use; target in 2018–2030: -25%	-7.4	-5.1	0.2
Utilisation of production side streams; target for 2030: 100%	96	93	93
<b>S – SOCIAL</b>			
<b>Responsible corporate culture</b>			
The Group's Code of Conduct training coverage among the entire personnel (%)	97	98	96
The Group's Code of Conduct (published in November 2022) training coverage among the entire personnel (%)	55		
Ethics barometer (%)	85.2		84.4
Revised personnel survey (%)		76.6	
<b>Accident-free working environment</b>			
Lost-time accident frequency (LTA1) per million hours worked	5.2	5.4	5.1
Total Recordable Injury Frequency (TRIF) per million hours worked; target for 2030: 0	6.7	8.1	8.7
Fatal occupational accidents, internal workers	0	0	0
Fatal occupational accidents, external workers	1		
<b>G – GOVERNANCE</b>			
<b>Sustainable supply chain</b>			
The share of sustainable suppliers; target for 2030: 100%			
Commitment to the Supplier Code of Conduct	98	96	94
Compliance verified	93	88	78
Sustainability practices verified	48	45	48
Traceability of raw materials; target for 2030: 100%	92	92	91

The Group's strategic sustainability objectives extending up to 2030 are in line with the material sustainability focus areas of the business operations and support the UN Sustainable Development Goals. To achieve these ambitious objectives, Metsä Group needs to make substantial investments, develop and harmonise operations, and adopt new solutions.

The sustainability of suppliers is managed and monitored with the help of risk analyses, background checks, audits and self-evaluations as well as suppliers' commitment to Metsä Group's Supplier Code of Conduct. These account for matters related to the environment, corruption, the use of child labour and human rights violations, among others. The goal is for the supply chain to be 100% sustainable and for the origin of our raw materials to be known with a 100% accuracy by 2030. In 2022, 98% (96) of the procurement value came from suppliers that are committed Metsä Group's Supplier Code of Conduct (or to the suppliers' own equivalent codes), and the origin (at least the country of manufacture), was known for 92% (92) of the total purchases of raw materials and packaging materials.

In 2022, we clarified our supplier requirements regarding sustainability and compliance. During the year, we assessed the sustainability of more than one hundred suppliers with the help of a survey, a third-party sustainability analysis or an audit. In addition, we carried out a major investigation into our logistics providers' means and goals for the reduction of emissions.

**Environment**

Policies and management, quality and certification 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
- ISO 9001
- ISO 14001
- ISO 50001
- FSC
- PEFC
- UN Global Compact

Climate change has an impact on Metsä Group's operations and development, as well as the development of its operating environment. Metsä Group considers the importance of climate change mitigation at every stage of the value chain – in forests, production units and products.

One of Metsä Group's sustainability targets is to increase the amount of carbon stored in forests and products by 30% compared to 2018. The Group supports the strong growth of forests with sustainable forest management measures. In 2022, the Group carried out forest regeneration and young stand management on a total of 33,221 hectares, with an increase of 2.8% from the reference year. Metsä Group has set itself the goal of increasing the amount of carbon-storing wood products with a long service life. In 2022, these products stored 1,446,218 tonnes of CO<sub>2</sub> (1,631,376). To secure the biodiversity of forest nature, Metsä Group has been implementing its programme on the ecological sustainability of commercial forests since 2020. With the nature management programme established in 2021, Metsä Group is also taking part in improving the state of Finnish nature outside of commercial forests.

The wood we use is traceable and comes from certified forests or forests that meet the requirements of controlled origin. Of the wood used in 2022, 89% (88) was either PEFC or FSC certified. High biodiversity stumps were left at the forest owner's permission in more than 90% (88) of regeneration and thinning sites processed. Retention trees were left in 95% (94) of regeneration sites. They are left in all regeneration sites that fall under forest certification. In the long term, high biodiversity stumps and retention trees increase the volume of standing and fallen decaying wood in forests and support the biodiversity of forest nature by providing a habitat for a wide range of organisms and animal species.

In production, Metsä Group is aiming for fossil free mills by 2030. As the use of fossil fuels in production is discontinued, fossil-based carbon dioxide emissions will also fall to zero (Scope 1). In 2022, our direct Scope 1 emissions totalled 623,800 tonnes (652,000) of fossil carbon dioxide (CO<sub>2</sub>). Our emissions from purchased electricity and heating (Scope 2) amounted to 458,800 tonnes (474,000) of fossil carbon dioxide (CO<sub>2</sub>).

In 2022, 90% (90) of the fuels used by Metsä Group were bio-based (Scope 1). Biogenic CO<sub>2</sub> emissions from production totalled 10,040,093 tonnes (9,916,156) (Scope 1) in 2022.

For process water, Metsä Group's target is a 25% reduction per tonne of production from the 2018 level. In 2022, the use of process water per tonne of production was 7.4% (5.4) lower than in 2018. The use of water has decreased through investments and more efficient processes. For example, when the Äänekoski bioproduct mill started up, our water use per tonne of production decreased substantially.

The Group aims to make full use of production side streams. In 2022, we utilised 96% (93) of production side streams, around half of which was used to produce energy. Side streams are primarily used as raw material and secondarily as energy. Metsä Group continues its work to reduce the volume of landfill waste.

Some environmental permit limits were exceeded at the Group's production units in 2022. No environmental deviation or infringement of permit limits that would have caused significant environmental impacts, complaints, compensation or significant media publicity occurred at Metsä Group's mills in 2022.

All the Group's production units have an ISO 9001 quality system and an ISO 14001 environmental system in place, as well as a Chain of Custody system enabling reliable verification of the amount of certified wood in the products. In addition, the ISO 50001 energy efficiency system is in place in several of the Group's production units.

Sustainability and fossil free operations also guide Metsä Group's product development. Our goal is that the Group will not use any raw materials or packaging materials based on fossil oil by 2030. Of the raw materials and packaging materials used by the end of 2022, 99.6% (99.6) were fossil free. The fossil free solutions pursued would replace, among other things, the oil-based latex used in paperboards and the phenol-based glues used in wood products.

The Group's subsidiaries are subject to environmental responsibilities related to former industrial activities at sites that have since been closed, sold or leased, and from decommissioned landfill sites. Financial 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.

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### Governance

## The EU taxonomy

The taxonomy is a classification system for the financial market based on Regulation (EU) 2020/852, valid as of the beginning of 2022, listing economic activities sustainable in terms of climate and the environment. The taxonomy aims to direct money to sustainable investments in such a way that the EU can achieve the ambitious emission reduction targets it has set for itself.

The European Commission has stated that the taxonomy is subject to continuous development, and it has started determining the technical screening criteria for economic activities in which improvements will have the greatest impact on the climate and environment. The taxonomy's technical screening criteria do not currently cover Metsä Group's core business and sustainable products. As a result, taxonomy-eligible economic activities account for only a minor share of our sales. Our main business consists of wood supply and forest services, wood products, pulp, paperboard, and tissue and greaseproof papers. So far, the company does not know the schedule and the extent to which its main business operations can be included in the scope of the taxonomy.

The mitigation of climate change and global warming and adapting the business to a low-carbon future are at the core of our objectives. Our target is completely fossil free production and products by the end of 2030. We operate according to the principles of circular economy. We promote the sustainable use of forests and the resource efficiency of processes, reduce waste and emissions, and keep materials in circulation as long as possible. The products we make replace products made from fossil raw materials, we use a fully renewable main raw material, and our products can be recycled.

## Taxonomy reporting

The taxonomy defines six main environmental objectives against which the company's different economic activities are assessed. These environmental objectives are: (a) climate change mitigation, (b) climate change adaptation, (c) sustainable use and protection of water and marine resources, (d) transition to a circular economy, (e) pollution prevention and control, and (f) protection and restoration of biodiversity and ecosystems. For the 2022 financial period, Metsä Group discloses information on its taxonomy-eligible and taxonomy-aligned business operations with respect to the climate objectives, i.e., climate change mitigation and climate change adaptation. Business disclosures include the share of sales, capital expenditure and operating expenditure.

The disclosures on taxonomy-alignment focus on the extent to which the economic activity in question supports the confirmed environmental objectives. An economic activity is considered taxonomy-aligned if it makes a substantial contribution to one of the defined environmental objectives and causes no significant harm to the other objectives. In addition, the activity must meet the criteria for minimum social safeguards.

## Reporting principles

Metsä Group includes in taxonomy-eligible sales the sales of products and services that are included in the company's reported sales.

The Group's taxonomy-eligible sales in category 1.3. (Forest management) include the sales of raw wood originating from forests owned by Metsä Group to third parties. In 2022, Metsä Group only owned approximately 2,000 hectares of forest. Most of the Group's wood supply came from individual members of Metsäliitto Cooperative.

In category 4.20 (combined production of heat or cooling and power with bioenergy), the Group's taxonomy-aligned sales include the sales of combined heat and power produced with bioenergy at Metsä Fibre's Äänekoski bioproduct mill and the sales of electric power produced with bioenergy at Metsä Board's Husum pulp mill.

Taxonomy-eligible sales in category 4.20 include the sales of district heat produced at Metsä Wood's Kumpuniemen Voima and Metsä Board's Simpele and Kyro power plants to the nearby regions. Taxonomy-eligible sales in category 4.20 also include the sales of district heat from Metsä Fibre's Rauma pulp mill.

In category 4.24 (production of heat or cooling with bioenergy), taxonomy-eligible sales include the sales of heat produced by Metsä Wood's Punkaharju power plant and Lohjan Biolämpö and Metsä Fibre's Äänekoski biopower plant and power plants at the Merikarvia and Lappeenranta sawmills.

In category 4.9 (transmission and distribution of electricity), taxonomy-aligned sales include the transmission and distribution of electricity by Metsä Fibre's Ääneverkko. Taxonomy-aligned sales related to the operation of the digestion plant of Metsä Fibre's Äänekoski bioproduct mill have been reported in category 5.6 (anaerobic digestion of sewage sludge).

Metsä Group includes in the taxonomy-eligible capital expenditure additions to tangible and intangible fixed assets, including any right-of-use assets recognised based on long-term lease agreements. Taxonomy-aligned capital expenditure includes investments at Metsä Fibre's Äänekoski bioproduct mill and investments made in the modernisation of the recovery boiler and turbine at Metsä Board's Husum pulp mill in category 4.20.

Taxonomy-eligible capital expenditure also includes maintenance investments made in Metsä Board's Simpele and Kyro power plants and Metsä Wood's Kumpuniemen Voima in category 4.20, as well as maintenance investments made in Metsä Board's Kaskinen power plant and chemicals recovery plant and Metsä Wood's Punkaharju power plant and Lohjan Biolämpö in category 4.24.

Investments made to improve the operation of the digestion plant of Metsä Fibre's Äänekoski bioproduct mill have been reported in category 5.6.

Metsä Group includes in taxonomy-eligible operating expenditure research and development expenditure recognised as costs and the maintenance costs of production units and property, supplemented with the costs of waste management and short-term lease agreements. The costs includes both external service costs and the wages, employers' contributions included, of the company's own personnel involved in the listed economic activities. Operating expenses related to the recovery of chemicals and heat at the Äänekoski bioproduct mill and the Husum pulp mill in category 4.20 make up the most significant part of the taxonomy-aligned operating expenditure. The most significant part of taxonomy-eligible operating expenditure is formed of the operating expenses of pulp mills' chemicals and heat recovery in category 4.20.

Double counting has been avoided by classifying external sales in the taxonomy activities only once. In addition, it has been ensured that capital expenditure and operating expenditure are separate for each function.

Metsä Group considers that it fulfils the taxonomy's minimum social safeguards, which cover human rights, corruption and bribery, fair competition, and taxation. The company has reviewed each topic in two parts: from the perspectives of the existence of processes and addressing violations. The due diligence process related to human rights, among other things, has been described in more detail in sections S – Social and G – Governance of the Sustainability Report.

## Proportion of sales from products and services associated with taxonomy-aligned economic activities

Economic activities	Code	Absolute sales	Proportion of sales	'Substantial contribution' criteria		'No significant harm' criteria										Enabling/transitional activities
				Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Environmental pollution	Biodiversity and ecosystems	Minimum level of protection	Taxonomy-aligned proportion of sales in 2022	E/T		
		EUR million	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E/T	
<b>A. TAXONOMY-ELIGIBLE ACTIVITIES</b>																
<b>A.1 Environmentally sustainable (taxonomy-aligned) activities</b>																
Transmission and distribution of electricity	4.9.	0.3	0%	100%			Y	-	Y	Y	Y	Y	Y	0%	E	
Combined production of heat or cooling and electricity with bioenergy	4.20.	84.4	1%	100%			Y	Y	-	Y	Y	Y	Y	1%		
Construction, expansion and operation of water supply, treatment and distribution systems	5.1.	0.0	0%	100%			Y	Y	-	-	Y	Y	Y	0%		
Construction, expansion and operation of wastewater collection and treatment systems	5.3.	0.7	0%	100%			Y	Y	-	Y	Y	Y	Y	0%		
Anaerobic digestion of sewage sludge	5.6.	0.1	0%	100%			Y	Y	-	Y	Y	Y	Y	0%		
<b>Sales from environmentally sustainable (taxonomy-aligned) activities (A.1)</b>		85.5	1%	1%	0%									1%		
<b>A.2 Taxonomy-eligible but not environmentally sustainable (other than taxonomy-aligned) activities</b>																
Forest management	1.3.	0.1	0%													
Combined production of heat or cooling and electricity with bioenergy	4.20.	75.5	1%													
Production of heat or cooling with bioenergy	4.24.	10.1	0%													
<b>Sales from taxonomy-eligible activities that are not environmentally sustainable (other than taxonomy-aligned) (A.2)</b>		85.8	1%													
<b>Total (A.1+A.2)</b>		171.3	2%											1%		
<b>B. TAXONOMY-NON-ELIGIBLE ACTIVITIES</b>																
<b>Sales from taxonomy-non-eligible activities (B)</b>		6,808.9	98%													
<b>Total (A+B)</b>		6,980.2	100%													

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Proportion of capital expenditure on products and services associated with taxonomy-aligned economic activities

Economic activities	Code	Capital expenditure total	Proportion of capital expenditure	'Substantial contribution' criteria		'No significant harm' criteria										Enabling/transitional activities
				Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Environmental pollution	Biodiversity and ecosystems	Minimum level of protection	Proportion of taxonomy-aligned capital expenditure in 2022			
	EUR million	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E/T		
<b>A. TAXONOMY-ELIGIBLE ACTIVITIES</b>																
<b>A.1 Environmentally sustainable (taxonomy-aligned) activities</b>																
Transmission and distribution of electricity	4.9.	0	0%	100%			Y	-	Y	Y	Y	Y	0%	E		
Combined production of heat or cooling and electricity with bioenergy	4.20.	119.3	8%	100%			Y	Y	-	Y	Y	Y	8%			
Construction, expansion and operation of water supply, treatment and distribution systems	5.1.	0	0%	100%			Y	Y	-	-	Y	Y	0%			
Construction, expansion and operation of wastewater collection and treatment systems	5.3.	0.2	0%	100%			Y	Y	-	Y	Y	Y	0%			
Anaerobic digestion of sewage sludge	5.6.	3.1	0%	100%			Y	Y	-	Y	Y	Y	0%			
<b>Capital expenditure on environmentally sustainable (taxonomy-aligned) activities (A.1)</b>		122.6	8%	8%	0%								8%			
<b>A.2 Taxonomy-eligible but not environmentally sustainable (other than taxonomy-aligned) activities</b>																
Forest management	1.3.	0.0	0%													
Combined production of heat or cooling and electricity with bioenergy	4.20.	245.5	16%													
Production of heat or cooling with bioenergy	4.24.	2.6	0%													
<b>Capital expenditure on taxonomy-eligible but not environmentally sustainable (other than taxonomy-aligned) activities (A.2)</b>		248.1	17%													
<b>Total (A.1+A.2)</b>		370.7	25%										8%			
<b>B. TAXONOMY-NON-ELIGIBLE ACTIVITIES</b>																
<b>Capital expenditure on taxonomy-non-eligible activities (B)</b>		1,129.7	75%													
<b>Total (A+B)</b>		1,500.4	100%													

Proportion of operational expenditure on products and services associated with taxonomy-aligned economic activities

Economic activities	Code	Operational expenditure total	Proportion of operational expenditure	'Substantial contribution' criteria		'No significant harm' criteria										Enabling/transitional activities
				Climate change mitigation	Climate change adaptation	Climate change mitigation	Climate change adaptation	Water and marine resources	Circular economy	Environmental pollution	Biodiversity and ecosystems	Minimum level of protection	Proportion of taxonomy-aligned operational expenditure in 2022			
	EUR million	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E/T		
<b>A. TAXONOMY-ELIGIBLE ACTIVITIES</b>																
<b>A.1 Environmentally sustainable (taxonomy-aligned) activities</b>																
Transmission and distribution of electricity	4.9.	0	0%	100%			Y	-	Y	Y	Y	Y	0%	E		
Combined production of heat or cooling and electricity with bioenergy	4.20.	179	5%	100%			Y	Y	-	Y	Y	Y	5%			
Construction, expansion and operation of water supply, treatment and distribution systems	5.1.	0.7	0%	100%			Y	Y	-	-	Y	Y	0%			
Construction, expansion and operation of wastewater collection and treatment systems	5.3.	1.5	0%	100%			Y	Y	-	Y	Y	Y	0%			
Anaerobic digestion of sewage sludge	5.6.	3.0	1%	100%			Y	Y	-	Y	Y	Y	1%			
<b>Operational expenditure on environmentally sustainable (taxonomy-aligned) activities (A.1)</b>		231	7%	7%	0%								7%			
<b>A.2 Taxonomy-eligible but not environmentally sustainable (other than taxonomy-aligned) activities</b>																
Forest management	1.3.	0.2	0%													
Combined production of heat or cooling and electricity with bioenergy	4.20.	38.5	11%													
Production of heat or cooling with bioenergy	4.24.	7.7	2%													
<b>Operational expenditure on taxonomy-eligible but not environmentally sustainable (other than taxonomy-aligned) activities (A.2)</b>		46.3	13%													
<b>Total (A.1+A.2)</b>		69.5	20%											7%		
<b>B. TAXONOMY-NON-ELIGIBLE ACTIVITIES</b>																
<b>Operational expenditure on taxonomy-non-eligible activities (B)</b>		278.1	80%													
<b>Total (A+B)</b>		347.6	100%													

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#### Governance

### Social responsibility, HR matters, human rights

Policies and management systems:

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

Metsä Group respects internationally recognised human rights in accordance with the UN's Universal Declaration of Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work. We are committed to operating according to the UN's principles concerning business operations and human rights, and we expect the same from our business partners. We are also committed to ensuring that there are no occurrences of child labour, forced labour, human trafficking or any other form of modern slavery in our business operations and delivery chain. In 2017, we conducted a study on the human rights risks related to our operations. We have continued to develop our operations based on the results so that we can prevent negative human rights effects linked to our delivery chain and own operations increasingly efficiently and promote the realisation of human rights within our own sphere of influence. A study conducted by an independent party concerning the human rights performance of 78 Finnish companies in relation to the United Nations Guiding Principles on Business and Human Rights (UNGPs) was published in 2021. Metsä Group's results in the realisation of its human rights responsibility were average compared to the other companies assessed. Targets for development could be found in both practical measures and on how those measures are communicated in public. Consequently, we continue to consider our human rights impact and the ways in which we could promote their realisation and prevent human rights-related risks in our operations.

As a responsible employer, Metsä Group promotes management practices based on values and leadership that support growth. Taking care of the personnel's well-being, health and working capacity throughout their careers play a key role, and performance at work is supported with a wide range of measures. At Metsä Group, everyone has the opportunity to demonstrate their own competence and participate in development work. In 2022, the voluntary turnover rate of permanent employees was 5.7% (3.5).

Metsä Group pays special attention to compliance, ethics and the promotion of a culture of doing the right thing. At the end of 2022, 55% of our personnel had completed the new Code of Conduct online training published in November 2022 and 97% (98) had completed the previous version of the online training. The new training covers all our 15 ethical principles, instructions for reporting shortcomings, and central perspectives related to human rights and social responsibility. The training is one way of ensuring that everyone shares the same understanding of requirements related to sustainable business operations and is able to recognise situations involving ethical challenges and act appropriately in them. In addition, advanced training on the Code of Conduct was organised

for managers and HR personnel in 2021, at which time more than 1,000 people participated in the training.

A responsible corporate culture is one of Metsä Group's strategic sustainability goals. We conducted our ethics barometer survey, scheduled every other year, for the second time in 2022 to measure responsible corporate culture. The target set for the ethics index resulting from the barometer survey is 100% by 2030.

The ethics index representing the responsibility of corporate culture continued to be on a good level at 85.2% (84.4). The ethics index is formed from the answers to key questions covering five areas. More than 5,500 people, i.e., more than 58% (66) of our personnel, responded to the ethics barometer survey.

The ethics barometer results show that nearly all areas included in the survey has developed positively. Awareness of requirements related to sustainability has improved, the personnel feel that the topic is important and people act ethically in the company. Most room for improvement can be found in equal treatment of personnel and a culture in which employees feel safe to report unethical activities and in which shortcomings are addressed.

We identified a considerable number of development actions to correct the issues raised in the ethics barometer. There was a total of 144 development actions, some of which were already started in 2022 and the rest will be started during 2023. In addition to the ethics barometer and the personnel survey, we initiated Pulse surveys, which are conducted every quarter. They are used to monitor the development of commitment and ethics during the year and communicate the development of results to our personnel as well.

To invest in the long-term development of the personnel's core competences, Metsä Group started training programmes evaluation and renewal work. The goal is to build training programmes and Metsä Group Academies, for the selected core process areas. In addition to training, various methods, such as job rotation and mentoring, are used to support personnel development. We initiated two mentoring programmes, one of which focuses on professional development and the other on future management skills. Metsä Group invests in a high-quality recruitment process that aims to ensure that the best talents in the industry seek employment in the Group. We will continue to systematically develop our recruitment process promoting the equality of job applicants, as well as our collaboration with educational institutions. In 2022, Metsä Group introduced anonymous recruitment as the company's main recruitment method. Related to this development, personnel were trained in the new recruitment method and the planning of recruitment.

In addition to sponsored classes and school collaboration, young people are offered the opportunity to visit the Group's production units or felling sites through the 4H cooperation. The Group also supports entrepreneurship training provided to young people. Metsä Group engaged in collaboration with universities and vocational schools by offering training and thesis positions and continuing its active participation in the "Mahdollisuus metsä" school campaign, among other things.

The coronavirus pandemic was taken into consideration in many ways within the Group. Remote work was adopted for tasks where the nature of the work allowed. Instructions for ensuring health security were observed at mills and offices, and the personnel of Metsä and service providers

committed themselves to the instructions in an excellent way. Both our own employees and the personnel of service providers were widely tested for the coronavirus. The operating instructions and restrictions were introduced early on at Metsä. Operating instructions related to the abnormal situation were discontinued in stages after careful consideration so that in May 2022, the majority of Metsä's coronavirus restrictions were lifted. At the beginning of August, employees returned to the offices for work. When the work duties allow, part of the work can still be carried out remotely. Metsä Group's operating models for the coronavirus situation have produced good results and proven to be successful.

Metsä Group complies with an equality policy, the principles of which apply to recruitment, career opportunities, training and remuneration. We want to ensure that personal characteristics – such as gender, age, ethnic background, sexual orientation or disability – have no impact on an individual's opportunity to succeed in working life. The 'Metsä For All' vision, published in 2021, strengthens the company's aim for diversity, equality and inclusion. Our most significant actions to promote equality in 2022 were the introduction of anonymous recruitment as the main recruitment method and the deployment of the Metsä For All vision through workshops for local management and communication activities. Workshops in 2022–2023 include the definition of location-specific challenges and development actions. We measure our progress with equality targets.

Our equality targets are the following:

- Women account for 30% of Metsä Group's management (Vice President or higher) by 2030. In 2022, the actual figure was 21% (20).
- There is no unexplainable wage gap between women and men.
- We promote equality with a training programme that covers the entire personnel.

Systematic efforts in safety at work support the continuous development of operations and the achievement of the Group's objectives. High-quality proactive safety work, risk identification, intervention in unsafe working and the importance of personal risk assessments play a key role. The long-term objective is zero accidents by 2030. In 2022, the total recordable incident frequency was 6.7 (8.1) and the lost-time accident frequency declined by 3.7% from the previous year to 5.2 (5.4). Absences due to illness within the Group amounted to 5.0% (4.2) of the theoretical regular working hours. The target in terms of sickness absenteeism is below 3%. All our products are made using good and safe production methods. All Metsä Fibre's pulp mills and Metsä Board's mills, as well as nearly all Metsä Tissue's mills, have ISO 22000, FSSC 22000, BRC or IFS as their certified food safety system.

### Anti-corruption and anti-bribery activities

Policies and management systems:

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

Metsä Group's Code of Conduct prohibits corruption and bribery. Metsä Group is committed to anti-corruption and bribery measures in both its own operations and in relation to its partners. Metsä Group's Supplier Code of Conduct also includes a corresponding prohibition. Anti-corruption and anti-bribery efforts contribute to Metsä Group's 2030 sustainability objectives concerning a responsible corporate culture and supply chain. A review of anti-corruption and anti-bribery principles forms an essential part of the company's Code of Conduct training, updated in 2022. The training is mandatory for the entire personnel. The ethics barometer survey conducted in 2022 measures our personnel's experience of the implementation of ethical operation from different perspectives, including the sustainability of business practices. The ethics barometer is a tool that helps us detect areas requiring development, which can be related to anti-corruption and anti-bribery activities or the prevention of misconduct, for example. As one development action defined, based on the ethics barometer results, we increasingly emphasise intervening in ethical shortcomings in supervisor training and encourage people to report shortcomings. Based on the ethics barometer, financial misconduct, corruption, conflicts of interest, affecting partners' decision-making in inappropriate ways or data protection violations are not considered as material risks.

In 2022, we continued to develop processes related to the identification of suppliers, customers and other partners as well as the requirements of trade (Know Your Business Partner), which allow for more efficient identification and management of risks related to the sustainability of the delivery chain and trade policy changes. The backgrounds of partners are checked using a centralised service model which aims to identify risks related to business transactions – such as trade sanctions, money laundering and information related to human rights violations – in advance, and enables us to react to any changes and negative findings as effectively as possible. Due to Russia's military aggression against Ukraine, we have discontinued all our business operations related to Russia and Belarus. Our operations have been guided by compliance with the applicable regulations and overall consideration regarding business ethics.

### Compliance and ethics channel

Our personnel and stakeholders can report any shortcomings they observe via Metsä Group's compliance and ethics channel, which is available in ten different languages on Metsä Group's website. The reports can be submitted anonymously. Every breach or violation, and suspected breach or violation, which the company becomes aware of is investigated. Any such investigation is led by the Compliance Committee, composed of the directors in charge of legal affairs, compliance, and internal audit, which is also charged with ensuring that the consequences dictated by the outcome of each investigation are commensurate in cases of similar severity and that the corrective measures are adequate. Any detected illegal activities are reported to the authorities. Changes required by the EU's Whistleblowing Directive have been taken into consideration in the countries where we operate for the ethics reporting channel, the investigation of reports we receive and the protection of those making the reports.

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In 2022, a total of 32 (54) incidents were brought to the attention of the Compliance Committee. The cases involved suspected misconduct related to data protection and data security, shortcomings in equal treatment, and various other personnel-related events.

### Risk descriptions

The risks related to the environmental, human and social issues, respect for human rights, as well as the anti-corruption and anti-bribery activities reviewed above, are described in more detail in the Board of Directors' Report under the section Risk management and risks.

## Risk management and risks

Metsä Group's risk management is systematic and proactive, and it assesses and manages business-related risks, threats and opportunities. Risk management is governed by the risk management policy confirmed by the Board of Directors of Metsä Group's parent company Metsäliitto Cooperative, and by Metsä Group's corporate governance system. Metsä Group's business operations systematically assess strategic, operational and financial risks. Key risks are accounted for in the business operations' planning processes, and management measures are drawn up to prepare for the risks. In addition, the Metsä Group's Executive Management Team reviews the most significant risks as part of its executive management work.

Risks that exceed the Group'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.

The results of the risk management process are reported to the Board of Directors and the Board's Audit Committee on a regular basis. The risk assessments conducted in 2022 identified the following risks and uncertainties with a potential impact on Metsä Group's business operations and profitability.

### Development of the world economy

The global economy is marked by uncertainty, and the growth outlook is weaker due to high inflation, tighter monetary policy, and the capacity issues in global production and supply chains. These are caused by several factors, but most importantly by the war that Russia is waging in Ukraine and its consequences. The impact of the coronavirus pandemic can still be seen in the global economy.

Russia's war has significantly increased global geopolitical tensions, eroded consumers' and companies' trust in economic development, and spurred inflation. Especially in Europe, the war and the shift from Russian energy have aggravated the energy crisis, leading to weaker availability and extremely high prices. The impact of the sanctions on Russia and their countersanctions, as well as the risks caused by the crisis, affect areas such as international production and supply chains, the costs and availability of producers, energy infrastructure and cyber security.

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

higher interest rates, the impact of continued high inflation on real income, a further decrease in households' purchasing power and an extended energy crisis in Europe. Demand for the Metsä Group's products may also decrease.

### Significance of the Chinese market

China is a significant market area for Metsä Group and especially for Metsä Fibre. In recent years, China's economic growth has slowed down due to the country's strict coronavirus policy, troubles in its real estate sector and an energy shortage in the industrial sector. Increasing geopolitical tensions may also influence China's economic growth. Problems in China's industrial sector may increase the problems and costs of global delivery chains. The relations between the EU and China are burdened by bilateral sanctions and differing views on multiple issues. Should China's economic growth continue to slow down, or the relations between the EU and China deteriorate, this could affect the demand for the Group's products on the Chinese market and consequently the profitability of its business operations and that of Metsä Group as a whole.

### 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 risks may lead to more extensive measures restricting trade or the use of international sanctions. The possible consequences of these include a further slowdown in the recovery and growth of the world economy and even a curtailment of global trade flows. Any sanctions and restrictions on international trade may have an impact on the demand for Metsä Group's products and the Group's profitability.

### Changes in the competitive and operating environment

In the global market for forest industry products, the balance of supply and demand has a significant impact on the market prices of products. Changes in the economic situation, an increase in the capacity of competitors or competition over market shares may reduce the market prices of products. Product prices may increase as a result of cuts in capacity or industry consolidation. Significant currency fluctuations also have an impact on the market balance of forest industry products and companies' competitiveness. Changes in regulations such as the EU's climate and environmental policy and increasing new requirements to limit carbon dioxide or other emissions may weaken the Group's operating conditions and affect profitability. Various regulatory risks are also related to the acceptability of single-use food and food service packaging.

### Sustainability

Sustainability is an integral part of Metsä Group's business, and we aim to be a forerunner in ecological and operational sustainability. The different areas of sustainability, especially climate change and loss of biodiversity, also involve risks. Climate risks can be divided into transitional risks and physical risks. Transitional risks are caused by the transition to a low-carbon economy, and physical risks relate to changes in temperatures and rainfall, for example. In Metsä Group's business operations, these climate risks relate to wood supply and the use of energy and water, in particular.

Climate change mitigation and the transition to low-carbon economy are emphasised in Metsä Group's sustainability objectives. Transitioning to fully fossil free energy in production, abandoning fossil-based raw materials, making more efficient use of energy and water, and securing strong forest growth and carbon sequestration are at the core of these objectives. The measures taken to reach these objectives help Metsä Group to control climate risks. At the same time, they open up new possibilities for Metsä Group in a changed operating environment.

Safeguarding forest biodiversity and using forests sustainably for various wood products are very important strategic aspects for the Group's wood supply and business operations. Forest protection must be increased to safeguard forest biodiversity, which, in turn, poses risks for wood supply. As a responsible operator, Metsä Group also wants to improve the protection of forest biodiversity in commercial forests by increasing and retaining the amount of decaying wood and rare deciduous trees important to endangered species, as well as by emphasising the share of mixed forests based on various naturally occurring tree species. 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. In addition, Metsä Group has its own nature programme for non-commercial forests. Its goal is to safeguard biodiversity and improve the state of waters in Finland through restoration projects funded by Metsä Group.

Increasing EU regulation poses risks for the commercial use of forests for Metsä Group and its 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.

### Risks associated with the availability of financing

At Metsä Group, the main financial risks in business operations are primarily related to currencies, interest rates, liquidity, counterparty risks and the use of derivative instruments. Financial risks are governed according to the financial policy confirmed by the Board of Directors of Metsäliitto Cooperative. The goal is to secure sales margins, reduce uncertainty, improve predictability, balance the cash flow and give business units time to adjust their operations to the changed circumstances.

Access to capital and the price of capital are largely dependent on the conditions prevailing in the financial market and the Group's own financial situation. Metsä Group's good financial situation and well-functioning financial markets have kept the availability and price of financing at a good level. Should access to financing grow weaker or were its price to increase significantly, it could also have a negative impact on the cost and availability of the external capital needed by the Group.

Metsä Group prepares for the refinancing risk by utilising a variety of financing sources, by scheduling loans to have a balanced maturity profile and by starting refinancing processes well before the loans mature. The

Group's liquidity is strong. At the end of 2022, Metsä Group had credit facilities of approximately EUR 1,300 million.

### Changes in members' capital and additional members' capital

A member of Metsäliitto Cooperative who wishes to cancel their membership is entitled to receive a refund of their participation share payment and the additional contribution payment. The member may also receive a refund of the additional contributions based on a written claim. Based on the Cooperative's rules, the amount of members' participation share payments and additional contributions that can be refunded is equivalent to one third of the distributable equity in accordance with the most recent balance sheet adopted by the Annual General Meeting. Refunds of members' capital that are larger than usual may have an adverse effect on Metsä Group's financial position.

### Pulp market situation

The result of the pulp business has a significant impact on the profitability of Metsä Group as a whole. Metsä Fibre's pulp production capacity is more than 3 million tonnes of bleached softwood and hardwood pulp per year. In addition, Metsä Board produces pulp in Husum for both internal paperboard production and the market. Structural changes in customers' pulp use, increasing competition and new production capacity in the global pulp market may have a negative impact on the market price of pulp and the group's delivery volumes and thereby on the results of Metsä Group.

### Credit risks and other counterparty risks

The management of credit risks related to commercial activities is the responsibility of the business areas and Metsä Group's centralised credit control. Credit control defines the internal credit limits set for customers and the payment terms together with the management of business operations. Despite the pandemic, Metsä Group's customer credit risk was at a normal level in 2022.

The main principles of credit control are defined in the credit guidelines approved by the Group's Board of Directors. The operational management of the Group and the business operations participate in the assessment of credit risks and in making final decisions on credit, if needed.

In money market investments, derivatives and loans, only counterparties that have been defined in the Group's financial policy, meet the creditworthiness criteria or have been separately designated by a Board decision are approved.

### Business development

For example, Metsä Group's business operations are developed with the aid of new production technology, efficiency programmes, product development, the modernisation of product portfolios, customer segmentation, value-added services, and the harmonisation of business processes and the information systems steering them.

The objectives of business development projects and investments include growing the business, expanding the product portfolio, strengthening the market position and promoting sustainability objectives. Should the costs of the development projects and investments substantially exceed the estimates, should their completion be delayed

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or should the production-related or commercial targets not be reached, the impact could be adverse on the results of the business and the whole Group.

The Group's venture capital company Metsä Spring seeks and develops new business ideas with the potential of functioning as part of Metsä Group's business ecosystem in the future. Metsä Spring invests in the further development of the Group's own ideas and in external start-ups that are aiming to introduce new products to the market. Investments are made in high-risk ventures such as the textile fibre demo plant and the 3D fibre product demo plant in Äänekoski. If the development projects invested in are technically or commercially unsuccessful, there may be a risk of a write-down of the investment.

#### Cost and availability risks of production inputs

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

Metsä Group's halting of its wood supply from Russia may cause production curtailments at mills due to the availability of birch in particular, and thus affect the Group's sales and result. 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 the Group's profitability. In addition, the availability of transport capacity and a steep increase in market prices may negatively affect Metsä Group's profitability. Changes in exchange rates may also influence the costs of some production inputs. Metsä Group aims to hedge against these risks with long-term delivery agreements and the related derivative agreements.

#### Continuity risks

The continuity of mills' production may be impacted by, for instance, large-scale fires, significant equipment malfunctions, serious accidents, extreme weather phenomena and environmental damage. Furthermore, employees falling ill due to infectious diseases, malware and attacks against IT systems, or any persisting malfunctions in IT systems, labour disputes, availability issues in the most important raw materials, and disruptions in the logistics chain may suspend the entire business or parts of it.

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. Regular risk management work is carried out with insurance companies to reduce the risk of production interruption, and the business areas, mills and Group services have drawn up contingency plans in preparation for the realisation of continuity risks. Metsä Group's crisis management plan guides management in crisis situations within the Group, business areas and mills.

#### Personnel risks

Metsä Group pays attention to ensuring the availability and retention of qualified personnel. The Group prepares for risks related to generational

shifts and other personnel risks by means of management coaching, personnel development programmes, successor plans and the development of its employer image. The maintenance of working capacity, successor planning and having multiskilled employees are also part of the management of personnel risks. Metsä Group also prepares for the resource needs of any new units by initiating personnel planning and recruitment processes well in advance. Factors threatening the employees' health security are monitored regularly, and any required measures are adopted to protect the personnel and ensure business continuity.

#### 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 cyberattacks, 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.

#### Liability risks

The business involves liability risks, such as contractual, environmental and product liability risks. Liability risks are mitigated by way of unified business processes, contract training, management practices, quality control and transparent operations.

#### ■ Governance

Metsäliitto Cooperative is a Finnish cooperative and the parent company of Metsä Group. It is owned by 91,607 forest-owner members. On 31 December 2022, the combined forest area owned by the members totalled 5,335,000 hectares.

Metsäliitto Cooperative's governing bodies are the Representative Council, the Supervisory Board, the Board of Directors and the CEO, who acts as the President and CEO of Metsä Group. The members of Metsäliitto Cooperative elect the members of the Representative Council in an election held every four years. The members of the Supervisory Board are elected by the Representative Council. The Supervisory Board elects the members of Metsäliitto Cooperative's Board of Directors, and the Board of Directors appoints the CEO of Metsäliitto Cooperative and the President and CEO of Metsä Group.

The Representative Council uses the supreme decision-making power belonging to the members of Metsäliitto Cooperative in matters it is responsible for pursuant to the law and the rules of Metsäliitto Cooperative. The rules of Metsäliitto Cooperative specify the tasks of the Supervisory Board. Its main task is to ensure that Metsäliitto Cooperative is managed in accordance with the rules and the decisions of the Representative Council and the Supervisory Board.

According to the rules of Metsäliitto Cooperative and in accordance with legislation, the Board of Directors is charged with ensuring that Metsäliitto Cooperative and Metsä Group's operations and governance are appropriately arranged. The Board of Directors has authority over

strategic and other decisions with far-reaching consequences. In the 2022 financial period, Metsäliitto Cooperative's Board of Directors was composed of eight members. According to the overall assessment by the Board of Directors, all members of the Board were independent of Metsäliitto Cooperative. The Board of Directors convened 17 times in 2022, and the percentage of attendance in the meetings by Board members was 99%. Metsäliitto Cooperative has a CEO, who also acts as the President and CEO of Metsä Group, unless otherwise decided by the Supervisory Board. The President and CEO is charged with the management of the operations of Metsä Group in accordance with the law and the rules of the Cooperative, as well as the decisions and instructions of the administrative bodies. The President and CEO is assisted by the Group's Executive Management Team. Metsäliitto Cooperative's Board of Directors has determined the principles applicable to the diversity of the Board. According to the principles, the successful management of the tasks of the Board of Directors requires a diverse composition, diverse competence and experience. It is Metsäliitto Cooperative's goal that both genders be represented on the Board of Directors. The Supervisory Board's Nomination Committee observes the principles concerning diversity when preparing proposals for the Supervisory Board on the composition of the Board of Directors. The realisation of the principles is reported on yearly in the Corporate Governance Statement. A separate Corporate Governance Statement has been issued and published simultaneously with the financial statements and this Report of the Board of Directors.

#### ■ The impact of Russia's military aggression on Metsä Group's business operations

Russia's attack on Ukraine has affected Metsä Group's business operations. Operations at the Metsä Svir sawmill, the company's only production unit in Russia, have been discontinued, as has wood procurement from the country. Product deliveries to Russia and Belarus have also been halted. Due to the discontinuation of Russian business operations, the Group recognised impairments and expenses totalling EUR 79.6 million in the 2022 operating result.

The replacement of Russian wood has progressed as planned. Procurement has been boosted especially in Finland but also in Sweden. The main challenges are related to the replacement of birch logs in plywood production. This has partly been solved by increasing the share of spruce plywood production. Increasing softwood fibre-based production in the pulping industry has been one way to adapt to the new situation caused by the decrease in imported birch volumes.

Russia's military aggression and the ensuing sanctions have a bearing on energy matters. Metsä Group has long invested in the production of renewable energy, and this is softening the impact of the crisis. The most challenging question is the availability of natural gas needed in production and the management of related costs. Measures aimed at replacing natural gas are progressing according to plans.

Due to the increase in electricity prices caused by the war, the Finnish Government published a legislative proposal on a temporary windfall tax for the electricity sector on 29 December 2022. The proposed bill would apply to the tax year 2023, and the additional tax included in it would be

30% of Finnish companies' profit from electricity business to the extent that the profit exceeds an annual return of 10%, calculated on the equity tied in the electricity business. The proposed bill is still being processed by the Finnish Parliament, and the final approval is expected by the end of February 2023 at the earliest.

#### ■ Coronavirus pandemic

Metsä Group follows and complies with the coronavirus guidelines issued by the authorities. In May, the company lifted its coronavirus restrictions in response to the improved pandemic situation. At the beginning of August, Metsä Group moved to a hybrid model that combines remote and in-person work for jobs in which remote working is possible. The resource situation has been normal during the coronavirus pandemic, and production and deliveries have run normally, with a few exceptions.

#### ■ The EU Taxonomy

Set up by the EU regulation 2020/852, the Taxonomy is a classification system for sustainable economic activity that was created for the financial market and took effect at the beginning of 2022. Its goal is to increase investment that is considered sustainable and to direct capital increasingly to these investments and operations.

For the 2022 financial period, Metsä Group 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 expenditure.

Metsä Group's main products and related businesses such as the production of pulp and paperboard are not currently covered by the Taxonomy. Therefore, the share of Metsä Group's taxonomic operations is small. Metsä Group does not have the timetable and scope of which its main products and businesses could fall within the scope of taxonomy. Metsä Group's key objectives include the mitigation of climate change and the adaptation of business operations for a low-carbon future. The target is completely fossil free production and products by the end of 2030. In accordance with the principles of the circular economy, Metsä Group invests 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.

#### ■ Events after the review period

Metsä Group's innovation company Metsä Spring invested in Fiberwood, a start-up that develops new kinds of thermal insulation materials from the forest industry's side streams. Fiberwood's products offer a sustainable and natural alternative to mineral wool- and polystyrene-based insulation solutions. The company will begin constructing a test production line at its facilities in Järvenpää in Finland. Side streams from Metsä Group's mills can be used to produce insulation material. In addition to green construction, Fiberwood's fossil free material is used to develop cushioning for a variety of packages.

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In February 2023, Metsä Tissue announced it would be increasing its production of fresh fibre tissue paper at the Mariestad mill in Sweden. The value of the investment, to be implemented in 2023–2025, is approximately EUR 370 million, making it one of Metsä Tissue's and the entire tissue paper industry's largest investments in Europe.

With the investment, Metsä Tissue will strengthen its position as a forerunner in tissue paper industry investments in Sweden and Scandinavia and contribute to the security of supply of key hygienic tissue paper products by expanding local production. The volume of tissue paper production will increase from approximately 75,000 tonnes at present to around 145,000 tonnes per year.

The mill expansion includes the construction of a new tissue paper machine, new converting lines, automated storage and new office facilities. The renewed mill will feature the best available technology, significantly improving environmental efficiency in terms of water, noise and atmospheric emissions. The environmental efficiency goals will also be supported by increased fresh fibre production. The investment will add around 100 new jobs at the mill, and indirectly around 2,000 person-years during construction.

#### ■ Near-term outlook

The demand for wood focuses on thinning sites to be harvested when the ground is unfrozen and on roundwood from delivery sales. Purchases of winter stands are made according to need and the weather conditions. In energy wood, the demand focuses on crown wood and energy wood trunks. Demand for forest management services is expected to remain good.

At Metsä Wood, the general economic downturn and the slowdown in construction activity can be seen in the weaker demand for engineered wood products and improved availability of alternative materials in Europe. In the US and Australian markets, the demand for construction remains good for now. In the absence of Russian imports in the European market, the demand for birch plywood significantly exceeds supply, although the economic downturn is already being seen in the outlook for the moulding and light transport equipment segments. In the UK, the demand for Metsä Wood's downstream business is expected to remain well below the pre-pandemic level in the coming months.

At Metsä Fibre, global economic development creates uncertainty about the demand for market pulp. The supply of long-fibre pulp will decrease due to the limited availability of raw material in North America. The demand for sawn timber is expected to pick up in the second quarter of 2023. In the first quarter of 2023, the average prices of market pulp will be slightly lower than in the previous quarter.

In Metsä Board's business, the decline in global economic growth and consumers' purchasing power is creating uncertainty in the market. The near-term prospects for paperboard sales are uncertain. Paperboard delivery volumes in January–March are expected to remain at roughly the same level as in October–December. The average prices for folding boxboard are expected to increase. Cost pressures are expected to continue. Following the increase in wood prices and harvesting and transport costs last year, wood costs are expected to increase in the early part of the year compared to the previous quarter.

The business environment for tissue papers will continue to be unstable. Costs remain high, and there are challenges in the availability of raw materials. Metsä Tissue will continue to implement targeted price increases and develop its range to improve profitability.

#### ■ Result guidance for January–March 2023

Metsä Group's comparable operating result in January–March 2023 is expected to be weaker compared to October–December 2022.

#### ■ Proposal of the Board of Directors on the use of the surplus on the balance sheet

Metsäliitto Cooperative's Board of Directors has decided to propose that for 2022, interest of 7.0% (6.0% for 2021) be paid on the participation share capital invested by members, and that interest of 6.5% be paid on Metsä1 additional shares, 4.0% (5.0) on additional capital A, and 1.0% (1.0) on additional capital B. The Board of Directors also proposes that a surplus reimbursement of EUR 0.30 per cubic metre of industrial roundwood received from a member over the past four concluded financial periods be distributed. The surplus reimbursement will be paid primarily as Metsä1 additional shares, but in money for the part corresponding to the tax-at-source to be carried in terms of each member. If the right to the shares has been transferred to another person in accordance with the statutes of the cooperative, the interest is paid to the person who is registered as the owner on the reconciliation date, 31 March 2023. The proposed payment date is 12 May 2023. If the member entitled to the surplus reimbursement resigns from the cooperative before the date of payment, this share of the surplus reimbursement will not be distributed. In total, the proposed profit distribution would be approximately EUR 101 million (80), of which the surplus reimbursement based on wood trade would be approximately 15%.

## Consolidated statement of comprehensive income

EUR million	Note	1–12/2022	1–12/2021
<b>Sales</b>	2.1, 2.2	6,980.2	6,017.0
Change in stocks of finished goods and work in progress		141.2	-8.0
Other operating income	2.1, 2.3	204.7	85.3
Materials and services	2.1, 2.4	-4,559.6	-3,866.4
Employee costs	2.1, 3.	-720.6	-680.4
Depreciation, amortisation and impairment charges	2.1, 4.1, 4.2	-334.5	-340.1
Other operating expenses	2.1, 2.4	-409.4	-333.8
<b>Operating result</b>		1,301.9	873.6
Share of results from associated companies and joint ventures	7.1	-4.8	-2.2
Net exchange gains/losses	5.2	-4.6	-3.7
Other financial income	5.2	7.3	1.0
Interest and other financial expenses	5.2	-30.1	-36.9
<b>Result before tax</b>		1,269.8	831.7
Income taxes	6.	-271.1	-174.7
<b>Result for the period</b>		998.7	657.0
<b>Other comprehensive income</b>	5.1, 6.		
<b>Items that will not be reclassified to profit and loss</b>			
Items relating to adjustments of defined benefit plans		-1.4	4.2
Fair value of financial assets through other comprehensive income		193.6	-7.7
Income tax relating to items that will not be reclassified		-36.6	-0.9
Total		155.7	-4.4
<b>Items that may be reclassified subsequently to profit and loss</b>			
Cash flow hedges		105.7	-15.6
Currency translation differences		-46.6	-0.8
Share of comprehensive income of joint venture Income tax relating to items that may be reclassified		-21.1	3.1
Total		38.0	-13.4
<b>Other comprehensive income, net of tax</b>		193.7	-17.8
<b>Total comprehensive income for the period</b>		1,192.3	639.3
<b>Result attributable to:</b>			
Members of parent company		573.2	373.8
Non-controlling interest		425.5	283.2
		998.7	657.0
<b>Total comprehensive income attributable to:</b>			
Members of parent company		684.0	371.6
Non-controlling interest		508.4	267.7
		1,192.3	639.3

The notes are an integral part of these financial statements.

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# Consolidated balance sheet

EUR million	Note	31.12.2022	31.12.2021
<b>ASSETS</b>			
<b>Non-current assets</b>			
Goodwill	4.1	418.9	431.6
Other intangible assets	4.1	271.8	229.1
Tangible assets	4.2	4,625.9	3,557.8
Biological assets	4.3	3.2	3.5
Investments in associated companies and joint ventures	7.1	3.6	63.6
Other investments	4.4	376.8	197.9
Other non-current financial assets	5.3	15.9	34.4
Deferred tax receivables	6.	47.0	37.7
Derivative financial instruments	5.7	71.5	5.5
		5,834.6	4,561.0
<b>Current assets</b>			
Inventories	4.5	1,237.1	1,038.3
Accounts receivables and other receivables	4.6	941.3	882.6
Tax receivables based on the taxable income for the period		48.9	15.1
Derivative financial instruments	5.7	87.9	49.0
Cash and cash equivalent	5.4	1,265.0	1,334.5
		3,580.2	3,319.4
<b>Assets classified as held for sale</b>	7.2	0.0	11.0
<b>Total assets</b>		9,414.7	7,891.4
<b>MEMBERS' FUNDS AND LIABILITIES</b>			
<b>Equity attributable to members of parent company</b>			
Members' capital	5.1	1,438.6	1,447.1
Translation differences	5.1	-54.0	-34.2
Fair value and other reserves	5.1	835.0	706.2
Retained earnings		1,915.8	1,455.3
		4,135.4	3,574.4
<b>Non-controlling interest</b>	7.1	1,565.8	1,240.3
<b>Total members' funds</b>		5,701.2	4,814.6
<b>Non-current liabilities</b>			
Deferred tax liabilities	6.	390.9	302.5
Post employment benefit obligations	3.5	59.6	86.2
Provisions	4.9	12.2	11.9
Borrowings	5.5	1,128.7	861.1
Other liabilities	4.7	4.7	9.1
Derivative financial instruments	5.7	0.0	10.0
		1,596.1	1,280.8
<b>Current liabilities</b>			
Provisions	4.9	6.6	3.4
Current borrowings	5.5	328.2	301.0
Accounts payable and other liabilities	4.8	1,662.5	1,404.9
Tax liabilities based on the taxable income for the period		68.6	35.9
Derivative financial instruments	5.7	51.6	44.1
		2,117.4	1,789.2
<b>Liabilities classified as held for sale</b>	7.2	0.0	6.8
<b>Total liabilities</b>		3,713.6	3,076.8
<b>Total members' funds and liabilities</b>		9,414.7	7,891.4

The notes are an integral part of these financial statements.

# Consolidated statement of changes in members' funds

EUR million	Note	Equity attributable to members of parent company						Non-controlling interest	Total
		Members' capital	Translation differences	Fair value and other reserves	Retained earnings	Total			
<b>Members' funds 1.1.2021</b>		1,322.4	-35.9	711.3	1,093.7	3,091.5	822.7	3,914.2	
Result for the period					373.8	373.8	283.2	657.0	
Other comprehensive income, net after tax		5.1.6	1.7	-5.2	1.3	-2.2	-15.5	-17.8	
<b>Total comprehensive income</b>			1.7	-5.2	375.1	371.6	267.7	639.3	
Transactions with owners									
Interest on members' capital and dividends paid		5.1			-59.0	-59.0	-18.5		
Change in members' capital		5.1	124.7		-16.0	108.7		108.7	
Transfer from retained earnings to the reserve for invested unrestricted equity		5.1		0.1		0.1	-29.6	-29.5	
Share based payments		3.3			-1.0	-1.0	0.6	-0.5	
Acquired shares from non-controlling interest, which did not change the controlling right		7.1			-1.7	-1.7		-1.7	
Sold shares from non-controlling interest, which did not change the controlling right		7.1		0.0	64.3	64.3	197.4	261.6	
<b>Members' funds 31.12.2021</b>		1,447.1	-34.2	706.2	1,455.3	3,574.4	1,240.3	4,814.6	
<b>Members' funds 1.1.2022</b>		1,447.1	-34.2	706.2	1,455.3	3,574.4	1,240.3	4,814.6	
Result for the period					573.2	573.2	425.5	998.7	
Other comprehensive income, net after tax		5.1.6	-19.8	128.4	2.2	110.8	82.8	193.7	
<b>Total comprehensive income</b>			-19.8	128.4	575.4	684.0	508.4	1,192.3	
Transactions with owners									
Interest on members' capital and dividends paid		5.1			-60.7	-60.7	-145.0	-205.6	
Reimbursement of surplus		5.1	6.8		-7.8	-1.0		-1.0	
Change in members' capital		5.1	-15.3	0.2	-13.0	-28.1		-28.1	
Share based payments		3.3			-3.2	-3.2	0.1	-3.2	
Acquired shares from non-controlling interest, which did not change the controlling right		7.1			-28.7	-28.7	-40.5	-69.3	
Sold shares from non-controlling interest, which did not change the controlling right		7.1		0.1	-1.4	-1.2	2.6	1.4	
<b>Members' funds 31.12.2022</b>		1,438.6	-54.0	835.0	1,915.8	4,135.4	1,565.8	5,701.2	

The notes are an integral part of these financial statements.

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# Consolidated cash flow statement

EUR million	Note	1-12/2022	1-12/2021
<b>Cash flow from operating activities</b>			
Result for the period		998.6	657.1
Adjustments to the result <sup>1)</sup>		492.4	529.0
Interest received		4.2	0.8
Interest paid		-9.1	-28.9
Dividends received		0.6	3.0
Other financial items, net		-16.7	-6.0
Income taxes paid		-225.6	-153.7
Change in working capital <sup>2)</sup>		-17.7	21.6
<b>Net cash flow from operating activities</b>		<b>1,226.8</b>	<b>1,023.0</b>
<b>Cash flow arising from investing activities</b>			
Acquisition of shares in subsidiaries, net of cash	71	-18.7	0.4
Acquisition of associated companies and joint ventures		-2.4	-1.3
Acquisition of other shares		0.0	-0.4
Investments in tangible and intangible assets		-1,449.7	-962.2
Proceeds from disposal of shares in subsidiaries, net of cash	71	24.5	24.7
Proceeds from disposal of shares in associated companies and joint ventures		145.6	
Proceeds from disposal of other shares		18.2	0.2
Proceeds from sale of tangible and intangible assets		51.0	35.9
Change in non-current receivables, net		-4.1	-1.6
<b>Net cash flow arising from investing activities</b>		<b>-1,235.5</b>	<b>-904.2</b>
<b>Cash flow arising from financing activities</b>			
Change in members' capital		54.3	110.5
Non-controlling interest acquired	7.2	-65.9	
Non-controlling interest sold	7.2		261.2
Increase in non-current liabilities	5.5	370.3	2.9
Decrease in non-current liabilities	5.5	-200.6	-259.0
Change in current liabilities, net	5.5	1.9	0.6
Change in current interest-bearing receivables, net	5.5	0.8	-0.7
Return of capital			-29.6
Interest on members' capital and dividends paid		-217.1	-84.7
<b>Net cash flow arising from financing activities</b>		<b>-56.3</b>	<b>1.2</b>
<b>Change in cash and cash equivalents</b>		<b>-65.1</b>	<b>120.0</b>
Cash and cash equivalents at beginning of period		1,334.5	1,212.9
Translation differences		1.5	0.9
Change in cash and cash equivalents		-65.1	120.0
Value adjustments of investment funds included in cash and cash equivalents.		-5.9	0.7
<b>Cash and cash equivalents at end of period</b>	5.4	<b>1,265.0</b>	<b>1,334.5</b>

The notes are an integral part of these financial statements.

EUR million	1-12/2022	1-12/2021
<b>NOTES TO CONSOLIDATED CASH FLOW STATEMENT</b>		
<b><sup>1)</sup> Adjustments to the result</b>		
Taxes	271.1	174.6
Depreciation, amortisation and impairment charges	334.5	340.1
Biological assets	0.1	-0.2
Share of profit from associated companies and joint ventures	4.8	2.2
Gains and losses on sale of non-current financial assets	-148.5	-32.1
Finance costs, net	27.3	39.6
Pension liabilities and provisions	-2.6	-5.3
Other adjustments	5.7	10.1
<b>Total</b>	<b>492.4</b>	<b>529.0</b>
<b><sup>2)</sup> Change in working capital</b>		
Change in inventories	-217.5	-65.4
Change in accounts receivables and other receivables	-70.6	-170.6
Change in accounts payable and other liabilities	270.4	257.7
<b>Total</b>	<b>-17.7</b>	<b>21.6</b>

The notes are an integral part of these financial statements.

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# Notes to consolidated financial statements

## 1. Accounting principles

### Main operations

Metsäliitto Cooperative and its subsidiaries comprise a group ("Metsä Group" or "Group") in which operations are organised into five business segments: Wood Supply and Forest Services, Wood Products Industry, Pulp and Sawn Timber Industry, Paperboard Industry, and Tissue and Greaseproof Papers.

The Group's parent company is Metsäliitto Cooperative. The parent company is domiciled in Helsinki, and its registered address is Revontulenpuisto 2, 02100 Espoo, Finland. A copy of the consolidated financial statements can be obtained from the website [www.metsagroup.com](http://www.metsagroup.com) or the parent company's head office at Revontulenpuisto 2, 02100 Espoo, Finland.

These financial statements were authorised for issue by Metsäliitto Cooperative's Board of Directors on 9 February 2023. According to the Finnish Co-operatives Act, the Representative Council has the right to accept, reject or decide to amend the financial statements at the Annual General Meeting after their date of publication.

### Accounting principles

Metsä Group's consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS), applying the standards and interpretations that had been approved by the EU and were effective on 31 December 2022. The notes to the consolidated financial statements also comply with the requirements of Finnish accounting and Community legislation supplementing the IFRS rules.

The consolidated financial statements are presented in millions of euros. 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, biological assets, 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 business operations in Russia, the Group recognised impairments and expenses totalling EUR 79.6 million in the 2022 operating result.

EUR million	
Impairments on owned and leased property	40.6
Impairments on inventories and receivables	14.7
Expenses for accumulated Russian ruble-denominated translation differences	29.4
Personnel expenses	1.5
Gains on the sale of fixed assets and income from terminated leased property	-6.6
<b>Total</b>	<b>79.6</b>

Income for Russian ruble-denominated translation differences of EUR 4.0 million accrued since June 2022 is reported under financial income and expenses.

Further information can be found in the following notes: 2.1. Segment information, 2.4. Operating expenses, 4.1. Intangible assets, 4.2. Property, plant and equipment, 4.5. Inventories, 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 2022 and 2021, no major revenue was accumulated from the sales of products created by the use of an unfinished tangible asset.

Other standard amendments will not have a material impact on the consolidated financial statements.

### New and amended standards to be applied in future financial periods

Amendments to IAS 12, Income taxes – Deferred tax related to assets and liabilities arising from a single transaction (effective for financial periods beginning on or after 1 January 2023). The amendments narrow the scope of the initial recognition exemption and specify that the exemption does not apply to individual transactions, such as leases and decommissioning obligations that give rise to equal and opposite temporary differences. The amendments have an impact on the notes presented.

Other standard amendments will not have a material impact on the consolidated financial statements.

### Transactions 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.

More 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.

### 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
Pension obligations	3.5 Pension obligations
Intangible assets and impairment testing	4.1 Intangible assets
Property, plant and equipment and leases	4.2 Property, plant and equipment
Valuation of growing trees	4.3 Biological assets
Financial instruments measured at fair value	4.4 Other investments
Valuation of inventories	4.5 Inventories
Valuation of accounts receivables	4.6 Accounts receivables and other receivables
Provisions	4.9 Provisions
Income taxes	6. Income taxes
Contingent liabilities from legal disputes and claims	8.1 Commitments and contingencies

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# 2. Profitability

## 2.1 Segment information

### Accounting principles

#### Operating segments

Metsä Group's operating segments are comprised of the Group's business areas. The operating segments are reported consistently, with the internal reports submitted to the President and CEO. The President and CEO is in charge of allocating resources to the operating segments and evaluating their performance.

The segments report in line with the same accounting principles as the Group. All intra-segment transactions are based on market prices and are eliminated on consolidation.

#### Comparable key figures

Extraordinary and material items not included in ordinary business operations have been eliminated in the comparable operating result. 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.

### Wood Supply and Forest Services

Metsä Forest provides premium wood for Metsä Group's production units and its other industrial customers. It offers owner-members of the parent company, Metsäliitto Cooperative, comprehensive services in wood trade and forest and nature management. Metsä Forest invests in developing sustainable forest management methods and digital services provided for forest owners.

### Wood Products Industry

Metsä Wood is one of Europe's leading manufacturers of engineered wood products. The company processes valuable log wood into environmentally friendly products for construction and transport industry, which are both megatrend-driven businesses of the future. The main products are Kerto® LVL, birch and spruce plywood and further processed sawn timber. Material-efficient wood products store carbon and play an important role in combating climate change.

### Pulp and Sawn Timber Industry

Metsä Fibre is a leading producer of bioproducts, biochemicals and bioenergy. Metsä Fibre is the world's leading producer of bleached softwood pulp and a major producer of sawn timber. Metsä Fibre's bleached softwood and birch pulps have been developed for the manufacture of paperboards, tissue and printing paper as well as speciality paper. Spruce sawn timber and pine sawn timber are used primarily in the construction industry. The company also develops and continuously expands the range of bioproducts produced from the side streams of pulp production.

### Paperboard Industry

Metsä Board is a leading European producer of premium and lightweight fresh fibre paperboard. The company's folding boxboard and food service boards as well as white kraftliners offer sustainable, recyclable and safe solutions for consumer goods, retail-ready and food service packaging. All of the wood raw material used by Metsä Board comes from sustainably managed Northern European forests, which guarantees the high and consistent quality of the fibre. The global sales network provides services to customers worldwide, including brand owners, converters and merchants.

### Tissue and Greaseproof Papers

Metsä Tissue is one of the leading tissue paper suppliers in Europe to households and professionals and one of the leading greaseproof paper suppliers globally. The company innovates products and services that make everyday life cleaner, easier and more hygienic, in an environmentally sustainable manner. The company's brands are Lambi, Serla, Tento, Mola, Katrin and SAGA. In addition to its own brands, the company develops and manufactures a range of supplier label products as well as tailored customer label products for leading European retailers.

### Other operations

Other operations include Metsä Group head office functions, the companies Metsä Group Treasury Oy and Metsä Spring Ltd., and the holding function of Metsäliitto Cooperative as well as Kemi Shipping Ltd.

## Operating segments 2022

EUR million	Wood Supply and Forest Services	Wood Products Industry	Pulp and Sawn Timber Industry	Paperboard Industry	Tissue and Greaseproof Papers	Other operations	Eliminations	Group total
External sales	546.9	643.6	2,307.3	2,281.9	1,196.2	4.4		6,980.2
Internal sales	1,586.4	18.7	763.4	197.7	0.9	15.3	-2,582.5	0.0
Sales total	2,133.3	662.3	3,070.7	2,479.6	1,197.0	19.8	-2,582.5	6,980.2
Operating result	-10.9	54.8	845.5	531.5	-3.0	111.5	-227.6	1,301.9
Items affecting comparability	-34.6		-48.6	10.8	0.5	137.0	-39.5	25.6
Comparable operating result	23.7	54.8	894.1	520.7	-3.4	-25.4	-188.1	1,276.4
Share of results from associated companies and joint ventures								-4.8
Finance costs, net								-27.3
Income taxes								-271.1
Result for the period								998.7
Assets	330.1	397.9	3,720.4	2,993.3	902.7	390.5	-441.1	8,293.9
Unallocated assets								1,120.9
Total assets								9,414.7
Liabilities	292.4	90.7	661.2	529.8	330.3	307.9	-441.1	1,771.2
Unallocated liabilities								1,942.4
Total liabilities								3,713.6
Total investments	17.1	19.2	1,065.0	304.1	50.6	45.2	-0.9	1,500.4
Depreciation	7.8	20.7	119.2	82.1	44.7	7.8	5.0	287.3
Impairments	31.3	0.7	14.2	0.9				47.2
Personnel, average	838	1,647	1,422	2,352	2,512	815		9,587

Segment's assets = intangible and tangible assets, investments in associated companies and joint ventures, inventories, accounts receivables and other non-interest-bearing receivables (excl. interest and tax items). Segment's liabilities = accounts payable, advance payments and other non-interest-bearing liabilities (excl. interest and tax items)

## Items affecting comparability in operating result

2022 EUR million	Wood Supply and Forest Services	Wood Products Industry	Pulp and Sawn Timber Industry	Paperboard Industry	Tissue and Greaseproof Papers	Other operations	Eliminations	Group total
Other operating income	6.6			28.6	0.5	138.4	-49.8	124.2
Changes in inventories	-0.9		-11.0					-11.9
Employee costs	-0.7		-1.4	-4.6		-1.4		-8.1
Share of profit from associated companies and joint ventures				-11.6			11.6	0.0
Depreciations	-31.3		-14.2	-0.9				-46.5
Other operating expenses	-8.3		-22.0	-0.6			-1.3	-32.1
Total	-34.6	0.0	-48.6	10.8	0.5	137.0	-39.5	25.6

The operating result of the **Wood Supply and Forest Services segment** includes a total of EUR -34.6 million of items related to the discontinuation of business operations in Russia.

The operating result of the **Pulp and Sawn Timber Industry segment** includes EUR -42.7 million of expenses related to the discontinuation of business operations in Russia. In addition, the operating result includes personnel expenses of EUR -0.7 million and an impairment of EUR -5.2 million related to the discontinuation of sawmill operations at the Kyrö sawmill.

Other operating income for the **Paperboard Industry segment** includes the capital gain of EUR 19.2 million from the sale of shares in Oy Hangö Stevedoring Ab, the capital gain of EUR 6.5 million for the sale of land

unrelated to business operations and the measurement income of EUR 2.8 million related to the sale of shareholding. The personnel expenses include expenses of EUR 4.6 million related to the reorganisation of customer service and supply chain management. The share of results from associated companies and joint ventures includes expenses of EUR -10.5 million related to the discontinuation of Metsä Fibre's business operations in Russia and expenses of EUR -1.2 million related to the discontinuation of sawmill operations at Metsä Fibre's Kyrö sawmill.

Other operating income for the **Other Operations segment** includes a capital gain of EUR 125.3 million for the sale of shares in Finsilva Oyj and a capital gain of EUR 13.1 million for the sale of shares in Suomen Metsäsijoitus Oy. Personnel expenses include expenses of EUR -1.4 million related to the adjustment of operations at Kemi Shipping Oy.

**Eliminations** include EUR -46.0 million for the elimination of the capital gain from the sale of the Finsilva Oyj shares, EUR -3.8 million for the elimination of the capital gain from the sale of the Suomen Metsäsijoitus Oy shares, EUR 11.6 million for the elimination of the share of results from associated companies and joint ventures included in the operating result of

the Paperboard Industry segment, and EUR -1.3 million of other operating expenses related to the discontinuation of business operations in Russia.

The overall impact of the discontinuation of business operations in Russia on the operating result is presented in Note 1. Accounting principles.

The result of the **Pulp and Sawn Timber Industry segment** includes a EUR -34.5 million impairment related to the tangible assets of Metsä Fibre's existing pulp mill in Kemi.

The **Paperboard Industry segment's** other operating income includes the capital gain of EUR 7.0 million from the sale of Metsä Board's land area unrelated to business operations and EUR 5.2 million in insurance claims received for the production losses attributable to a fire at Metsä Board's Husum mill. The share of results from associated companies and joint ventures includes a EUR -6.9 million impairment related to the tangible assets of Metsä Fibre's existing pulp mill in Kemi and EUR -1.8 million in taxes recognised on the basis of a tax audit at Metsä Fibre's Italian subsidiary. Impairments include a EUR -4.6 million impairment related to

Metsä Board Husum's existing paperboard production assets and other operating expenses include EUR -9.7 million in costs related to the fire on the chip conveyor belt at Metsä Board's Husum pulp mill.

The result of the **Other operations segment** includes the EUR 4.1 million capital gain from the sale of Metsä Group's head office in Tapiola, Espoo.

**Eliminations** include the EUR -4.1 million elimination of the capital gain from the head office; the EUR 6.9 million elimination of the impairment and the EUR 1.8 million elimination of taxes included in Metsä Board's result; and the EUR -3.7 million impairment related to the tangible assets of Metsä Fibre's existing pulp mill in Kemi.

## Operating segments 2021

EUR million	Wood Supply and Forest Services	Wood Products Industry	Pulp and Sawn Timber Industry	Paperboard Industry	Tissue and Greaseproof Papers	Other operations	Eliminations	Group total
External sales	522.1	560.2	2,014.3	1,973.8	946.0	0.5		6,017.0
Internal sales	1,500.7	19.8	613.8	110.3	0.8	9.5	-2,254.8	0.0
Sales total	2,022.9	580.1	2,628.1	2,084.1	946.7	10.0	-2,254.8	6,017.0
Operating result	36.4	18.6	613.7	375.9	-9.7	-18.8	-142.5	873.6
Items affecting comparability			-34.5	-10.8		4.1	0.9	-40.2
Comparable operating result	36.4	18.6	648.2	386.6	-9.7	-22.8	-143.4	913.8
Share of results from associated companies and joint ventures								-2.2
Finance costs, net								-39.6
Income taxes								-174.7
Result for the period								657.0
Assets	335.4	441.7	2,610.7	2,384.6	819.1	239.5	-290.4	6,540.6
Assets classified as held for sale				11.0				11.0
Unallocated assets								1,339.8
Total assets								7,891.4
Liabilities	239.1	98.1	525.6	508.0	311.1	155.3	-290.4	1,546.7
Liabilities classified as held for sale				6.8				6.8
Unallocated liabilities								1,523.3
Total liabilities								3,076.8
Total investments	7.2	28.9	650.7	220.2	63.3	42.0	-18.2	994.2
Depreciation	10.5	20.3	124.3	85.6	45.6	6.2	4.9	297.4
Impairments			34.5	4.6			3.7	42.7
Personnel, average	857	1,666	1,428	2,461	2,541	666		9,619

Segment's assets = intangible and tangible assets, investments in associated companies and joint ventures, inventories, accounts receivables and other non-interest-bearing receivables (excl. interest and tax items). Segment's liabilities = accounts payable, advance payments and other non-interest-bearing liabilities (excl. interest and tax items)

## Items affecting comparability in operating result

2021	Wood Supply and Forest Services	Wood Products Industry	Pulp and Sawn Timber Industry	Paperboard Industry	Tissue and Greaseproof Papers	Other operations	Eliminations	Group total
Other operating income				12.2		4.1	-4.1	12.2
Share of profit from associated companies and joint ventures				-8.7			8.7	0.0
Depreciations			-34.5	-4.6			-3.7	-42.7
Other operating expenses				-9.7				-9.7
Total	0.0	0.0	-34.5	-10.8	0.0	4.1	0.9	-40.2

## Geographical segments

The sales of geographical segments are presented based on the location of the customer. Segment assets and total investments are presented based on geographical location of the assets.

EUR million	Sales		Non-current assets		Total investments	
	2022	2021	2022	2021	2022	2021
Finland	854.0	987.9	4,621.9	3,512.7	1,249.4	768.4
Germany	598.7	535.5	159.6	161.7	19.3	27.1
Italy	232.7	186.9	0.4	0.5	0.0	0.1
Sweden	244.7	231.2	757.5	628.6	212.2	176.9
France	264.0	195.3	0.4	0.2	0.3	0.2
Poland	198.3	142.8	54.6	58.2	4.3	2.8
Other EU countries	964.3	712.8	89.7	94.1	6.6	5.2
EU Total	3,356.8	2,992.4	5,684.0	4,456.0	1,492.1	980.7
Great Britain	479.0	449.1	29.3	49.4	6.2	10.6
Turkey	242.1	166.6	0.0	0.0	0.0	0.0
Norway	287.0	165.0	0.6	0.4	0.5	0.2
Other Europe	126.3	203.5	0.1	15.7	0.3	2.2
Europe total	4,491.2	3,976.7	5,714.0	4,521.5	1,499.1	993.7
China	1,123.8	1,013.6	1.4	0.8	1.3	0.3
USA	631.5	479.8	0.6	1.0	0.0	0.1
Other countries	733.7	546.9	0.0	0.1	0.0	0.0
Total	6,980.2	6,017.0	5,716.1	4,523.4	1,500.4	994.2

## Personnel at year end

	2022	2021
Finland	5,135	5,329
Sweden	1,243	1,235
Germany	922	949
Poland	570	433
Great Britain	390	483
Slovakia	301	305
Russia	80	305
Baltic countries	254	230
Other Europe	144	151
Europe total	9,040	9,421
Other countries	115	112
Total	9,155	9,533

## Information on most important customers

EUR 1,119.4 million of sales, or 16% of overall sales, (951.5 and 16%) is from a single external customer. That part belongs to pulp and sawn timber industry and paperboard industry segments.

## 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 invoices vary to some extent geographically and in different business areas, but the payment time 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.

It is the management's view that groupings pursuant to operating segments and geographical distribution best describe the nature, amount and timing of sales income as well as the uncertainty related to the said income. The sales of operating segments and geographic areas pursuant to the location of customers is presented in Note 2.1, Segment information.

## Sales by market area

EUR million	2022	2021
EMEA		
Finland	854.0	987.9
Other EU	2,502.7	2,004.5
Other Europe	1,134.5	984.2
Middle East and Africa	235.9	184.3
EMEA total	4,727.1	4,161.0
APAC	1,482.9	1,289.5
Americas	770.2	566.5
Sales total	6,980.2	6,017.0

## 2.3 Other operating income

EUR million	2022	2021
Gains on disposals	157.3	33.8
Rental income	1.4	1.6
Service revenue	5.2	2.8
Government grants	12.0	29.5
Sales of scrap and waste	1.4	1.7
Others	27.3	15.8
Total	204.7	85.3

## Gains on disposals

EUR million	2022	2021
Finsilva Oyj shares	79.3	
Oy Hangö Stevedoring Ab shares	19.2	
Suomen Metsäsijoitus Oyj shares	9.2	
Measurement of Encore Ympäristöpalvelut Oy shares	3.3	
Emission rights (Note 4.1)	36.5	25.7
Land area unrelated to business operations	6.5	7.0
Other	3.2	1.1
Total	157.3	33.8

The government grants and compensation relate to the compensation for training, healthcare and research costs, insurance indemnities and energy aid.

In 2022, government grants and allowances include EUR 3.7 million in emissions trading compensation (3.2) and EUR 4.4 million in electrification aid. In 2021, public subsidies and claims additionally included EUR 16.8 million in insurance claims received for the property damage and production losses caused by the fire at Metsä Board's Husum mill.

## 2.4 Operating expenses

EUR million	2022	2021
Materials and services		
Materials, consumables and goods		
Purchases	3,144.8	2,665.9
Change in inventories	-70.8	-64.4
External services		
Logistics expenses	971.6	784.5
Other external services	514.0	480.4
Materials and services, total	4,559.6	3,866.4
Employee costs	720.6	680.4
Depreciations and impairment charges	334.5	340.1
Other operating expenses		
Rents and other property costs	38.2	35.9
Purchased services	206.2	175.8
Losses on fixed asset disposals	0.7	1.0
Other operating expenses	164.3	121.1
Other operating expenses total	409.4	333.8

Information on personnel costs is presented in Note 3.1 and information on depreciations and impairment charges in Notes 4.1 and 4.2.

Among other operating expenses are energy costs, marketing and advertising costs and administrative expenses.

In 2022, other operating expenses include expenses of EUR 32.2 million related to the discontinuation of business operations in Russia. The amount includes expenses of EUR 29.4 million for accumulated ruble-denominated translation differences recognised in the result.

The Group's R&D expenses recorded as an expense in 2022 were EUR 24.9 million (19.8).

## Principal auditor's fees

### Fees of principal auditor, KPMG Oy Ab

EUR million	2022	2021
Audit	1.4	1.3
Auditors' opinions	0.1	0.0
Tax services	0.0	
Other services	0.4	0.3
Total	1.9	1.6

In 2022 fees paid to other auditors than KPMG were EUR 1.8 million (1.4).

# 3. Remuneration

## 3.1 Employee costs

EUR million	2022	2021
Wages and salaries	465.5	446.9
Share-based payments	5.7	10.1
Other long-term remuneration	19.8	5.7
Social security costs		
Defined benefit plans	2.6	2.5
Defined contribution plans	71.7	59.5
Other employee costs	155.3	155.7
Employee costs total	720.6	680.4

In 2022, the personnel expenses include EUR 4.6 million of expenses related to the reorganisation of Metsä Board's customer service and supply chain management, EUR 1.5 million of expenses related to the discontinuation of business operations in Russia, EUR 1.4 million of expenses related to the adjustment of operations at Kemi Shipping Oy, and EUR 0.7 million of expenses related to the discontinuation of sawmill operations at the Kyrö sawmill.

## 3.2 The management's salaries, remuneration and pension costs

Top management consists of the members of the Supervisory Board, Board of Directors and Group Executive Management Team including the President and CEO.

### Remuneration paid to top management

EUR million	2022	2021
Salaries and fees	6.5	4.9
Share-based payments	3.8	4.7
Pension costs		
Defined benefit plans	5.7	3.6
Defined contribution plans	0.5	0.7
Total	16.5	14.0

### Remuneration paid to members of the Supervisory Board and pension benefits

EUR	Salaries and fees		Pension benefits, defined contribution plans	
	2022	2021	2022	2021
Paajanen Juha, Chair	71,600	77,600	11,563	12,113
Siponen Ahti, Deputy Chair	33,200	33,600	5,362	5,245
Members total	152,800	191,600		
Total	257,600	302,800	16,925	17,358

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### Remuneration paid to the members of the Board of Directors and Pension benefits

EUR	Salaries and fees		Pension benefits, defined contribution plans	
	2022	2021	2022	2021
Linnaranta Jussi, Chair	166,554	170,840	29,397	29,231
Saukkonen Timo, Deputy Chair	82,400	83,200	13,308	12,988
Heikkilä Taavi	82,800	65,600	13,372	10,240
Mäkimattila Mikko	72,800	72,400	12,849	12,388
Parpala Juha	67,200	66,800	10,853	10,427
Pärssinen Nina	71,200	48,200	11,499	7,524
Salonen Ilkka	85,200	84,000	13,760	13,112
Vanhänen Jussi	68,400		12,073	
Total	696,554	591,040	117,110	95,910
Former members of the Board of Directors				
Hiltunen Arto, until 31.12.2021	1,600	82,800	282	14,035
Björkenheim Johan, until 31.12.2020		1,600		250
Total	698,154	675,440	117,392	110,195

### Salaries and remuneration paid to the President and CEO and other members of the Executive Management Team and pension benefits

EUR	2022	2021	2022	2021
	President and CEO Ilkka Härmälä	President and CEO Ilkka Härmälä	Other Executive Management Team	Other Executive Management Team
Salaries and remuneration				
Base salary including fringe benefits <sup>1)</sup>	869,405	860,671	2,623,925	2,254,601
Salaries and remuneration paid by other Group companies	136,992	132,160		
Short-term incentives <sup>2)</sup>	723,305	208,627	1,174,515	434,776
Special incentives <sup>3)</sup>				60,000
Long-term incentives <sup>4)</sup>	1,246,855	1,493,780	2,525,779	2,668,919
Deferred long-term incentives <sup>5)</sup>			27,195	495,693
Total	2,976,557	2,695,238	6,351,414	5,913,990
Pension costs				
Defined benefit plans	4,079,072	2,683,020	1,614,868	955,598
Defined contribution plans	274,308	181,068	98,178	431,704
Total	4,353,380	2,864,088	1,713,046	1,387,302
Salaries and remuneration as well as pension costs in total	7,329,937	5,559,326	8,064,460	7,301,291

<sup>1)</sup> Base salary, which can include a housing benefit, company phone and car benefit, extended healthcare, travel and accident insurance as well as other minor fringe benefits.

<sup>2)</sup> The 2022 payment concerns performance in 2021, and the 2021 payment concerns performance in 2020.

<sup>3)</sup> Special rewards paid on a project related to the divestment of a 30% share in Metsä Board's Husum pulp mill to Norra Skog.

<sup>4)</sup> 2022: performance period 2019–2021; 2021: performance period 2018–2020.

<sup>5)</sup> The rest of the Executive Management Team: deferred long-term remuneration from previous years totalling EUR 27,195 was paid in accordance with the conditions of payment and the decision of the Board of Directors in 2022, and a total of EUR 495,693 was paid in 2021.

Based on a decision by the Board of Directors, the President and CEO may be paid a short-term reward based on defined financial criteria and strategic targets. The performance period for the reward is 12 months. In 2022 and 2021, the reward limit of the President and CEO's short-term incentive scheme was at the target level 37.5% and at the maximum level 93.75% of the fixed annual salary.

Based on a decision by the Board of Directors, members of Metsä Group's Executive Management Team may be paid a short-term reward based on defined financial criteria and strategic targets. The performance period for the reward is 12 months. In 2022 and 2021, the reward limit of the short-term incentive scheme for members of Metsä Group's Executive Management Team was at the target level 30% and at the maximum level 75% of the fixed annual salary.

The term of notice of President and CEO Ilkka Härmälä is 12 months. If the contract of the President and CEO is terminated by the Board of Directors, the President and CEO is entitled to a severance pay corresponding to 12 months' salary. No severance pay is paid if the contract is terminated by the President and CEO. The terms of notice of other members of the Group's Executive Management Team is six months. Other members of the Executive Management Team are entitled to a compensation corresponding to 6–12 months' salary in case of severance due to reasons not dependent on the member.

Härmälä's retirement age is determined in accordance with the Employee Pensions Act. Härmälä is also included in the benefit-based supplementary pension scheme that covers Metsä Group's management. Based on the supplementary pension scheme, the level of the President and CEO's pension is maximum 60% of the total salary under the Employee Pensions Act, calculated on the basis of the five-year period preceding retirement. If President and CEO's employment at the Group ends before retirement, they are entitled to a paid-up policy.

Depending on the date on which their contract began, some members of Metsä Group's Executive Management Team have separate benefit-based supplementary pension insurance with a retirement age of 62. The level of the pension is at maximum 60% of the total salary according to the Employee Pensions Act, calculated on the basis of the five-year period preceding retirement. If their employment relationship with Metsä Group ends before retirement age, members of the Executive Management Team are entitled to a paid-up policy. At the end of 2022, four members of the Executive Management Team had supplementary pension arrangements.

There are no loan receivables, guarantees or other liabilities for members of the management.

## 3.3 Share-based payments

### Accounting principles

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

The effect of the arrangements on profit is presented under personnel expenses.

During the review period, the company had four active share incentive schemes: the Share Incentive Scheme 2014, which the Board of Directors decided to adopt on 6 February 2014, the Performance-Based Share Incentive Scheme 2017–2021, which the Board of Directors decided to adopt on 10 January 2017, and the Retentive and Performance-Based Share Incentive Schemes 2020–2024, which the Board of Directors decided to adopt on 12 December 2019 as part of the incentive and commitment system for key personnel. The impact of the share incentive schemes on the result of the 2022 financial period was EUR 5.7 million (10.1).

### Share Incentive Scheme 2014, Performance-Based Share Incentive Scheme 2017–2021 and Performance-Based Share Incentive Scheme 2020–2024

The schemes offer the target group the opportunity to be awarded Metsä Board Corporation's series B shares for three three-calendar-year performance periods for achieving the targets set for the respective performance criteria. The performance periods are the calendar years 2014–2016, 2015–2017, 2016–2018, 2017–2019, 2018–2020, 2019–2021, 2020–2022, 2021–2023 and 2022–2024. For the Share Incentive Scheme 2014 and the Performance-Based Share Incentive Scheme 2017–2021, the

amount of reward earned for the performance period will be paid based on the achievement of the targets set for the performance criteria after the end of the performance period, in March according to the estimate. In addition to the shares, the reward includes a cash component, which covers the taxes and tax-like charges resulting from the reward to the key employees. The total number of shares allocated under the Performance-Based Share Incentive Scheme 2020–2024 includes both a share component and a cash component. The reward is paid similarly partly in shares and partly in cash, and the aim is for the cash contribution to cover taxes and tax-like charges at the time of payment. The reward will not be paid if the person's employment ends before the end of the performance period. In addition, the scheme includes a two-year restriction period. If the employment relationship of a key employee ends during the restriction period, the key employee should, as a rule, return the transferred shares to the company without consideration. In some countries, the reward may only be paid after the end of the restriction period.

For the 2019–2021 performance period, 674,590 Metsä Board Corporation's series B shares and a cash component to cover the taxes and tax-like charges incurred from the reward were paid at the time of the transfer of the shares. During the period, a total of 11,157 shares were returned.

In 2016, the company changed the terms of the schemes by setting a cap proportionate to the employees' salaries on the reward paid for the performance periods 2014–2016 and 2015–2017. Payment of the portion of the reward exceeding the cap will be deferred and paid fully in cash in the coming years, when the cap allows for this. As of the 2016–2018 performance period, a cap proportionate to the employees' salaries is in use. The portion of the reward exceeding the cap will be cut permanently. The last deferred rewards were paid during 2022 to those entitled to them.

### Retentive Share Incentive Scheme 2020–2024

The scheme offers key employees in the target group the opportunity to be awarded Metsä Board Corporation's series B shares, provided that the participant's employment relationship is in force and remains 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.

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The basic information and events of the share-based incentive schemes

2022	Share incentive schemes 2017–2021	Share incentive schemes 2020–2024
Maximum number of shares	2,821,773	1,502,821
Criteria	Equity ratio, ROCE, EBIT	Equity ratio, ROCE, EBIT
Number of key persons (31.12.2022)	80	29
Share price at grant date, EUR <sup>1)</sup>	5.20	8.10
Fair value at end of financial period, EUR million	7.3	9.6
Expense 2022, share-based payment, recognised as equity, EUR million	3.7	2.0
Liabilities, share-based payment, at the end of financial period, EUR million	0.3	6.2
Amounts 1 Jan. 2022 <sup>2)</sup>		
Outstanding at the beginning of period	1,931,547	1,017,847
Changes during the period		
Shares granted	2,361	495,239
Shares forfeited	15,107	93,115
Shares exercised	643,157	0
Shares expired	639,366	0
Amounts 31 Dec. 2022		
Outstanding at the end of period	636,278	1,419,971

- The fair value of the share-based payment at the time of transfer was the market price of Metsä Board Corporation's B share less the amount of dividend to be distributed before the payment of the reward in accordance with the consensus estimates. The fair value of the share-based payment is recognised as an amount based on the best possible estimate of the amount of the reward to which a right is expected to be established.
- The amounts of share rewards shown in the table are net amounts for the share-based incentive scheme 2017–2021. That is, they reflect the number of shares earned or granted on the basis of share bonuses. In addition to these, the remuneration includes a cash portion to cover taxes and tax-like charges at the time of payment of the remuneration. For the share-based incentive scheme 2020–2024, the amounts of share bonuses shown in the table are gross amounts, i.e. they reflect the total number of shares and cash shares to be issued on the basis of share bonuses. The remuneration is paid partly in shares and partly in cash. The cash contribution aims to cover taxes and tax-like charges at the time of payment of the fee.

3.4 Other long-term remuneration

**Accounting principles**

Other long-term remuneration is treated in the Group in the same manner as the bonuses included in other long-term fringe benefits.

Metsä Group's long-term remuneration scheme for 2020–2024 is based on three-year performance periods (2020–2022, 2021–2023 and 2022–2024), each followed by a one-year restriction period. The Board of Directors decided on shortening the restriction period in its meeting on 14 December 2022. The performance criteria, the targets set for them and the executives covered by the scheme are decided by the Board of Directors at the beginning of each performance period. The attainment of the targets established for a performance period determines the proportion of the reward to be paid to the executives. The possible rewards from Metsä Group's long-term remuneration scheme for the performance periods 2020–2022, 2021–2023 and 2022–2024 are based on the development of Metsä Group's return on capital employed (ROCE, %) as specified by the Board of Directors. Minimum levels have been set for the Group's operating result (EBIT) and equity ratio. The Board is furthermore entitled to cut, partly or in full, the remuneration based on the scheme, provided that certain criteria related to the development of the Group's result and equity ratio are not met, or if the amount of remuneration would exceed the maximum remuneration specified for the executive concerned. In addition to meeting the performance criteria, rewarding is based on a synthetic

share with a value that is calculated on the basis of the total value of Metsä Group. The reward limit of the President and CEO is at the maximum level 250% of their fixed annual salary, while for other members of Metsä Group's Executive Management Team, it is 140% or 210% of their fixed annual salaries. In addition, a maximum level has been defined for remuneration. For the President and CEO, it is 325% of their fixed annual salary, and for other members of Metsä Group's Executive Management Team, 180% or 270% of their fixed annual salaries.

Any remuneration is paid in cash after the restriction period, and it includes all statutory taxes and any other tax-like charges. If an executive's service or employment contract terminates during the performance or restriction period, the executive forfeits, as a rule, their right to the remuneration.

Metsä Group's long-term remuneration scheme covers all the members of Metsä Group's Executive Management Team and other directors in key group positions (excluding Metsä Board, which has its own share-based remuneration scheme).

The impact of other long-term remuneration schemes on the 2022 consolidated income statement was EUR 19.8 million (5.7).

Performance period	2020–2022	2021–2023	2022–2024
Number of allocated synthetic shares (gross)	1,113,361	1,121,560	1,107,716
Performance criteria	ROCE <sup>1)</sup>	ROCE <sup>1)</sup>	ROCE <sup>1)</sup>
Number of key persons (31 Dec. 2022)	67	70	75
Restriction period	1 year	1 year	1 year
Year of payment of reward	2024	2025	2026

1) Metsä Group's three-year average ROCE. Minimum values have also been set for the equity ratio and operating result.

3.5 Pension 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 obligation items to be recognised as expenses during the financial period is based on the use of actuarial assumptions, which involves the management's judgement. These assumptions include the discount rate, the expected rise in salary levels, and 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 liability and the number of items to be recognised as expenses.

The defined benefits plans in Great Britain 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 pension plan in Great Britain is organised through an independent foundation separate from the Group.

In Finland, the Group has additional pension arrangements that are regarded as defined benefit plans. Depending on the date on which their contract began, some members of Metsä Group's Executive Management Team have separate, defined benefit-based supplementary pension insurance policies, with a retirement age of 62. The level of the pension is a maximum of 60% of the total salary pursuant to the Employees Pensions Act, calculated on the basis of the five-year period preceding retirement. If their employment relationship with Metsä Group ends before retirement age, members of the Executive Management Team are entitled to a paid-up policy.

The defined benefit pension plan in Sweden concerns officials born 1978 or earlier. The arrangement grant old-age pensions, family pensions and disability pensions. The amount of pension depends on the salary in which the future salary increases, length of service, promotions and other important factors like changes on the labour market are considered. The defined benefit plans in Sweden are unfunded. The obligation has a guarantee liability.

The Group has also defined benefit plans in Belgium, Italy, Norway and Slovakia.

Pension and other post-employment benefits

EUR million	2022	2021
Liabilities in balance sheet		
Defined benefit pension plans	59.0	85.4
Defined contribution pension plans	0.7	0.9
Total	59.6	86.2
Overfunded defined benefit pension plans in assets (Note 5.3)	-5.3	-26.1

**Defined benefit pension plans**

The Group's most significant defined benefit pension plans are in Germany, Great Britain, Finland and Sweden.

The Group has several additional defined benefit pension plans in Germany. The arrangements grant old-age pensions, disability pensions and family pensions exceeding the statutory pension security to eligible employees, officials, senior management and former owners of the local company. 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 to 30 years to receive a full pension. With employees, all service years after the age of 18 are taken into consideration. Some of the pension arrangements are closed. The defined benefit plans in Germany are unfunded.

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### Governance

### Amounts recognised in balance sheet

EUR million	2022	2021
Present value of funded obligations	128.6	181.1
Fair value of plan assets	-117.9	-186.2
Deficit (+) / surplus (-)	10.7	-5.1
Present value of unfunded obligations	42.9	64.4
Net liabilities (+) / net assets (-) of defined benefit plans	53.6	59.3
Defined benefit-based pension liabilities on the balance sheet, net	59.0	85.4
Defined benefit-based pension assets on the balance sheet, net	-5.3	-26.1

### Changes in defined benefit obligations during 2022

EUR million	Present value	Fair value of plan assets	Total
1.1.2022	245.5	-186.2	59.3
Current service cost	2.6		2.6
Administrative costs	3.5	-2.9	0.6
Interest expense (+) or interest income (-)			0.0
Income (-) and losses from settlement	-0.1		-0.1
Total amount recognised in profit and loss	6.1	-2.9	3.2
Remeasurements in other comprehensive income			
The return on plan assets, excl. amounts included in interest		65.2	65.2
Gains (-) and losses (+) from change in demographic assumptions	-0.1		-0.1
Gains (-) and losses (+) from change in financial assumptions	-68.6		-68.6
Experience gains and losses	6.3		6.3
Total remeasurements in other comprehensive income	-62.4	65.2	2.9
Translation differences	-8.4	7.0	-1.4
Contribution			
From employers		-7.0	-7.0
From plan participants	0.0	0.0	0.0
Payments from plans			
Benefit payments	-9.4	6.1	-3.2
Settlements	-0.1	-0.1	-0.1
31.12.2022	171.5	-117.9	53.6

### Changes in defined benefit obligations during 2021

EUR million	Present value	Fair value of plan assets	Total
1.1.2021	253.2	-181.8	71.4
Current service cost	2.9		2.9
Administrative costs	2.3	-1.8	0.4
Interest expense (+) or interest income (-)	-0.4		-0.4
Income (-) and losses from settlement	-0.1		-0.1
Total amount recognised in profit and loss	4.7	-1.8	2.9
Remeasurements in other comprehensive income			
The return on plan assets, excl. amounts included in interest		-2.8	-2.8
Gains (-) and losses (+) from change in demographic assumptions	-0.6		-0.6
Gains (-) and losses (+) from change in financial assumptions	-6.4		-6.4
Experience gains and losses	3.2		3.2
Total remeasurements in other comprehensive income	-3.7	-2.8	-6.5
Translation differences	7.1	-8.5	-1.4
Contribution			
From employers		-4.4	-4.4
From plan participants	0.0	0.0	0.0
Payments from plans			
Benefit payments	-15.2	12.4	-2.8
Settlements	-0.7	0.9	0.2
31.12.2021	245.5	-186.2	59.3

### Defined benefit pension plans and plan assets by country in 2022

EUR million	Germany	Great Britain	Finland	Sweden	Other countries	Total
Present value of obligations	21.1	62.7	54.8	20.6	12.3	171.5
Fair value of plan assets		-68.0	-41.8		-8.1	-117.9
Total	21.1	-5.3	13.0	20.6	4.2	53.6

### Defined benefit pension plans and plan assets by country in 2021

EUR million	Germany	Great Britain	Finland	Sweden	Other countries	Total
Present value of obligations	31.0	99.5	68.6	32.1	14.3	245.5
Fair value of plan assets		-125.6	-52.6		-8.1	-186.2
Total	31.0	-26.1	16.0	32.1	6.3	59.3

### Significant actuarial assumptions 2022

	Germany	Great Britain	Finland	Sweden	Other countries
Discount rate, %	3.6–3.8	4.9–5.0	2.9–3.8	4.0	3.1–3.2
Salary growth rate, %	3.0	2.6	2.0	2.8	1.0–3.8
Pension growth rate, %	2.0–2.2	3.1	2.7–2.9	2.0	2.3–3.5

### Significant actuarial assumptions 2021

	Germany	Great Britain	Finland	Sweden	Other countries
Discount rate, %	0.7–1.3	1.8–1.9	0.2–1.2	1.9	0.7–1.5
Salary growth rate, %	3.0	2.8	2.0	3.0	1.0–2.5
Pension growth rate, %	1.8	3.4	2.2–2.4	2.3	2.0–2.3

### Sensitivity of defined benefit obligation to changes in essential weighted assumptions 2022

	Impact on defined benefit obligation		
	Change of assumption	Increase	Decrease
Discount rate, %	0.5%	4.6% decrease	4.9% increase
Increase in salary growth rate	0.5%	0.7% increase	0.7% decrease
Increase in pension growth rate	0.5%	5.0% increase	4.8% decrease
		Increase in assumption in one year	Decrease in assumption in one year
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 entered in the balance sheet.

### Plan assets

	2022		2021	
	EUR million	%	EUR million	%
Qualifying insurance policies	2.2	2	1.9	1
Cash and cash equivalents	2.4	2	0.9	1
Investments funds	8.0	7	130.8	70
Funds in insurance companies	105.3	89	52.6	28
Total	117.9	100	186.2	100

Defined benefit plans expose the Group to several different risks, the most considerable being 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 bonds issued by the companies. A decline in the discount rate increases the arrangement's liabilities.

#### Inflation risk

The majority of the plans' benefit obligations are linked to inflation, and higher inflation will lead to higher liabilities although, in most cases, caps on the level of inflationary increases are in place to protect the plan against extreme inflation.

#### Life expectancy

The majority of the arrangement obligations is related to producing lifetime benefits for members, so the expected increase in life expectancy will increase the arrangement obligations.

The contribution made to defined benefit plans following the termination of employment is expected to be EUR 6.9 million in the 2023 financial period.

The weighted average duration of the defined benefit obligation is 13.0 years (15.8).

## 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.

Depreciation of goodwill is not recognised. Instead, it is tested annually for impairment 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. Intangible assets for which a useful life cannot be determined, such as brands acquired in the context of corporate acquisitions or trademarks, are not subject to depreciation, but tested annually for impairment.

The residual value of an asset, the useful life and depreciation method are checked 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.

The research and development costs recognised as expenses are presented in Note 2.4, Operating expenses.

#### Computer software

Costs related to developing and building 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, over 5–20 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 the lower of the acquisition cost or fair value at the end of the financial period. 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	431.6	528.2	42.3	1 002.1
Translation differences	-9.4	0.2		-9.2
Increase		16.2	46.3	62.5
Acquisitions		1.3		1.3
Decrease	-0.1	-103.7		-103.9
Transfers between items		14.4	-14.0	0.4
Acquisition cost, 31 Dec. 2022	422.1	456.6	74.6	953.3
Accumulated depreciation and impairment charges, 1 Jan. 2022	0.0	-341.4	0.0	-341.4
Translation differences		0.0		0.0
Accumulated depreciation on deduction and transfers		100.1		100.1
Depreciation for the period		-15.9		-15.9
Impairments	-3.2	-2.2		-5.4
Accumulated depreciation and impairment charges, 31 Dec. 2022	-3.2	-259.4	0.0	-262.6
Book value, 1 Jan. 2022	431.6	186.8	42.3	660.7
Book value, 31 Dec. 2022	418.9	197.2	74.6	690.7

Acquired businesses include the intangible assets of Hämeenkyrön Voima Oy. Further information about acquired businesses is available in Note 7.2.

The impairments include EUR 4.7 million of impairments related to the discontinuation of business operations in Russia, as well as an impairment of EUR 0.7 million for the Wood Products Industry segment based on impairment testing.

EUR million	Goodwill	Other intangible assets	Construction in progress	Total
Acquisition cost, 1 Jan. 2021	434.1	520.6	18.9	973.7
Translation differences	-2.5	0.8		-1.8
Increase		5.5	24.9	30.4
Acquisitions		4.7		4.7
Decrease		-4.1	-0.8	-5.0
Transfers between items		0.8	-0.6	0.1
Assets classified as held for sale		0.0		0.0
Acquisition cost, 31 Dec. 2021	431.6	528.2	42.3	1,002.1
Accumulated depreciation and impairment charges, 1 Jan. 2021	0.0	-318.6	0.0	-318.6
Translation differences		-0.7		-0.7
Accumulated depreciation on deduction and transfers		-1.4		-1.4
Depreciation for the period		0.0		0.0
Impairments		-20.8		-20.8
Accumulated depreciation and impairment charges, 31 Dec. 2021	0.0	-341.4	0.0	-341.4
Book value, 1 Jan. 2021	434.1	202.1	18.9	655.1
Book value, 31 Dec. 2021	431.6	186.8	42.3	660.7

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Acquired businesses include Kemi Shipping Oy and the assets classified as held for sale the tangible assets of Oy Hangö Stevedoring Ab. Further information on the transaction is available in Note 7.2

In 2022, the Group received 1,227 thousand tonnes (769) of emission allowances free of charge. In addition, it purchased 238 thousand tonnes (192) of emission allowances on the market and sold 644 thousand tonnes (527) of emission allowances to the market. On the balance sheet date, the Group had 1,488 thousand tonnes (1,344) of emission allowances. At the end of 2021, it also had 235 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 financial period totalled 636 thousand tonnes (662).

In 2022, capital gains from the sale of emission allowances recognised in other operating income totalled EUR 36.8 million (25.9) and the costs recognised in materials and services arising from emission allowances were EUR 0.6 million (3.9). At the end of the financial periods 2022 and 2021, the balance sheet had no provisions related to emission allowances. At the end of the period, the market value of the emission allowances was EUR 80.76 per tonne (79.61) and the market value of emission allowances possessed, including the delayed emission allowances, was EUR 120.2 million (125.7).

In 2022, other intangible assets include EUR 140.7 million in brands and trademarks with an unlimited useful life (140.7). The most significant of these is the pulp brand Metsä, allocated to the Pulp and Sawm Timber Industry, whose carrying value was EUR 134.8 million in 2022 (134.8). In addition, Tissue and Greaseproof Papers include EUR 5.9 million in brands and trademarks with an unlimited useful life (5.9).

#### Goodwill allocated to segments

EUR million	2022	2021
Wood Supply and Forest Services		2.4
Wood Products Industry		0.7
Pulp and Sawm Timber Industry	3.8	3.9
Paperboard Industry	12.2	12.4
Tissue and Greaseproof Papers	22.1	31.5
Other operations	390.4	390.4
Eliminations	-9.7	-9.7
Total	418.9	431.6

Other operations include goodwill of EUR 389.8 million related to the Metsä Fibre acquisition and EUR 0.6 million related to the acquisition of Metsä Tissue.

#### Goodwill allocated in impairment testing

EUR million	2022	2021
Wood Supply and Forest Services		2.4
Wood Products Industry		0.7
Pulp and Sawm Timber Industry		
Pulp and Sawm Timber Industry	3.8	3.9
Other operations	389.8	389.8
Eliminations	-3.8	-3.8
Pulp and Sawm Timber Industry total	389.9	390.0
Paperboard Industry	12.2	12.4
Tissue and Greaseproof Papers		
Tissue and Greaseproof Papers	22.1	31.5
Other operations	0.6	0.6
Eliminations	-5.9	-5.9
Tissue and Greaseproof Papers total	16.8	26.2
Total	418.9	431.6

### Impairment of assets

#### Accounting principles

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 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 symmetrically. 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 cashflows

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 development of delivery volumes and sales prices, the development of costs related to key raw material costs and other costs, as well as the discount rate and the long-term growth rate.

Following the discontinuation of Russian business operations, the Group made a write-down on goodwill related to Russia, totalling EUR 2.5 million, in June 2022. These are mainly related to Wood supply and Forest services segment.

Metsä Group 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.

In 2022, the Group recognised a write-down of EUR 0.7 million for the goodwill of the Wood Products Industry segment based on impairment testing.

### 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 (%)
Pulp and Sawm Timber Industry	389.9	134.8	7.40	5.83	2.0	2.0
Paperboard industry						
Folding boxboard	8.6		7.21	5.78	2.0	2.0
Liner	3.6		7.21	5.78	2.0	2.0
Market pulp			7.21	5.78	2.0	2.0
Tissue and Greaseproof Papers						
Tissue papers	16.6	5.9	7.21	5.49	2.0	2.0
Greaseproof papers	2.5		7.21	5.49	2.0	2.0

In the most significant impairment tests, a reasonably potential change in any individual key assumption would not lead to the recognition of an impairment.

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 Property, plant and equipment

#### 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. External capital expenses resulting directly from the acquisition, construction or manufacture of an item of property, plant or equipment that meet the conditions are activated as part of the acquisition cost of property, plant and equipment.

If a piece of property, plant or equipment consists of several parts with differing useful lives, each part is handled as a separate item. In that case, the expenses related to replacing the part 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 are in accordance with the definition of property, plant and equipment. Otherwise, such commodities are classified as inventories.

Significant investments in renovations and improvements are capitalised on the balance sheet and depreciated over the remaining useful life of the main commodity related to such investments. Repair and maintenance costs are recognised as expenses when they are realised.

Property, plant and equipment is depreciated on a straight-line basis over the following estimated useful lives. Owned land and water areas are not subject to depreciations.

##### Estimated useful lives:

Buildings and construction	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	3–10 years

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### Governance

The residual value of an asset, the financial useful life and depreciation method are checked 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.

Public subsidies related to the acquisition of commodities 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, the right-of-use item and the 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 right-of-use 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. Right-of-use 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 54.6 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	60.3	9.7	1,478.1	61.5	6,050.7	100.6
Translation differences	-0.7	0.0	-14.1	-0.5	-129.8	-1.2
Additions	0.9	1.8	105.5	15.6	173.1	11.3
Acquisitions			6.6		6.1	18.4
Decrease	-3.7	-0.4	-16.1	-7.4	-84.8	-35.5
Transfers between items	0.4		58.7		346.5	
Acquisition cost, 31 Dec. 2022	57.4	11.1	1,618.6	69.1	6,361.8	93.7
Accumulated depreciation and impairment charges 1 Jan. 2022	-0.5	-1.8	-856.2	-23.2	-4,422.2	-33.4
Translation differences	0.0	0.0	8.8	0.1	95.8	0.5
Accumulated depreciation on deduction and transfers		0.2	14.3	6.8	102.7	16.8
Depreciation for the period		-0.8	-48.9	-12.8	-186.8	-15.9
Impairments	-0.1		-8.1	-0.9	-9.7	-21.7
Accumulated depreciation and impairment charges 31 Dec. 2022	-0.5	-2.4	-890.1	-30.0	-4,420.1	-53.7
Book value, 1 Jan. 2022	59.8	7.9	621.9	38.3	1,628.5	67.2
Book value, 31 Dec. 2022	56.8	8.7	728.5	39.1	1,941.7	40.0

EUR million	Other tangible assets	Construction in progress	Total	Total	Total
	Owned	Owned	Owned	Leased	
Acquisition cost, 1 Jan. 2022	143.3	1,069.5	8,802.0	171.8	8,973.7
Translation differences	-0.3	-16.5	-161.4	-1.8	-163.1
Additions	4.5	1,103.1	1,387.1	28.7	1,415.8
Acquisitions	0.1		12.7	18.4	31.1
Decrease	-7.1	-0.2	-111.9	-43.2	-155.1
Transfers between items	15.5	-421.5	-0.4	0.0	-0.4
Acquisition cost, 31 Dec. 2022	156.0	1,734.4	9,928.1	173.9	10,102.1
Accumulated depreciation and impairment charges 1 Jan. 2022	-78.6	0.0	-5,357.6	-58.4	-5,416.0
Translation differences	0.4		105.0	0.6	105.6
Accumulated depreciation on deduction and transfers	6.6		123.6	23.8	147.4
Depreciation for the period	-6.2		-241.9	-29.5	-271.4
Impairments	-1.4		-19.2	-22.6	-41.8
Accumulated depreciation and impairment charges 31 Dec. 2022	-79.2	0.0	-5,390.0	-86.1	-5,476.2
Book value, 1 Jan. 2022	64.7	1,069.5	3,444.4	113.4	3,557.8
Book value, 31 Dec. 2022	76.7	1,734.4	4,538.1	87.8	4,625.9

Acquisitions include the property, plant and equipment of Hämeenkyrön Voima Oy and the property, plant and equipment of maintenance operations for Metsä Fibre's production facilities acquired through a business transfer. Further information about acquisitions is available in Note 7.2.

Impairments include impairments of EUR 35.9 million related to the discontinuation of business operations in Russia and an impairment of EUR 5.2 million for the property, plant and equipment of the Kyrö sawmill due to the discontinuation of sawmill operations in 2022. Impairments by segment are indicated in Note 2.1.

EUR million	Land and water areas		Buildings and constructions		Machinery and equipment	
	Owned	Leased	Owned	Leased	Owned	Leased
Acquisition cost, 1 Jan. 2021	60.7	9.2	1,508.8	46.1	6,018.7	100.1
Translation differences	0.2	0.0	-1.1	0.3	-29.1	-0.1
Additions	1.0	0.4	11.2	6.8	99.6	16.0
Acquisitions		0.7	24.1	0.2	9.8	0.0
Decrease	-2.1	-0.1	-67.0	8.0	-63.7	-15.4
Transfers between items	0.5		12.9		34.9	
Assets classified as held for sale		-0.5	-10.8		-19.5	0.0
Acquisition cost, 31 Dec. 2021	60.3	9.7	1,478.1	61.5	6,050.7	100.6
Accumulated depreciation and impairment charges 1 Jan. 2021	-0.5	-1.0	-842.0	-16.8	-4,304.7	-30.3
Translation differences	0.0	0.0	1.0	-0.2	23.2	0.0
Accumulated depreciation on deduction and transfers		0.1	46.5	5.5	55.9	14.8
Assets classified as held for sale		-0.1	7.3		15.1	0.0
Depreciation for the period		-0.7	-47.5	-11.7	-191.5	-18.1
Impairments	0.0		-21.5		-20.3	
Accumulated depreciation and impairment charges 31 Dec. 2021	-0.5	-1.8	-856.2	-23.2	-4,422.2	-33.4
Book value, 1 Jan. 2021	60.2	8.2	666.9	29.3	1,714.0	69.8
Book value, 31 Dec. 2021	59.8	7.9	621.9	38.3	1,628.5	67.2

EUR million	Other tangible assets	Construction in progress	Total	Total	Total
	Owned	Owned	Owned	Leased	Total
Acquisition cost, 1 Jan. 2021	142.4	300.0	8,030.6	155.4	8,186.0
Translation differences	0.1	-4.5	-34.4	0.3	-34.1
Additions	1.6	823.6	937.0	23.2	960.2
Acquisitions	0.6		34.4	0.9	35.3
Decrease	-1.7	-0.4	-134.8	-7.5	-142.3
Transfers between items	0.7	-49.1	-0.1	0.0	-0.1
Assets classified as held for sale	-0.4		-30.6	-0.6	-31.2
Acquisition cost, 31 Dec. 2021	143.3	1,069.5	8,802.0	171.8	8,973.7
Accumulated depreciation and impairment charges 1 Jan. 2021	-70.1	0.0	-5,217.3	-48.0	-5,265.3
Translation differences	-0.1		24.1	-0.2	23.9
Accumulated depreciation on deduction and transfers	-0.7		101.7	20.4	122.1
Assets classified as held for sale	0.3		22.7	-0.1	22.6
Depreciation for the period	-7.1		-246.1	-30.5	-276.6
Impairments	-0.9		-42.7	0.0	-42.7
Accumulated depreciation and impairment charges 31 Dec. 2021	-78.6	0.0	-5,357.6	-58.4	-5,416.0
Book value, 1 Jan. 2021	72.3	300.0	2,813.3	107.4	2,920.7
Book value, 31 Dec. 2021	64.7	1,069.5	3,444.4	113.4	3,557.8

Acquired businesses include Kemi Shipping Oy and the assets classified as held for sale the tangible assets of Oy Hangö Stevedoring Ab. Further information on the transaction is available in Note 7.2

A decision to build a new bioproduct mill in Kemi was made in February 2021. Metsä Group recognised a EUR 38.2 million impairment in relation to the tangible assets of the existing pulp mill in Kemi. The impairments also include a EUR 4.6 million impairment recognised in the current paperboard production assets of Metsä Board's Husum pulp mill, which the company plans to replace in the investment increasing the mill's folding boxboard capacity.

The Nordic real estate investment company NREP bought Metsä Group's head office in Tapiola, Espoo, in January 2021. In connection with the transaction, Metsäliitto Cooperative concluded a long-term lease agreement for the site. The head office property was classified as an asset held for sale on 31 December 2020. Further information on the transaction is available in Note 7.2 (Acquisitions, assets classified as held for sale and operations disposed of).

In 2022, a total of EUR 25.8 million (11.8) in borrowing costs was capitalised. The average interest rate applied to capitalisation was 2.14% (2.11).

## Leases

EUR million	2022	2021
Costs related to short-term leases	5.0	2.9
Costs of leases in which the underlying asset is of low value	9.4	9.7
Interest expenses	3.3	3.5
Cash outflow for leases	50.0	31.9

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).

## 4.3 Biological assets

### Accounting principles

Metsä Group's biological assets (growing trees) are measured at fair value less the estimated expenses from a sale. The fair value of a stand of trees is based on the current value of expected cash flows (income and expenses) and the change in fair value is recognised in operating result. Young trees are measured at acquisition cost. The measurement of the biological assets of Metsä Group's associated companies is in line with the Group's accounting principles. The fair value of biological assets is categorised at Level 3.

### Key estimates and judgements

#### Fair value measurement

The management's estimates of the growth, felling and price development of trees, as well as the discount rates applied, have a key effect on the measurement of the fair value of trees. The calculation of income from felling and silvicultural costs is based on the prevailing price level and the company's view of the future trend in prices and costs. The calculations also take account of limits related to environmental protection.

EUR million	2022	2021
At 1 Jan.	3.5	3.2
Purchases during the period		0.0
Sales during the period	-0.1	0.0
Harvested during the period	-0.1	0.0
Gains/losses arising from changes in fair values	0.0	0.2
At 31 Dec.	3.2	3.5

On 11 February 2022, Metsäliitto Cooperative divested its entire holding (19.8%) in its associated company Finsilva Oyj to Dasos Capital Oy's forest fund. Contracts between Metsä Group and Finsilva related to wood trade and forest services will remain unaffected. In 2021, the fair value of Finsilva Oyj's forest assets totalled EUR 417 million, of which the Group's share was EUR 82.5 million.

On 31 October 2022, Metsäliitto Cooperative divested its entire holding (25%) in its associated company Suomen Metsäsijoitus Oy. In 2021, the fair value of Suomen Metsäsijoitus Oy's forest assets totalled EUR 32.9 million, of which the Group's share was EUR 8.2 million.

Metsä Group has long-term forest lease agreements in Russia and Latvia. The agreements have not been recognised in the balance sheet, because their price or fixed price determination basis is not defined in the agreements. The price is determined by the government usually once a year or, in some cases, more frequently. In practice, the price follows the auction prices for short-term felling rights. Long-term felling rights are primarily used for ensuring the availability of wood.

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## 4.4 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. The Group classifies the shares in Pohjolan Voima Oyj as financial assets recognised at fair value in other comprehensive income. The changes in the fair value of these financial assets are presented in the fair value reserve, taking into account the tax impact. Changes in fair value are not transferred from equity to profit or loss.

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 quoted shares are based on the share price on the balance sheet date. The fair values of shares other than publicly quoted shares are determined using various valuation models, such as the price levels or recent transactions and valuation methods based on the current 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 investment measured with the measurement model is the Group's investment in the shares of Pohjolan Voima Oyj, classified under Other investments. The value of these shares is measured as the current value of discounted cash flows. Key factors affecting cash flows include the price of electricity, inflation expectations and the discount rate. The energy prices for the first 8 years are rolling 12-month averages of electricity futures prices. The prices for subsequent years are based on a long-term market price forecast. The carrying amount of the Group's shares in Pohjolan Voima was EUR 340.2 million on the balance sheet on 31 December 2022. The carrying amount of these shares is estimated to change by EUR -14.2 million and EUR 15.2 million if the rate used for discounting the cash flows changes by 0.5 percentage points from the rate estimated by the management. The carrying amount of the shares is estimated to change by EUR 82.3 million if the energy prices applied in the fair value calculation differ by 10% from the rate estimated by the management.

EUR million	2022	2021
Pohjolan Voima Oyj	373.3	191.6
Other non-quoted shares	3.4	6.3
Total	376.8	197.9

The most important shareholding of non-quoted companies consists of a 3.0% stake in Finnish energy company Pohjolan Voima Oy, that 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 the 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 (OL1 and OL2) and, through the B2 shares of Pohjolan Voima, to a share of 2.0% of the energy generated by the Olkiluoto 3 nuclear power plant.

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 for EUR 12.0 million. Hämeenkyrön Voima Oy merged with Metsä Board on 31 July 2022.

The holding of Pohjolan Voima Oyj shares is recognised quarterly at fair value for each series of shares using the discounted cash flow method. The weighted average cost of capital applied in the calculation was 5.42% (3.14). The acquisition value of Pohjolan Voima Oyj shares is EUR 33.1 million (45.0) and the fair value is EUR 340.2 million (191.6). The fair value of nuclear power shares was EUR 361.4 million in total (166.9) and of hydroelectric power shares (series A) EUR 11.8 million (12.7). In 2021, the fair value of the G10 series was EUR 12.0 million. The change in fair value in 2022 was due to an update in the long-term electricity price forecast used in the share valuation model and to the increase in electricity market prices over the year.

The shareholder agreement of Pohjolan Voima prevents free selling of shares with others than shareholders.

## 4.5 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. The cost of debt is not included in the acquisition cost.

Net realisable value is the estimated sales price in ordinary business operations less the estimated cost of production and the necessary sales costs.

### Key estimates and judgements

The Group regularly reviews its inventories for situations where the inventories contain downgraded items or their market value falls 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	605.8	531.6
Work in progress	31.5	20.7
Finished goods and goods for sale	555.1	430.8
Advance payments	44.7	55.2
Total	1,237.1	1,038.3

In 2022, EUR 19.1 million (1.5) was recorded as a cost when the book value of inventories was reduced to match their net realisation value. EUR 119.9 million of the 2022 expenses are related to the discontinuation of Russian business operations. In the income statement, the expenses are entered under materials and services.

## 4.6 Accounts receivables and other receivables

### Accounting principles

Trade receivables are initially measured at fair value and later at amortised cost, taking into account impairment. The determination of the impairment of trade receivables is subject to the model based on expected credit losses. 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 a customer's financial position weakens so that it affects their solvency, further impairment losses may need to be recognised for future periods. The impacts of Russia's military aggression and the Covid-19 pandemics on determining the impairment of sales receivables is discussed in Note 5.6. Management of financial risks, counterparty risk.

EUR million	2022	2021
Current financial assets through profit and loss at fair value		
1 January	4.0	0.0
Transfers from non-current		3.8
Change in fair value	0.3	0.2
31 December	4.3	4.0
Investments in associated companies and joint ventures	1.7	2.6
Trade receivables from others		
Trade receivables	782.3	731.1
Impairment	-1.4	-3.2
Total	780.9	727.9
Loan receivables	1.7	2.9
Other receivables	106.4	101.6
Accrued income	46.3	43.5
Trade receivables and other receivables, total	941.3	882.6

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 2.8 million.

Case-specific impairments and impairments determined by applying the model based on expected credit losses deducted from accounts receivables.

EUR million	2022	2021
At 1 Jan.	3.2	4.1
Increases	0.8	0.1
Decreases	-2.6	-1.0
At 31 Dec.	1.4	3.2

The Group has recognised EUR -0.7 million (0.0) of impairment losses from accounts receivables in 2022.

#### Age distributions of accounts receivables less impairments

EUR million	2022	2021
Not overdue	715.6	702.6
Overdue		
less than 30 days	58.0	26.8
between 31–60 days	5.4	0.6
between 61–90 days	0.2	0.5
between 91–180 days	0.3	-0.8
more than 180 days	1.3	-1.9
Total	780.9	727.9

#### 4.7 Other liabilities

EUR million	2022	2021
Other non-current liabilities		
Advance payments	1.1	1.1
Accounts payables	0.0	0.6
Other non-current liabilities	2.4	
Accruals and deferred income	1.3	7.4
Total	4.7	9.1

#### 4.8 Accounts payable and other liabilities

EUR million	2022	2021
Advance payments received	10.9	8.5
Accounts payable	680.2	580.7
Accounts payable, Supply Chain Finance schemes	354.4	309.7
Other liabilities	80.0	69.0
Accrued expenses		
Customer discounts	68.4	61.7
Purchase-related items	210.5	190.5
Employee costs	147.2	112.1
Other accrued expenses	110.8	72.6
Total	1,662.5	1,404.9

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.

#### 4.9 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 liability 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 current 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 include mainly warranty provisions, liabilities resulting from disputes and employment affairs as well as other contractual obligations.

##### 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.

EUR million	Restructuring	Environmental obligations	Other provisions	Total
1.1.2022	0.4	10.7	4.2	15.2
Translation differences	0.0	0.0	0.1	0.1
Increases	4.9	0.1	0.9	6.0
Utilised during the year	0.0	-1.1	-1.0	-2.2
Unused amounts reversed	-0.2	-0.1	0.0	-0.3
31.12.2022	5.0	9.6	4.2	18.8
Long tem provisions	0.1	9.6	2.5	12.2
Short term provision	4.9	0.0	1.7	6.6
Total	5.0	9.6	4.2	18.8

The EUR 4.9 million increase in restructuring provisions is related to the restructuring of Metsä Board's customer service and supply chain management.

EUR million	Restructuring	Environmental obligations	Other provisions	Total
1.1.2021	0.3	13.4	4.8	18.6
Translation differences	0.0		0.1	0.1
Increases	0.0	0.2	1.6	1.8
Utilised during the year		-1.6	-1.9	-3.5
Unused amounts reversed	0.0	-0.7		-0.7
Transfers between the categories		-0.5	0.5	0.0
Transfers to assets held for sale			-1.0	-1.0
31.12.2021	0.4	10.7	4.2	15.2
Long tem provisions	0.1	9.5	2.3	11.9
Short term provisions	0.2	1.2	1.9	3.4
Total	0.4	10.7	4.2	15.2

Transfers to assets classified as held for sale include Oy Hangö Stevedoring Ab's other provisions. More information on assets classified as held for sale is provided in note 7.2.

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.

The environmental provisions and other provisions are expected to be released for the most part by 2030.

## 5. Capital structure and financial risks

### 5.1 Equity

#### Accounting principles

Members' capital consists of participation shares and additional shares.

Under IFRIC 2 Members' Shares in Co-operative Entities and Similar Instruments, shares for which the co-operative does not have an unconditional right to refuse redemption in accordance with the cooperative's rules are classified as financial liabilities. The rules of

Metsäliitto Cooperative specify the maximum amount of members' capital that may be redeemed annually. One third of the distributable surplus shown on the most recently adopted balance sheet may be used for refunds of participation and additional shares. This share of members' capital is recognised as a financial liability in the financial statements. The part regarded as a financial liability of the interest paid on members' capital has been recognised in financial expenses.

#### Changes in members' capital

EUR million	Participation shares	Metsä1 additional shares	Additional shares A	Additional shares B	Total
Members' capital at 1 Jan. 2022	239.6	0.0	1,062.0	145.6	1,447.1
Paid-in members' capital	5.1	90.9	2.8	0.0	98.8
Entry of interest on shares	1.4	31.7			33.2
Surplus reimbursement as Metsä1 additional shares		6.8			6.8
Fund increase related to an equity bonus		6.3	0.2		6.4
Conversion from A additional shares		692.6	-692.6		0.0
Refund of share payments	-7.9	-0.1	-51.5	-18.1	-77.6
Accelerated refund of participation shares	6.3				6.3
Transfers to current interest-bearing liabilities	-12.5	-126.7	61.2	-4.4	-82.4
Members' capital at 31 Dec. 2022	232.0	701.5	382.1	123.1	1,438.6
Members' capital at 1 Jan. 2021	228.9		943.6	149.9	1,322.4
Paid-in members' capital	7.9		109.1	4.5	121.5
Entry of interest on shares	0.6		43.4		44.1
Fund increase related to an equity bonus			7.0		7.0
Refund of share payments	-7.9		-36.3	-10.9	-55.1
Accelerated refund of participation shares	8.9				8.9
Transfers to current interest-bearing liabilities	1.0		-4.9	2.1	-1.8
Members' capital at 31 Dec. 2021	239.6	0.0	1,062.0	145.6	1,447.1

#### Transfers to current interest-bearing liabilities

EUR million	Participation shares	Metsä1 additional shares	Additional shares A	Additional shares B	Total
31.12.2022	41.9	126.7	69.0	22.2	259.9
Change	-12.5	-126.7	61.2	-4.4	-82.4
31.12.2021	29.4		130.2	17.8	177.4
Change	1.0		-4.9	2.1	-1.8
31.12.2020	30.4		125.3	19.9	175.6

#### Members' capital

The par value of a participation share is EUR 1.00. The subscription price of a participation share is equivalent to its par value unless otherwise decided by the Representative Council or the Board of Directors, authorised by the Representative Council. A member's obligation to acquire participation shares is determined as specified in the by-laws of the Cooperative on the basis of the surface area and location of their forestland. No member is obligated to acquire more than 30,000 participation shares.

According to the by-laws of Metsäliitto, a member of Metsäliitto whose participation shares have been paid for in full is entitled to subscribe for additional shares as per the conditions defined in the by-laws and specified by Metsäliitto's Board of Directors. According to the by-laws of Metsäliitto, there are four types of additional shares: A additional shares, B additional shares, Metsä1 additional shares, and Metsä2 additional shares. The par value of an additional share is EUR 1.00 (one euro). There is a minimum of one and a maximum of 1,500 million A additional shares. There is minimum of one and a maximum of 300 million B additional shares. There is no limit on the maximum number of Metsä1 additional shares and Metsä2 additional shares.

Until 31 December 2021, the quantity of A additional shares that a member has been able to subscribe for has been equal to the net amount of the wood trade income they have received from Metsäliitto or equal to the amount of the interest on the member's participation shares or additional shares distributed by Metsäliitto.

Until 31 December 2021, a member has been able to subscribe for the number of B additional shares they want. However, the maximum number of paid B additional shares that a member is able to have at any one time is 1.5 million.

As of 1 January 2022, the quantity of Metsä1 additional shares that a member can subscribe for will be equal to the net amount of the wood trade income they receive from Metsäliitto or equal to the amount of the interest on the member's participation shares or additional shares distributed by Metsäliitto.

Metsä1 additional shares will automatically convert to Metsä2 additional shares 10 years as of the end of the calendar year during which a Metsä1 additional share to be converted was subscribed for, or if it was transferred without consideration, received, unless their validity has been extended with a wood trade as specified in the Cooperative's by-laws.

Upon application, an A additional share can be converted into a Metsä1 additional share so that the applicant is given several Metsä1 additional shares equal to the number of the A additional shares subject to the conversion in exchange for the A additional shares.

Based on a decision of the Board of Directors, Metsäliitto is entitled to redeem all Metsä1 and/or Metsä2 additional shares or part of them. In the event of a possible redemption, the redemption price of an additional share is the share's par value, i.e. EUR 1.00 (one euro).

The amount paid for A additional shares, as well as for Metsä1 and Metsä2 additional shares, is returned to a member six (6) months, and the amount paid for B additional shares, eighteen (18) months, from the end of the financial period during which the membership ended or the Cooperative received the member's request in writing to reduce the number of additional shares, nevertheless accounting for what is specified in the Cooperative's by-laws with regard to the maximum amount of

returns. Metsäliitto's Board of Directors is entitled, based on its discretion, to delay the return of the amounts or par value paid for Metsä1 and Metsä2 additional shares during the Cooperative's operations, provided that the Board of Directors, based on an extensive review, considers the payment of the return to jeopardise the Cooperative's solvency or its retention at an adequate level.

By investing income from wood trades or interest on shares from Metsäliitto in A additional shares until 31 December 2021, or in Metsä1 additional shares as of 1 January 2022, a member may earn equity bonuses in such a way that each additional share subscribed for includes a single equity bonus. An equity bonus means the right to subscribe for one new additional share for the wood trade receivable to be settled during the period of use equal to the two calendar years following the calendar year of the additional share subscription in such a way that the subscriber of the share themselves pays at least 75% of the subscription price of the new additional share, or a portion larger than this confirmed by the Board of Directors. The remaining portion of the subscription price of the additional share is paid for the member in the form of a fund increase by Metsäliitto. According to the authorisation approved by the Cooperative's Representative Council on 22 November 2011 and changed on 28 of April 2021, a maximum of EUR 100 million of the Cooperative's surplus may be transferred to the additional members' capital as a fund increase of additional share subscriptions made with equity bonuses.

As of 1 January 2022, Metsäliitto will not issue new A and B additional shares, excluding any A additional shares which a member may choose to subscribe for with equity bonuses earned prior to 2022 during their period of use.

#### Use of surplus and distribution of other funds

Surplus may be distributed to the members. Interest or other returns on Metsäliitto's surplus may be distributed to the members. Funds may also be distributed to the members in other ways in accordance with Chapter 16, section 1 of the Cooperatives Act. The distribution of funds and the grounds for such distribution is decided on by the Cooperative's Representative Council. Based on a decision by the Representative Council, funds may also be distributed as additional shares of Metsäliitto.

If surplus is returned to a member because of how the member has used Metsäliitto's services during their membership, the distribution is divided in proportion to the volume of industrial roundwood Metsäliitto has received from its members during a minimum of two (2) and a maximum of six (6) of the most recently ended financial periods.

#### Interest on members' capital and reimbursement of surplus

After the balance sheet date, the Board of Directors has proposed that EUR 85.9 million (71.6) be distributed as interest on members' capital and EUR 15.6 million (8.0) as reimbursement of surplus, determined based on the volume of industrial roundwood received in the last four full financial periods. The reimbursement of surplus will be primarily paid as Metsä1 additional shares, but in money for the part corresponding to the tax withheld for each member. In 2022, EUR 11.0 million (7.2) of the interest on members' capital was treated as financial expenses.

## Translation differences

Translation differences include the differences arising from the translation of subsidiaries' financial statements in currencies other than euro. The gains and losses from the hedging of net investments in such subsidiaries, excluding deferred taxes, are also included in translation differences, provided that the conditions for hedge accounting are met. The Group ended its equity hedging in 2016.

## Translation differences

EUR million	2022	2021
In balance sheet		
SEK	-59.8	-18.2
RUB		-22.1
GBP	-7.5	-3.5
PLN	-8.0	-7.1
SKK	11.2	11.2
USD	6.8	3.3
Others	3.3	2.1
Total	-54.0	-34.2
In consolidated statement of comprehensive income		
SEK	-79.7	-14.0
RUB	31.5	3.5
GBP	-4.3	5.3
PLN	-0.9	-0.4
USD	6.6	6.2
Others	0.2	-1.3
Total	-46.6	-0.8

In June 2022, as a consequence of the discontinuation of Russian business operations, the Group recognised an expense of EUR 29.4 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	166.0	37.4
Revaluation reserve	1.2	1.2
Revaluation surplus	94.9	94.9
General reserve	71.5	71.4
Legal reserve and reserves stipulated by the rules	0.1	0.1
Reserve for invested unrestricted equity	501.4	501.2
Total	835.0	706.2

## Fair value reserve

The reserve include the effective portion of fair value based on hedge accounting applied to interest, currency and commodity derivatives and the fair value change of other investments less deferred tax.

## Revaluation reserve

Revaluation of land and bonds in non-current assets are recognised in the revaluation reserve.

## Revaluation surplus

The revaluation surplus include the fair value of the previous holdings in Metsä Fibre which arised from the allocation of fair value of the acquired Metsä Fibre shares in 2009.

## Legal reserve and reserves stipulated by the Articles of Association / Rules

Legal reserve and reserves stipulated by the Articles of Association have been created and accumulated as a result of resolution by the Annual General Meeting of shareholders/representatives.

## Reserve for invested unrestricted equity

The reserve for invested unrestricted equity includes other investments in equity and the share issue price to a sum especially decided not to be recognised in the share capital.

## Other comprehensive income, net of tax 2022

EUR million	Equity attributable to members of parent company					
	Translation differences	Fair value and other reserves	Retained earnings	Total	Non-controlling interest	Total
Items relating to adjustments of defined benefit plans			1.0	1.0	-2.4	-1.4
Fair value of financial assets through other comprehensive income		95.9		95.9	97.7	193.6
Income tax relating to items that will not be reclassified		-19.2	1.2	-18.0	-18.6	-36.6
Cash flow hedges						
Currency flow hedges						
gains and losses recorded in equity		45.2		45.2	6.5	51.7
transferred to adjust sales		6.4		6.4	22.1	28.5
transferred to adjust purchases		-13.7		-13.7		-13.7
Interest flow hedges						
gains and losses recorded in equity		46.4		46.4	29.3	75.7
transferred to adjust financial items			0.0	0.0		0.0
Commodity hedges						
gains and losses recorded in equity		28.9		28.9	25.0	53.9
transferred to adjust purchases		-48.7		-48.7	-41.6	-90.3
Total		64.6		64.6	41.1	105.7
Translation differences	-19.8			-19.8	-26.8	-46.6
Income tax relating to items that may be reclassified		-12.9		-12.9	-8.2	-21.1
Other comprehensive income, net of tax	-19.8	128.4	2.2	110.8	82.8	193.7

## Other comprehensive income, net of tax 2021

EUR million	Equity attributable to members of parent company					
	Translation differences	Fair value and other reserves	Retained earnings	Total	Non-controlling interest	Total
Items relating to adjustments of defined benefit plans			2.6	2.6	1.6	4.2
Fair value of financial assets through other comprehensive income		-4.0		-4.0	-3.7	-7.7
Income tax relating to items that will not be reclassified		0.8	-1.4	-0.6	-0.3	-0.9
Cash flow hedges						
Currency flow hedges						
gains and losses recorded in equity		-8.1		-8.1	-14.9	-23.0
transferred to adjust sales		-26.0		-26.0	-18.1	-44.1
transferred to adjust purchases		2.4		2.4		2.4
Interest flow hedges						
gains and losses recorded in equity		10.0		10.0	5.5	15.4
transferred to adjust financial items		2.1		2.1		2.1
Commodity hedges						
gains and losses recorded in equity		38.0		38.0	31.9	69.9
transferred to adjust purchases		-20.9		-20.9	-17.5	-38.5
Total		-2.5		-2.5	-13.1	-15.6
Translation differences	1.7			1.7	-2.6	-0.8
Income tax relating to items that may be reclassified		0.5		0.5	2.6	3.1
Other comprehensive income, net of tax	1.7	-5.2	1.3	-2.2	-15.5	-17.8

## 5.2 Financial income and expenses

### Accounting principles

Interest income and costs are recognised in amortised cost with the effective interest rate method.

Dividend yield is recognised when the right to a dividend has arisen.

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 rate differences		
Commercial items	8.7	12.6
Hedging, no hedge accounting	-16.8	-16.1
Others	3.5	-0.2
Exchange rate differences total	-4.6	-3.7
Other financial income		
Interest income on loans, other receivables and cash and cash equivalents	6.9	1.0
Dividend income	0.4	
Other financial income total	7.3	1.0

EUR million	2022	2021
Interest and other financial expenses		
Valuation of financial assets and liabilities		
Gains and losses on financial assets or liabilities at fair value through profit or loss	-5.3	1.2
Gains / losses on change in value of financial assets	0.0	0.0
Gains / losses on derivatives, no hedge accounting	0.0	0.0
Gains / losses on derivatives, in cash flow hedges	0.0	-2.0
Total	-5.3	-0.8
Interest income from financial liabilities	-21.0	-30.7
Other financial expenses	-3.8	-5.4
Interest and other financial expenses total	-30.1	-36.9
Financial income and expenses total	-27.3	-39.6

The Russian ruble-denominated translation differences accumulated since June 2022 as a consequence of the discontinuation of Russian business operations, amounting to EUR 4.0 million, have been reported in other exchange rate differences in the income statement.

The interest expenses of financial liabilities were lower in 2022 and 2021, given that the interest expenses of ongoing investments were capitalised into the investments' acquisition cost.

In 2021, the change in the value of financial items included a one-off EUR -2.1 million change in value from the termination of Metsä Tissue's EUR 75 million interest rate swaps, related to the early repayment of a long-term loan.

## 5.3 Other financial assets

EUR million	2022	2021
Other non-current financial assets		
Loan receivables	6.5	4.2
Defined benefit plans (Note 3.5)	5.3	26.1
Other receivables and accrued income	4.1	4.2
Total	15.9	34.4

## 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 Group has classified short-term money market investments and bank assets that are in line with its financial policy as cash and cash equivalents. The determination of the impairment of cash and cash equivalents is subject to the model based on expected credit losses. The expected credit losses are reviewed for the following 12 months. The impacts of the Covid-19 pandemic on determining the impairment of cash and cash equivalents is discussed in Note 5.6, Management of financial risks, counterparty risk.

EUR million	2022	2021
Financial assets at fair value through profit and loss	433.5	459.1
Current investments	520.2	321.8
Cash at bank and in hand	311.3	553.6
Total	1,265.0	1,334.5

## 5.5 Financial liabilities and interest-bearing net liabilities

### Accounting principles

Financial liabilities are initially recognised at fair value. The Group has classified all financial liabilities under "Other liabilities".

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 financial liabilities

EUR million	2022	2021
<b>Non-current interest-bearing financial liabilities</b>		
Bonds	249.0	248.8
Loans from financial institutions	634.3	356.4
Lease liabilities	94.8	105.9
Other liabilities	150.6	150.0
Total	1,128.7	861.1
<b>Current interest-bearing financial liabilities</b>		
Current portion of long-term debt	66.2	124.2
Current loans	2.1	-0.7
Other liabilities	259.9	177.5
Total	328.2	301.0
Assets classified as held for sale		1.5
Interest-bearing financial liabilities, total	1,456.9	1,163.6

In 2021 Short-term loans include Oy Hangö Stevedoring Ab's intra-group interest-bearing loan of EUR 0.9 million transferred to assets classified as held for sale.

### Interest-bearing financial assets

EUR million	2022	2021
<b>Non-current interest-bearing financial assets</b>		
Loan receivables	6.5	4.2
Other receivables	2.4	2.8
Total	8.9	7.0
<b>Current interest-bearing financial assets</b>		
Financial assets at fair value through profit and loss	433.5	459.1
Loan receivables	6.1	6.9
Current investments at amortised cost	520.2	321.8
Cash at bank and in hand	311.3	553.6
Total	1,271.0	1,341.3
Interest-bearing financial assets, total	1,279.9	1,348.3
Interest-bearing net liabilities, total	177.0	-184.7

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**Changes in liabilities and current interest-bearing receivables reported in the cash flow from financing activities in 2022**

EUR million	1 Jan. 2022	Cash impact changes	Non-cash impact changes			Other changes	31 Dec. 2022
			Aquired / sold businesses	Changes in exchange rates	Changes in leases		
<b>Non-current interest-bearing financial liabilities including the current portion</b>							
Bonds	248.8					0.2	249.0
Loans from financial institutions	455.0	219.7		-0.8		0.0	673.9
Lease liabilities	131.6	-46.7	18.4	-1.2	25.8	-6.4	121.5
Other liabilities	150.0	0.9		-0.4			150.6
<b>Total</b>	<b>985.4</b>	<b>174.0</b>	<b>18.4</b>	<b>-2.4</b>	<b>25.8</b>	<b>-6.2</b>	<b>1,194.9</b>
<b>Non-current non-interest bearing liabilities</b>	<b>9.1</b>	<b>-4.3</b>		<b>0.0</b>			<b>4.7</b>
<b>Current interest-bearing liabilities</b>							
Current liabilities	-0.7	1.9		0.0		0.9	2.1
Other liabilities	177.5					82.4	259.9
<b>Total</b>	<b>176.7</b>	<b>1.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>83.3</b>	<b>262.0</b>
<b>Current interest-bearing loan receivables</b>	<b>-6.9</b>	<b>0.8</b>		<b>0.0</b>			<b>-6.1</b>
<b>Total</b>	<b>1,164.3</b>	<b>172.4</b>	<b>18.4</b>	<b>-2.4</b>	<b>25.8</b>	<b>77.1</b>	<b>1,455.6</b>

**Changes in liabilities and current interest-bearing receivables reported in the cash flow from financing activities in 2021**

EUR million	1 Jan. 2021	Cash impact changes	Non-cash impact changes			Other changes	31 Dec. 2021
			Aquired / sold businesses	Changes in exchange rates	Changes in leases		
<b>Non-current interest-bearing financial liabilities including the current portion</b>							
Bonds	248.6					0.2	248.8
Loans from financial institutions	681.9	-228.7	2.2	-0.2		-0.2	455.0
Lease liabilities	114.8	-30.3	0.9	0.1	46.8	-0.7	131.6
Other liabilities	150.0	-3.1				3.1	150.0
<b>Total</b>	<b>1,195.3</b>	<b>-262.1</b>	<b>3.1</b>	<b>-0.2</b>	<b>46.8</b>	<b>2.4</b>	<b>985.4</b>
<b>Non-current non-interest bearing liabilities</b>	<b>2.3</b>	<b>6.0</b>	<b>0.6</b>	<b>0.1</b>			<b>9.1</b>
<b>Current interest-bearing liabilities</b>							
Current liabilities	2.1	-1.2		0.0		-1.6	-0.7
Other liabilities	173.8	1.8				1.8	177.5
<b>Total</b>	<b>175.9</b>	<b>0.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.2</b>	<b>176.7</b>
<b>Current interest-bearing loan receivables</b>	<b>-3.8</b>	<b>-0.7</b>		<b>-4.0</b>		<b>1.6</b>	<b>-6.9</b>
<b>Total</b>	<b>1,369.8</b>	<b>-256.2</b>	<b>3.7</b>	<b>-4.1</b>	<b>46.8</b>	<b>4.2</b>	<b>1,164.3</b>

**Bonds**

EUR million	Interest, %	2022	2021
2017–2027	2.750	249.0	248.8

In September 2017, Metsä Board issued an unsecured bond of EUR 250 million. The bond matures on 29 September 2027 and carries a fixed coupon rate of 2.75%. The loan has a senior status.

**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 Group. 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 Group'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% 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 foreign currency exposure of Metsä Group 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 revenue and costs. The exposure is including foreign currency denominated balance sheet exposure consisting of accounts receivable and accounts payable and 50% 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 66%, share of Swedish krona is 18% and share of pound is 8%. 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.

Other essential currencies, where Metsä Group has currency risk are CAD, DKK and NOK. The hedging policy is to keep the balance sheet exposure and 50% of annual cash flow of contracted or estimated currency flows consistently hedged. The amount of hedging may deviate from the normal level by 40% in either direction. 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 9.1 months on average (2021: 8.1) being 122% of the hedging norm (114). During the reporting period, the hedging level has varied between 8 and 9 months (7–9) being between 109 and 129% of the norm (101–114). The dollar's hedging level was 9.3 months (8.2) being 129% of the hedging norm (116). The Swedish krona's hedging level was 10.6 months (9.5) being 138% of the hedging norm (139). The pound's hedging level was 7.3 months (7.5) being 100% of the hedging 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 Group 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 Group average deviation vs. hedging norm was 29.0 percentage points (2.4 months) at the end of reporting period and has been on average 24.9 (1.7 months) percentage points during year 2022.

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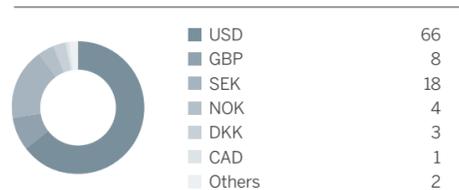
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**Hedging of foreign exchange transaction exposure**

31.12.2022	Annual transaction exposure									
	USD	GBP	SEK	NOK	DKK	RUB	CAD	Other long	Other short	Total
Transaction exposure, net (mill. currency units)	2,079	200	-5,819	1,101	600		33			
Transaction exposure, net (EUR million)	1,949	225	-523	105	81		23	43		2,949
Transaction exposure hedging (EUR million)	-1,516	-137	462	-46	-41		-13	0		-2,189
Hedging at the end of the year (months)	9.3	7.3	10.6	5.3	6.1		6.8	0.0		9.1
Average hedging in 2022 (months)	8.8	7.6	10.2	6.6	5.6		5.5	1.0		8.6
Average rate of hedging at the end of the year	1.0390	0.8696	10.7137							

31.12.2021	Annual transaction exposure								
	USD	GBP	SEK	NOK	DKK	RUB	Other long	Other short	Total
Transaction exposure, net (mill. currency units)	1,957	185	-5,222	832	481	-8,107			
Transaction exposure, net (EUR million)	1,727	220	-509	83	65	-95	69		2,769
Transaction exposure hedging (EUR million)	-1,188	-138	404	-48	-30	54	0		-1,860
Hedging at the end of the year (months)	8.2	7.5	9.5	6.8	5.6	6.8	0.0		8.1
Average hedging in 2021 (months)	7.3	7.4	10.2	6.8	5.7	7.2	0.9		7.6
Average rate of hedging at the end of the year	1.1609	0.8567	10.2066						

**FOREIGN CURRENCY BREAKDOWN OF CURRENCY EXPOSURE, %**



**Net investments in a foreign entity**

31.12.2022	Equity exposure				Total
	USD	GBP	SEK	Others	
Equity exposure (mill. currency units)	110	61	9,767		
Equity exposure (EUR million)	103	69	878	73	1,124

31.12.2021	Equity exposure				Total
	USD	GBP	SEK	Others	
Equity exposure (mill. currency units)	112	74	7,787		
Equity exposure (EUR million)	99	88	760	121	1,069

**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 Swedish krona and the British pound. 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 40.6 months (2021: 45.6) at the end of the year. During the reporting period duration has varied between 41 and 46 months (39–51). Of interest-bearing liabilities 15% (13) is subjected to variable rates and the rest to fixed rates and the average interest rate at the end of 2022 was 2.3% (2.8). At the end of 2022, an increase of 1% in interest rates would decrease interest rate costs of the next 12 months by EUR 2.0 million (4.7).

The Group is applying cash flow hedge accounting in accordance with IFRS 9 to all interest rate swaps by which floating-rate financing has been converted to fixed-rate financing. The gross nominal volume of interest rate swaps at the time of financial statements is EUR 722.4 million (766.4) and the maturity of interest rate swap contracts varies between 1–10 years (1–11).

**Interest rate risk**

	2022	2021
Loan amount (EUR million)	1,197	987
Duration (months)	40.6	45.6
Average interest rate (%)	2.3	2.8
Interest rate sensitivity (EUR million)	-2.0	-4.7

**Re-pricing structure of loans**

EUR million	31.12.2022
1–4/2023	274
5–8/2023	87
9–12/2023	-78
2024	148
2025	259
2026	236
>2026	960

EUR million	31.12.2021
1–4/2022	-96
5–8/2022	113
9–12/2022	264
2023	170
2024	176
2025	276
>2025	1,276

Interest rate sensitivity is an estimate of the effect of an interest rate change of 1% on net interest cost based on year-end exposure. The duration includes committed credit facilities of EUR 690 million and attached interest rate swaps related to investment of Metsä Fibre. These are also included in the re-pricing distribution of loans. Interest rate risk exposure does not include the part of Metsäliitto Cooperative subscribed capital that is recognized as short-term interest-bearing liability.

**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 and risk management policy approved by Board of Directors of Metsä Group companies. 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 Group has abandoned the hedging of electricity, propane and liquefied natural gas (LNG) price risk and hedges matured during year 2022. Hedge accounting in accordance with IFRS 9 is applied to all commodity hedging. According to the commodity hedging policy an 80% 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% in either direction. Hedges based on previous policy are gradually maturing. The Group Board of Directors makes significant strategic decisions.

Metsä Group's commodity risk management has electricity risk had a key role. The electricity exposure of Metsä Group is stabilized after Olkiluoto 3 -project and investment in Husum pulp mill are getting ready. Therefore the need to hedge the electricity exposure ended and all hedges have matured during the year 2022. Part of mills' purchase of fuel is based on natural gas. Metsä Group is hedging the price risk of natural gas purchases as financial hedges and by physical fixed-price contracts. Metsä

Group 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 Group is not hedging its pulp price risk.

**Hedging of electricity price risk exposure**

GWh	31.12.2022	31.12.2021
Electricity exposure, net 2022	1,214	1,471
Electricity hedging 2022	89	258
Hedging at the end of the year 2022 (%)	7	18
Average price of hedging at the end of the year (€/MWh)	44.10	34.53

Electricity price risk is hedged based on defined risk management policy by physical contracts only. The net electricity exposure has been calculated by taking into account the own and associated companies' electricity production. The calculation includes hedging of electricity purchase. Metsä Fibre is not included, as it does not hedge its surplus electricity position.

**Hedging of natural gas price risk exposure**

GWh	31.12.2022	31.12.2021
Natural Gas exposure, net 2022	1,005	1,286
Natural Gas hedging 2022	637	1,026
Hedging at the end of the year 2022 (%)	63	80
Average price of hedging at the end of the year (€/MWh)	73.67	27.67

Natural Gas price risk is hedged based on defined risk management policy by physical contracts or by financial contracts. Natural gas net position includes Metsä Board and Metsä Tissue forecasted natural gas consumption. Only Metsä Board position is hedged using financial contracts and Metsä Tissue Central Europe's consumption with physical contracts.

**Hedging of logistics oil price risk exposure**

t	31.12.2022	31.12.2021
Oil exposure, net 2022	153,606	148,585
Oil hedging 2022	49,250	46,079
Hedging at the end of the year 2022 (%)	32	31
Average price of hedging at the end of the year (€/t)	534.78	371.18

Logistic oil price risk is hedged based on defined risk management policy by financial contracts. Metsä Group logistic oil exposure includes positions with bunker clause. Metsä Board is hedging gas oil, heavy fuel oil and marine fuel oil purchases.

**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% of the Group's liquidity requirement for the first 12 months and 50–100% of the following 12–24 months liquidity requirement. The objective is that at the most 20% of the Group's loans, including committed credit facilities, is allowed to mature within the next 12 months and at least 25% 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.

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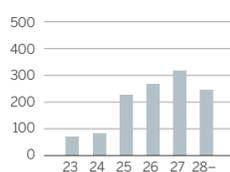
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#### REPAYMENT OF NON-CURRENT LOANS

EUR million



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 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. The Group is using short-term working capital financing related to account receivables and account payables. The debt financing of Metsä Fibre's Kemi investment of EUR 1,000 million consists of EUR 500 million 10-year loan guaranteed by Finnvera with an 80% risk share, EUR 200 million 10-year loan guaranteed by the Swedish Eksportkreditnämnd (EKN) with a 95% risk share, EUR 200 million 15-year loan by the European Investment Bank (EIB) and EUR 100 million five-year Green Term Loan with eight commercial banks. 309.3 million euros of loan package was withdrawn at the end of year 2022. Metsä Board has for Husum investments Finnvera 95% guaranteed loan agreement of EUR 100 million, that is totally withdrawn at the end of year 2022.

Metsä Group's liquidity has remained strong. The available liquidity was EUR 2,555.3 million (3,126.2) at the end of the reporting period, of which EUR 1,265.0 million (1,334.5) was liquid funds and investments and EUR 1,290.3 million (1,791.8) committed credit facilities. The Group had also at its disposal short-term, uncommitted commercial paper programmes and credit lines amounting to EUR 161.4 million (161.5) and undrawn pension premium (TyEL) funds of EUR 392.5 million (371.4). At the end of 2022, the liquidity reserve is expected to cover the forecasted financing need of 2023 and 2024. 5% (5) of long-term loans and committed facilities fall due in a 12 month period and 47% (74) have a maturity of over four years. The average maturity of long-term loans is 4.1 years (4.3). The share of short-term financing of the Group's interest bearing liabilities is 18% (15).

#### 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. Liquidity reserve is partially maintained in the form of committed credit facilities, although the strengthened liquidity position has increased the counterparty risk during the last years. 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 especially the used commercial paper counterparties. Derivatives trading is regulated by the standardised ISDA contracts made with the counterparties. 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 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. Operative management reviews and sets all major credit limits which are not supported by credit insurance and/or other security according to Credit Risk Management Policies.

The portion of overdue client receivables of all sales receivables of Metsä Group is at the time of financial statements 8.4% (3.0), of which 0.0% (0.0) is overdue between 90–180 days and 0.0% (0.0) over 180 days. Additionally Metsä Group 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 valid reasons. The specification of doubtful receivables is in the Notes no. 4.6. At year end closing 2022 Metsä Group returned to normal principal of calculating expected credit loss. Expected credit losses on accounts receivables in accordance with IFRS 9 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 net of credit insurance on accounts receivables from external debtors outstanding at period end. The expected credit loss percentages are business area specific and vary between 0.0–0.2%. As compared to previous year 2021 the expected credit loss calculations were adjusted in order to take in to account the impact of COVID-19 pandemic by reviewing customer credit risks and expected credit risk probability on a detailed level.

The geographical structure of the accounts receivable is diversified and is reflecting the external sales structure presented in the Segment information. Largest sources of credit risk exist in Finland, Germany, Italy, United Kingdom, USA, Sweden China, Poland, France and Hong Kong. Top ten countries represent around 68% of (68) external customer receivables. The share of largest individual customer (individual companies or groups of companies under common ownership) credit risk exposure of the Group at the end of 2022 was about 4% (7) of total accounts receivable. About 27% (29) of accounts receivable was owed by ten largest customer groups (individual companies or groups of companies under common ownership). At the end of 2022, Metsä Group's trade receivables were for a very large part covered by credit insurance or other security, such as letters of credit.

#### 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. Certain central target values, which correspond to standard requirements set by financing and capital markets, have been defined for the capital structure. The Group's capital structure is regularly assessed by the Group's Board of Directors and its Audit Committee.

The Group monitors the development of its capital structure mainly through equity ratio. The objective of the Group on long term basis is to maintain its equity ratio at the minimum level of 40% (temporary deviation allowed).

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
Net gearing ratio, %	3	-4
Equity ratio, %	60.6	61.1
Interest-bearing liabilities	1,456.9	1,163.6
- interest-bearing financial assets	1,279.9	1,348.3
Interest-bearing net liabilities	177.0	-184.7
Member's funds	4,135.4	3,574.4
+ non-controlling interests	1,565.8	1,240.3
Total	5,701.2	4,814.6
Total assets	9,414.7	7,891.4
- advanced payments received	12.0	9.6
Total	9,402.7	7,881.8

The debt financing of Metsä Group is arranged so that Metsä Board, Metsä Fibre and Metsä Tissue each have required loans to cover the financial needs of the sub-Groups formed by them and that the loans of the companies in question were independent of each other. Likewise Metsäliitto Cooperative has separately arranged financing to cover the financial needs of the parent company and Metsä Forest and Metsä Wood.

In Metsä 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 EUR 1,000 million financing package of Metsä Fibre Kemi investment net gearing may not exceed 100% in relation to the share capital. Accordingly the covenant conditions of EUR 100 million loan of Metsä Board Husum investments net gearing may not exceed 100% in relation to the share capital. All Group companies have been in compliance with its covenants during the reporting periods 2022 and 2021. In case Metsäliitto Cooperative or any of its subsidiaries could not meet its obligations as defined by the above mentioned key ratios 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.

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## Market risk sensitivity 31 December

EUR million	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	
	2022	2021	2022	2021	2022	2021	2022	2021
<b>Interest rate risk (100 bp rise in interest rates)</b>								
Effect on profit	-2.8	-3.1			2.0	4.7	19.4	33.4
Effect on other change in equity	20.2	29.5						
<b>Commodity risk (electricity price + 20 %)</b>								
Effect on profit					-34.4	-11.2	-24.2	-8.9
Effect on other change in equity	10.2	2.2						
<b>FX risk (USD - 10 %)</b>								
Effect on profit	-1.1	-3.8			-194.9	-172.7	-43.3	-54.0
Effect on other change in equity	139.8	102.3	-10.3	-9.9				
<b>FX risk (GBP - 10 %)</b>								
Effect on profit	0.3	1.0			-22.5	-22.0	-8.8	-8.3
Effect on other change in equity	11.1	10.9	-6.9	-8.8				
<b>FX risk (SEK - 10 %)</b>								
Effect on profit	-9.1	1.3			52.3	50.9	6.2	10.6
Effect on other change in equity	-38.6	-36.4	-87.8	-74.3				

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 recognized interest rates, electricity prices and foreign exchange rates as its key market risks and has set 1 percentage point interest rate rise, 20% rise in electricity price and 10% weakening of USD, GBP and SEK as reasonably possible risk variables. These currencies represent almost 90% 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, but not 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 calculation of Metsä Group's interest rate risk sensitivity does not include the EUR 438 million fund investments in the investment portfolio, as a 1 percentage point increase in interest rates does not increase interest income but instead results in a change in the fund unit's value. The 2021 comparative figure has also been updated to correspond to the revised figure.

## Maturity of repayment and interest payment of financial liabilities 2022

EUR million	2023	2024	2025	2026	2027	2028–	Total
Bonds and debentures					249.0		249.0
Loans from financial institutions	39.6	59.3	159.0	154.2	56.4	205.2	673.9
Lease liabilities *)	30.7	24.6	18.8	13.4	12.5	39.1	139.1
Other non-current interest-bearing liabilities	0.0	0.2	50.2	100.2	0.0		150.6
Non-current interest-bearing liabilities, total	70.3	84.1	228.0	267.9	318.0	244.4	1,212.6
Current interest-bearing liabilities	262.0						262.0
Financial liabilities total	332.2	84.1	228.0	267.9	318.0	244.4	1,474.6
Financial expenses total	28.9	28.4	26.0	17.9	11.0	7.5	119.6
Financial liabilities and expenses total	361.2	112.5	254.0	285.7	328.9	251.9	1,594.2
Guarantees agreements	2.0	1.6	8.9	0.0	0.0	1.7	14.3
Derivative financial instrument							
Currency derivatives, liabilities	3,959.1						3,959.1
Currency derivatives, assets	-3,993.5						-3,993.5
Interest rate swaps, liabilities	1.7	1.4	1.1	0.7	0.6	0.7	6.2
Interest rate swaps, assets	-16.9	-18.0	-13.5	-9.7	-7.6	-12.3	-77.9
Commodity derivatives, liabilities	5.0						5.0
Commodity derivatives, assets	-6.7						-6.7
Derivatives, net of cash	-51.3	-16.6	-12.4	-8.9	-7.1	-11.6	-107.9

## Maturity of repayment and interest payment of financial liabilities 2021

EUR million	2022	2023	2024	2025	2026	2027–	Total
Bonds and debentures						248.8	248.8
Loans from financial institutions	98.5	31.8	26.8	176.4	22.2	99.2	455.0
Lease liabilities *)	28.9	23.1	19.0	15.6	12.5	47.9	147.0
Other non-current interest-bearing liabilities				50.0	100.0		150.0
Non-current interest-bearing liabilities, total	127.4	54.9	45.8	242.0	134.7	396.0	1,000.8
Current interest-bearing liabilities	176.7						176.7
Financial liabilities total	304.2	54.9	45.8	242.0	134.7	396.0	1,177.5
Financial expenses total	19.3	18.2	18.0	16.9	11.8	7.2	91.4
Financial liabilities and expenses total	323.5	73.1	63.8	258.9	146.5	403.2	1,268.9
Guarantees agreements	6.9	2.4	5.2	0.2	0.0	1.3	16.0
Derivative financial instrument							
Currency derivatives, liabilities	2,977.5						2,977.5
Currency derivatives, assets	-2,946.4						-2,946.4
Interest rate swaps, liabilities	4.2	2.7	1.6	0.8	0.4	0.5	10.0
Interest rate swaps, assets	0.5	0.7	-0.3	-0.9	-1.3	-4.1	-5.5
Commodity derivatives, liabilities	0.1						0.1
Commodity derivatives, assets	-36.1						-36.1
Derivatives, net of cash	-0.3	3.4	1.3	-0.1	-1.0	-3.7	-0.4

\*) The cash flows of lease liabilities include both payments and the finance costs.

On 31 December 2022, the balance sheet value of lease agreement liabilities was EUR 121.5 million (131.6). On 31 December 2022, the balance sheet value of currency derivative liabilities EUR 46.5 million (44.0), while that of currency derivative receivables was EUR 81.0 million (12.9).

## 5.7 Fair values of financial assets and liabilities

### Classification and fair value of financial assets and liabilities in 2022

EUR million	Note	Fair value through profit and loss	Fair value through other comprehensive income	Amortised cost	Book value total
<b>Financial assets</b>					
Other non-current investments	4.4	3.4	373.3		376.8
Other non-current financial assets	5.3			15.9	15.9
Accounts receivables and others	4.6	4.3		936.9	941.3
Cash and cash equivalent	5.4	433.5		831.5	1,265.0
Derivative financial instruments	5.7	10.6	148.8		159.4
Total		451.9	522.2	1,784.4	2,758.4
Fair value total		451.9	522.2	1,784.4	2,758.4
<b>Financial liabilities</b>					
Non-current interest-bearing liabilities	5.5			1,128.7	1,128.7
Other non-current liabilities	4.7			3.7	3.7
Current interest-bearing liabilities	5.5			328.2	328.2
Accounts payable and others	4.8			1,501.5	1,501.5
Derivative financial instruments	5.7	7.7	43.8		51.6
Total		7.7	43.8	2,962.0	3,013.6
Fair value total		7.7	43.8	2,927.5	2,979.0

### Classification and fair value of financial assets and liabilities in 2021

EUR million	Note	Fair value through profit and loss	Fair value through other comprehensive income	Amortised cost	Book value total
<b>Financial assets</b>					
Other non-current investments	4.4	6.3	191.6		197.9
Other non-current financial assets	5.3			34.4	34.4
Accounts receivables and others	4.6	4.0		878.6	882.6
Cash and cash equivalent	5.4	459.1		875.4	1,334.5
Derivative financial instruments	5.7	2.0	52.5		54.5
Assets classified as held for sale	7.1			2.1	2.1
Total		471.4	244.1	1,790.5	2,506.0
Fair value total		471.4	244.1	1,790.5	2,506.0
<b>Financial liabilities</b>					
Non-current interest-bearing liabilities	5.5			861.1	861.1
Other non-current liabilities	4.7			8.0	8.0
Current interest-bearing liabilities	5.5			301.0	301.0
Accounts payable and others	4.8			1,284.3	1,284.3
Derivative financial instruments	5.7	1.9	52.2		54.1
Liabilities classified as held for sale	7.1			5.5	5.5
Total		1.9	52.2	2,459.8	2,513.9
Fair value total		1.9	52.2	2,490.3	2,544.4

Accounts receivables and other receivables do not include advance payments, deferred taxes or periodisations of employee costs (Note 4.6). Accounts payable and other financial liabilities do not include advance payments, deferred tax liabilities or periodisations of employee costs (Note 4.8).

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 0.0–6.0% (0.0–6.0). The fair value of accounts and other receivables and account payables and other liabilities are not essentially deviating from the carrying amounts in the balance sheet.

### Fair value hierarchy of financial assets and liabilities

#### Accounting principles

Financial assets and financial liabilities measured at fair value are classified as follows:

- Level 1 Fair value is based on quoted prices in active markets.
- Level 2 Fair value is based on inputs observable for the asset either directly or indirectly.
- Level 3 Fair value is based on company estimates and not on market data.

The fair value measurement of financial assets at fair value recognised under other items of comprehensive income is described in Note 4.4.

The fair values of electric power, natural gas, propane and fuel oil derivatives are measured on the basis of publicly quoted market prices (Level 1). The fair values currency forwards and currency options are determined on the basis of market prices at the closing date of the reporting period. The fair values of interest rate swaps are measured applying a method based on the current value of future cash flows, supported by market interest rates on the closing date of the reporting period and other market inputs (Level 2). The fair value of financial instruments not traded in an active market is determined using various measurement methods. Discretion is used in choosing the methods and making assumptions based primarily on the market conditions prevailing on the closing date of the reporting period (Level 3).

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## Fair value hierarchy of financial assets and liabilities

2022					
EUR million	Note	Level 1	Level 2	Level 3	Total
<b>Financial assets recognised at fair value</b>					
Other non-current financial assets	4.4			376.8	376.8
Current financial assets through profit and loss at fair value	5.4	437.8			437.8
Derivative financial assets	5.7	6.7	152.7		159.4
<b>Financial liabilities recognised at fair value</b>					
Derivative financial liabilities	5.7	5.0	46.5		51.6
<b>Financial assets not recognised at fair value</b>					
Cash and cash equivalent	5.4		831.5		831.5
<b>Financial liabilities not recognised at fair value</b>					
Non-current interest-bearing financial liabilities	5.5		1,094.2		1,094.2
Current interest-bearing financial liabilities	5.5		328.2		328.2

2021					
EUR million	Note	Level 1	Level 2	Level 3	Total
<b>Financial assets recognised at fair value</b>					
Other non-current financial assets	4.4			197.9	197.9
Current financial assets through profit and loss at fair value	5.4	463.0			463.0
Derivative financial assets	5.7	36.1	18.4		54.5
<b>Financial liabilities recognised at fair value</b>					
Derivative financial liabilities	5.7	0.1	54.0		54.1
<b>Financial assets not recognised at fair value</b>					
Cash and cash equivalent	5.4		875.4		875.4
<b>Financial liabilities not recognised at fair value</b>					
Non-current interest-bearing financial liabilities	5.5		891.3		891.3
Current interest-bearing financial liabilities	5.5		301.3		301.3

## Other non-current financial assets measured at fair value based on level 3

EUR million	2022	2021
Opening balance 1 Jan.	197.9	205.5
Total gains and losses in profit and loss	3.3	-0.1
Total gains and losses in other comprehensive income	193.6	-7.7
Purchases	0.0	0.4
Settlements	-18.2	-0.1
Transfers to assets classified as held for sale		0.0
Closing balance 31 Dec.	376.8	197.9

## 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 Group currently applies hedge accounting only to cash flows. 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 with floating interest rates from 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), propane, light fuel oil, heavy fuel oil 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 commodity derivatives are determined on the basis of publicly quoted market prices.

### Management of financial risks and effectiveness of hedging

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. Early repayments of loans may cause an inefficiency situation where the hedging interest rate swaps are reversed or taken out from hedge accounting, and the change in fair value is recognised as financial items in comprehensive 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 light and heavy 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.

The hedging of electricity, propane and liquefied natural gas (LNG) expired at the end of 2022.

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**Derivatives 2022**

EUR million	Nominal value	Fair value		Fair value total	Fair value through profit and loss	Fair value through other comprehensive income
		Assets	Liabilities			
Interest rate swaps	722.3	71.7	0.0	71.7		71.7
Interest rate derivatives, total	722.3	71.7	0.0	71.7	0.0	71.7
Currency forward agreements	3,912.6	76.3	46.2	30.0	0.8	29.3
Currency option agreements	618.8	4.7	0.3	4.4		4.4
Currency derivatives, total	4,531.3	81.0	46.5	34.5	0.8	33.7
Oil derivatives	27.5	0.5	3.9	-3.3		-3.3
Natural gas derivatives	32.7	6.2	1.2	5.0	2.1	2.9
Commodity derivatives, total	60.2	6.7	5.0	1.7	2.1	-0.4
Derivatives total	5,313.8	159.4	51.6	107.9	2.9	105.0

**Derivatives 2021**

EUR million	Nominal value	Fair value		Fair value total	Fair value through profit and loss	Fair value through other comprehensive income
		Assets	Liabilities			
Interest rate swaps	766.4	5.5	10.0	-4.5		-4.5
Interest rate derivatives, total	766.4	5.5	10.0	-4.5	0.0	-4.5
Currency forward agreements	2,933.5	12.9	44.0	-31.1	0.2	-31.2
Currency derivatives, total	2,933.5	12.9	44.0	-31.1	0.2	-31.2
Electricity derivatives	5.4	5.8		5.8		5.8
Oil derivatives	17.1	3.7	0.0	3.7		3.7
Natural gas and propane derivatives	17.9	26.7	0.1	26.6		26.6
Commodity derivatives, total	40.4	36.1	0.1	36.0	0.0	36.0
Derivatives total	3,740.3	54.5	54.1	0.4	0.2	0.3

Changes in fair values and profit and loss impacts will be presented in note 5.1

**Economic effect of the net settlement of instruments under master netting agreements executed in 2022**

	Financial derivatives on-balance sheet	Assets and liabilities related to master netting agreements	Net risk
Derivative assets	159.4	51.5	107.9
Derivative liabilities	-51.6	-51.5	0.0

**Economic effect of the net settlement of instruments under master netting agreements executed in 2021**

	Financial derivatives on-balance sheet	Assets and liabilities related to master netting agreements	Net risk
Derivative assets	54.5	19.4	35.1
Derivative liabilities	-54.1	-19.4	-34.6

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.

**Maturity distributions of derivatives 2022**

EUR million	1-6 months	6-12 months	1-5 years	Over 5 years	Cash flow subject to hedging in total
Interest-rate derivatives subject to hedge accounting	72.1	22.1	325.0	303.1	722.3
Currency derivatives subject to hedge accounting	1,561.8	583.5			2,145.3
Currency derivatives not subject to hedge accounting	278.1				278.1
Commodity derivatives subject to hedge accounting	30.1	30.1			60.2

**Maturity distributions of derivatives 2021**

EUR million	1-6 months	6-12 months	1-5 years	Over 5 years	Cash flow subject to hedging in total
Interest-rate derivatives subject to hedge accounting	22.1	22.1	403.6	318.7	766.4
Currency derivatives subject to hedge accounting	1,419.3	389.4			1,808.7
Currency derivatives not subject to hedge accounting	226.0				226.0
Commodity derivatives subject to hedge accounting	20.7	19.7			40.4

## 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 issued 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 can be 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 judgements

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 forecasts 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	-241.4	-160.1
Income taxes for previous periods	-0.7	-11.2
Change in deferred taxes	-29.0	-3.2
Other	-0.1	-0.1
Total	-271.1	-174.7

Taxes based on the taxable income for the period include the tax subsidy of EUR 7.1 million sought in the 2022 taxation for the investments of the Swedish subsidiary in 2022.

Taxes of previous financial periods in 2021 include EUR -9.6 million in taxes recognised on the basis of the tax audit conducted at Italian subsidiaries.

### Income tax reconciliation

EUR million	2022	2021
Result before taxes	1,269.8	831.7
Computed tax at Finnish statutory rate	-254.0	-166.3
Tax rate differences of Finnish and foreign subsidiaries'	2.8	3.4
Tax exempt income	5.9	5.2
Non-deductible expenses	-14.8	-3.5
Impairment of goodwill	-0.5	
Restatement of deferred taxes recognised for temporary differences and tax losses in previous years	-5.9	-1.3
Use of unrecognised tax losses from previous years	0.3	1.5
Unrecognised deferred tax receivables from tax losses and temporary differences	-9.0	-0.1
Share of profit from associated companies and joint ventures	-1.0	-0.5
Income taxes for previous periods	-0.7	-11.2
Other	5.6	-1.9
Income tax expense	-271.1	-174.7
Effective tax rate, %	21.4	21.0

### Taxes included in other comprehensive income 2022

EUR million	Before tax	Tax effect	After tax
Items that will not be reclassified to profit and loss			
Items relating to adjustments of defined benefit plans	-1.4	2.1	0.7
Fair value of financial assets through other comprehensive income	193.6	-38.7	154.9
Total	192.3	-36.6	155.7
Items that may be reclassified subsequently to profit and loss			
Cash flow hedges	105.7	-21.1	84.6
Currency translation differences	-46.6		-46.6
Other items			
Total	59.1	-21.1	38.0

### Taxes included in other comprehensive income 2021

EUR million	Before tax	Tax effect	After tax
Items that will not be reclassified to profit and loss			
Items relating to adjustments of defined benefit plans	4.2	-2.4	1.8
Fair value of financial assets through other comprehensive income	-7.7	1.5	-6.2
Total	-3.5	-0.9	-4.4
Items that may be reclassified subsequently to profit and loss			
Cash flow hedges	-15.6	3.1	-12.6
Currency translation differences	-0.8		-0.8
Other items			
Total	-16.4	3.1	-13.4

### Deferred tax assets and tax liabilities

#### Reconciliation of deferred tax assets and liabilities in 2022

EUR million	1 January 2022	Charged in income statement	Charged in other items of comprehensive income	Translation differences and others	31 December 2022
Deferred tax assets in balance sheet					
Pension obligations and other provisions	15.4	-1.4	-3.7	-0.2	10.0
Intercompany margins	15.2	8.1		-0.2	23.1
Unused tax losses and tax credits	16.6	11.8		-0.3	28.2
Financial instruments	10.6	-4.8	-3.8	-1.1	0.9
Other temporary differences	11.5	1.9		0.0	13.4
Total	69.4	15.5	-7.5	-1.8	75.6
Offset from deferred tax liabilities	-31.7	-1.9	2.7	2.3	-28.5
Deferred tax assets on the balance sheet	37.7	13.6	-4.8	0.5	47.0
Deferred tax liabilities in balance sheet					
Pension obligations	8.1	0.0	-6.9	-0.4	0.8
Appropriations and untaxed provisions	240.2	37.7		-3.5	274.3
Acquired net assets and biological assets recognised at fair value	45.0	-2.6			42.4
Other investments recognised at fair value	27.3		38.7		66.0
Financial instruments	6.9	0.0	17.4	-0.2	24.1
Hedge of net investments in foreign operations	0.0	4.0		-4.0	0.0
Other temporary differences	6.7	5.4	-0.1	-0.2	11.8
Total	334.2	44.5	49.1	-8.4	419.4
Offset from deferred tax assets	-31.7	-1.9	2.7	2.3	-28.5
Deferred tax liabilities on the balance sheet	302.5	42.6	51.8	-6.1	390.9

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### Reconciliation of deferred tax assets and liabilities in 2021

EUR million	1 January 2021	Charged in income statement	Charged in other items of comprehensive income	Translation differences and others	31 December 2021
Deferred tax assets in balance sheet					
Pension obligations and other provisions	15.3	-0.1	0.4	-0.3	15.4
Intercompany margins	11.8	3.2		0.2	15.2
Unused tax losses and tax credit	21.5	-5.0		0.1	16.6
Financial instruments	8.9	0.0	1.8	-0.1	10.6
Other temporary differences	7.8	3.7	0.0	0.1	11.5
Total	65.3	1.9	2.2	0.0	69.4
Offset from deferred tax liabilities	-38.2	10.4	-4.0	0.1	-31.7
Deferred tax assets on the balance sheet	27.1	12.3	-1.7	0.1	37.7
Deferred tax liabilities in balance sheet					
Pension obligations	1.4	1.4	5.2	0.1	8.1
Appropriations and untaxed provisions	235.5	5.9		-1.2	240.2
Acquired net assets and biological assets recognised at fair value	48.3	-3.3			45.0
Other investments recognised at fair value	28.8		-1.5		27.3
Financial instruments	7.8	0.4	-1.2	0.0	6.9
Hedge of net investments in foreign operations	0.0	0.2		-0.2	0.0
Other temporary differences	6.3	0.4	0.0	0.0	6.7
Total	328.1	5.1	2.3	-1.3	334.2
Offset from deferred tax assets	-38.2	10.4	-4.0	0.1	-31.7
Deferred tax liabilities on the balance sheet	289.9	15.5	-1.6	-1.3	302.5

On 31 December 2022, the Group had EUR 94.0 million (41.6) of net tax losses, EUR 28.2 million (12.7) of which were recorded as deferred tax assets. The net tax losses were incurred mainly in Germany and Great Britain. The management expects the companies to generate taxable income in the future from which the losses can be deducted.

The operating losses whose use involves uncertainty and which have therefore not been recognised as deferred tax assets totalled EUR 170.9 million (133.8) on 31 December 2022. Tax losses on 31 December 2022

were incurred mainly in Germany and Russia. Unrecognised deferred tax assets from losses totalled EUR 49.1 million (41.7) on 31 December 2022.

On 31 December 2022, the Group had EUR 264.9 million of net tax losses, EUR 219.2 million of which will not expire. EUR 7.6 million of the losses will expire during the period 2023–2027 and the remaining EUR 38.1 million at a later date.

## 7. Group structure

### 7.1 Group companies

#### Subsidiaries and joint operations

#### Accounting principles

##### Subsidiaries

In addition to the parent company Metsäliitto Cooperative, the consolidated financial statements include all 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 gains 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 members' funds 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.

METSÄLIITTO COOPERTIVE	Country	Group's holding %
<b>Subsidiaries</b>		
Kemi Shipping Oy	Finland	100.00
Kumpuniemen Voima Oy	Finland	53.97
Metsä Forest Latvia SIA	Latvia	100.00
Metsä Group Asia Co. Ltd	China	100.00
Metsä Board Oyj <sup>1)</sup>	Finland	50.16
Metsä Fibre Oy	Finland	62.59
Metsä Forest Eesti AS	Estonia	100.00
Metsä Forest Sverige AB	Sweden	100.00
Metsä Group Services Sp. z.o.o.	Poland	100.00
Metsä Group Treasury Oy	Finland	100.00
Metsä Spring Oy	Finland	100.00
Metsä Tissue Oyj	Finland	100.00
Metsä Wood Deutschland GmbH	Germany	100.00
Metsä Wood Eesti AS	Estonia	100.00
Metsä Wood Holland B.V.	Netherlands	100.00
Metsä Wood Schweiz AG	Switzerland	100.00
Metsä Wood UK Ltd	Great Britain	100.00
Metsä Wood USA Inc.	USA	100.00
OOO Metsa Forest Podporozhye	Russia	100.00
OOO Metsa Forest St. Petersburg	Russia	100.00
OOO Petrovles-Podporozhye	Russia	100.00

##### Joint operations

Lohjan Biolämpö Oy <sup>2)</sup>	Finland	51.00
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METSÄ FIBRE GROUP	Country	Group's holding %
<b>Subsidiaries</b>		
Metsä Fibre GmbH	Germany	100.00
Metsä Fibre S.r.l.	Italy	100.00
OOO Metsä Svir	Russia	100.00
Oy Silva Shipping Ab	Finland	100.00
Ääneverkko Oy	Finland	100.00

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METSÄ BOARD GROUP Subsidiaries	Country	Group's holding %
Husum Pulp AB	Sweden	70.00
Metsa Board (Middle East & Africa) Ltd	Cyprus	100.00
Metsa Board Americas Corporation	USA	100.00
Metsa Board Australia and New Zealand Pty Ltd	Australia	100.00
Metsa Board Hong Kong Ltd	Hong Kong	100.00
Metsa Board Ibérica S.A.	Spain	100.00
Metsa Board Italia S.r.l.	Italy	100.00
Metsa Board Singapore Pte Ltd	Singapore	100.00
Metsa Board UK Ltd	Great Britain	100.00
Metsä Board Benelux n.v./s.a	Belgium	100.00
Metsä Board Deutschland GmbH	Germany	100.00
Metsä Board France S.A.S.	France	100.00
Metsä Board International Oy	Finland	100.00
Metsä Board NL Holding B.V.	Netherlands	100.00
Metsä Board Polska Sp. Z o.o.	Poland	100.00
Metsä Board Sverige AB	Sweden	100.00
Metsä Board Turkey LLC	Turkey	100.00
OOO Metsä Board Rus	Russia	100.00

METSÄ TISSUE GROUP Subsidiaries	Country	Group's holding %
Dambi AB	Sweden	100.00
Metsa Tissue Czech s.r.o.	Czech Republic	100.00
Metsa Tissue Krapkowice Sp. z.o.o.	Poland	100.00
Metsa Tissue Poland Sp. z.o.o.	Poland	100.00
Metsa Tissue Slovakia s.r.o.	Slovakia	100.00
Metsa Tissue Ukraine LCC	Ukraine	100.00
Metsä Greaseproof Papers GmbH	Germany	100.00
Metsä Greaseproof Papers Oy	Finland	100.00
Metsä Tissue A/S	Denmark	100.00
Metsä Tissue AB	Sweden	100.00
Metsä Tissue AS	Norway	100.00
Metsä Tissue GmbH	Germany	100.00
Metsä Tissue Hungary Kft.	Hungary	100.00
Metsä Tissue Immobilienverwaltungs GmbH	Germany	100.00
Metsä Tissue Ltd	Great Britain	100.00
<b>Joint operations</b>		
Katrinefors Kraftvärme AB <sup>2)</sup>	Sweden	50.00

<sup>1)</sup> Holding 68.24 % by number of votes.  
<sup>2)</sup> The primary goal for the arrangement is to produce energy to the parties and the liabilities of the arrangement are actually paid from the cash flow arising from the produced energy bought.

**Non-controlling interest's shares**

Principal non-controlling interest's shares	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
Metsä Fibre Group	Finland	37.41	37.95	245.4	168.8	861.0	670.0
Metsä Board Group <sup>1)</sup>	Finland	49.84	52.01	180.1	114.3	704.2	569.6
Other subsidiaries				0.0	0.1	0.7	0.6
				425.5	283.2	1,565.8	1,240.3

1) Non-controlling interest's holding by votes 31.76% (32.55).

**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.

In March 2022, Metsäliitto Cooperative acquired Metsä Board Corporation's series B shares from the market for a total value of EUR 19.6 million and at an average price of EUR 8.00 per share based on an authorisation by the Board of Directors. In November and December 2022, it acquired Metsä Board Corporation's series B shares for a total value of EUR 41.7 million and at an average price of EUR 8.42 per share based on an authorisation by the Board of Directors. Following the acquisitions, the Group's holding in Metsä Board Corporation increased by 2.09 percentage points. As a result of the arrangements, the non-controlling interest decreased by EUR 35.1 million and earnings by EUR 26.4 million.

Metsä Board's sale of 30% of the Husum pulp mill to Norra Skog was concluded on 4 January 2021. Following the arrangement, the

non-controlling interests' share increased by EUR 195.4 million and their earnings by EUR 64.7 million.

The acquisition cost of the shares in Metsä Tissue Corporation held by Metsäliitto Cooperative was adjusted in 2022 and 2021. The adjustment was related to a share transaction which took place on 2 February 2017 and with which 9% of the shares were acquired, after which Metsäliitto Cooperative held 100% of Metsä Tissue Corporation's shares. The acquisition cost was adjusted with Germany's Real Estate Transfer Tax (RETT) liability, which arose as a result of the share acquisition. Following the adjustment, earnings decreased by EUR 0.2 million in 2022 and by EUR 1.7 million in 2021. The adjustments were paid in 2022.

In 2021 and 2020 there were no other significant acquisitions or sales of non-controlling interests.

Impact on parent company's equity from transactions with non-controlling interests:

EUR million	2022	2021
Acquisition of Metsä Board shares	-26.4	
Sale of a 30% share in Metsä Board's Husum pulp mill		64.7
Metsä Tissue Oyj's adjustment	-0.2	-1.7
From other businesses	0.3	-0.5
Net impact on equity	-26.3	62.6

**Summary of financial information of subsidiaries with a substantial non-controlling interest**

EUR million	Metsä Fibre Group		Metsä Board Group	
	2022	2021	2022	2021
Sales	3,070.7	2,628.1	2,479.6	2,084.1
Result for the period	656.2	461.0	409.9	292.1
Non-controlling interest's share of the result	245.4	168.8	180.1	114.3
Total comprehensive income for the period	789.8	457.0	573.6	292.8
Non-controlling interest's share of the total comprehensive result	292.8	163.0	215.4	104.7
Dividends paid to non-controlling interest	59.1		85.9	18.5
Non-current assets	3,157.2	2,157.8	2,103.9	1,637.2
Current assets	835.6	865.8	1,299.3	1,273.4
Non-current liabilities	817.1	507.3	600.2	552.1
Current liabilities	739.6	624.7	547.9	517.0
Net assets	2,436.0	1,891.6	2,255.2	1,841.4
Net cash flow from operating activities	962.4	622.5	232.0	329.6
Net cash flow arising from investing activities	-1,065.7	-646.4	-205.3	-183.0
Net cash flow arising from financing activities	104.5	25.4	-37.1	-128.3
Change in cash and cash equivalents	1.2	1.5	-10.4	18.3

The numbers are presented before Metsä Group eliminations. The subgroup's internal items are eliminated.

## Associated companies and joint ventures

## 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% 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 associated companies and joint ventures are processed using the equity method, and they are initially recognised 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 after the operating profit, which reflects the operative nature of these companies. Correspondingly, the Group's share of changes in other comprehensive income items of 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 associated companies and joint ventures. Unrealised gains 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.

EUR million	2022	2021
<b>Investments in associated companies and joint ventures</b>		
At 1 Jan.	63.6	69.3
Share of results	-4.8	-2.2
Dividends received	-0.2	-3.0
Increases	2.4	1.3
Decreases	-57.3	-1.7
Translations differences	0.0	0.0
At 31 Dec.	3.6	63.6
<b>Amounts in income statement</b>		
Associated companies	-1.4	3.3
Joint ventures	-3.3	-5.6
Total	-4.8	-2.2
<b>Amounts in balance sheet</b>		
Associated companies	1.0	60.0
Joint ventures	2.6	3.6
Total	3.6	63.6

On 11 February 2022, Metsäliitto Cooperative divested its entire holding (19.8%) in its associated company Finsilva Oyj to Dasos Capital Oy's forest fund. The Group recognised a capital gain of EUR 54.2 million before tax for the divestment.

On 31 October 2022, Metsäliitto Cooperative divested its entire holding (25%) in its associated company Suomen Metsäsijoitus Oy. The Group recognised a capital gain of EUR 6.6 million after tax for the divestment.

On 31 December 2022, Metsä Fibre sold its shares in Oy Botnia Mill Service Oy (50.17%) to Caverion Industria Oy. The Group recognised a capital loss of EUR 0.2 million.

On 17 November 2021, Metsä Group acquired Stora Enso's holding in Kemi Shipping Oy and now owns all of Kemi Shipping Oy. Kemi Shipping Oy was previously treated as a joint venture in in the Group's consolidated financial statements.

## Information on principal associated companies

EUR million	Business	Country	Holding, %	
			2022	2021
Finsilva Oyj	Forest	Finland		19.8

## Summary of financial information of principal associated companies

EUR million	2022	2021
<b>Finsilva Oyj</b>		
Sales		25.8
Result for the period		21.2
Dividends received from associated company		2.9
Non-current assets		452.6
Current assets		8.2
Non-current liabilities		196.1
Current liabilities		3.1
Net assets	0.0	261.6
Reconciliation of financial information against book value in group balance sheet:		
Group's share of net assets	0.0	51.7
Book value of associated company in balance sheet	0.0	51.7

## Summary of financial information of other than principal associated companies

EUR million	2022	2021
Group's share of results	-1.4	-0.8
Book value in group balance sheet	1.0	8.3

The Group's joint ventures are not material in terms of the notes.

## 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 merged with Metsä Board Corporation on 31 July 2022.

Employees of Oy Botnia Mill Service Oy who worked with the maintenance of Metsä Fibre's production facilities transferred to Metsä Fibre's service through a business transfer on 31 December 2022. The business transfer also involved the transfer of a small amount of fixed assets and inventories.

On 17 November 2021, Metsä Group acquired Stora Enso's holding in Kemi Shipping Oy and now owns all of Kemi Shipping Oy. Kemi Shipping Oy was previously treated as a joint venture in in the Group's consolidated financial statements. The impact of the revaluation of the previous holding and the difference on consolidation from the acquisition amount to a total of EUR 0.9 million, which has been recorded in other operating income.

According to the management's estimates, the impact of Kemi Shipping Oy on Metsä Group's sales or operating result in the period 1 January–31 December 2021 would have been minor had the acquisition been carried out on 1 January 2021.

There were no other business acquisitions in 2022 or 2021.

## Acquired businesses total

EUR million	Note	2022 Posted values	2021 Posted values
Other intangible assets	4.1	1.3	0.3
Tangible assets	4.2	31.1	5.9
Long term financial assets			0.2
Inventories		4.0	0.1
Accounts receivables and other receivables		3.2	1.9
Cash and cash equivalent		0.9	1.2
Total assets		40.6	9.6
Deferred tax liabilities		0.0	
Borrowings		18.4	3.1
Accounts payable and other liabilities		2.8	3.2
Total liabilities		21.2	6.3
Net assets		19.4	3.3
Previously owned share of net assets			1.7
Other operating costs		19.6	0.7
Other operating income		-0.2	0.9
Acquisition price		-19.6	-0.7
Cash and cash equivalents in subsidiaries		0.9	1.2
Net cash flow arising on acquisitions		-18.7	0.4

The book values of acquired assets and liabilities are equivalent to fair values.

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## Disposed operations

### Disposed subsidiaries, businesses and joint ventures

On 16 December 2021, Metsä Board and Euroports signed an agreement on Metsä Board selling all the shares of its fully owned subsidiary, Oy Hangö Stevedoring Ab, to Euroports Finland Oy. The transaction was carried out on 31 March 2022. A EUR 19.2 million capital gain was recognised in the result, and the transaction had a positive cash flow impact of EUR 24.5 million. In the 2021 financial statements, the balance sheet items of Oy Hangö Stevedoring Ab were presented as assets held for sale and recognised at book value.

Oy Hangö Stevedoring Ab's assets classified as held for sale total in 2021

EUR million	Note	2021
Other intangible assets	4.1	0.0
Tangible assets	4.2	8.6
Non-current financial assets		0.0
Tax receivables		0.2
Inventories		0.1
Accounts receivables and other receivables		2.1
Cash and cash equivalent	5.4	
<b>Total assets</b>		<b>11.0</b>
Deferred tax liabilities	6	0.4
Provisions	4.9	1.0
Borrowings	5.5	1.5
Accounts payables and other liabilities		3.9
Net cash flow arising on disposals		6.8

The Nordic real estate investment company NREP bought Metsä Group's head office in Tapiola, Espoo, in January 2021. In connection with the transaction, Metsäliitto Cooperative concluded a long-term lease agreement for the site. A EUR 1.6 million capital gain after tax was recognised in the result of the transaction, which had a positive cash flow impact of EUR 24.5 million. In addition, the buyer paid a EUR 3.7 million loan receivable in connection with the transaction. A EUR 25.8 million lease liability of the lease agreement was recognised in the Group's balance sheet. Of the capital gain, EUR 10.8 million was recognised in the acquisition cost of leased fixed asset items, which reduces future depreciations. The head office property was classified as an asset held for sale on 31 December 2020.

There were no other material business acquisitions in 2022 or 2021.

## Divested operations, total

EUR million	Note	2022	2021
Intangible assets and property, plant and equipment	4.1, 4.2	9.1	32.1
Non-current financial assets		0.0	0.0
Deferred tax receivables	6.	0.2	0.0
Inventories		0.0	
Current receivables		2.3	0.1
Financial assets		0.7	0.3
<b>Total assets</b>		<b>12.4</b>	<b>32.5</b>
Deferred tax liabilities	6.	0.4	
Provisions	4.9	1.0	0.2
Current borrowings		0.9	17.4
Current liabilities		4.1	0.1
<b>Total liabilities</b>		<b>6.3</b>	<b>17.8</b>
Net assets		6.0	14.8
Adjustment of capital gain on leased non-current asset			10.9
Expert fees paid		0.8	0.3
<b>Total</b>		<b>6.9</b>	<b>25.9</b>
Capital gain after tax		19.2	1.5
Transaction price paid in cash		26.1	25.2
Expert fees paid		-0.8	-0.3
Cash and cash equivalents of divested subsidiary		-0.7	-0.3
Repayment of current receivables			3.7
Cash flow impact		24.5	28.4

## 7.3 Related party transactions

The Group's related parties include associated companies and joint ventures. Also the members of the Board of Directors, the members of the Group Executive Management Team and the President and CEO as well as their close family members are considered as related parties. Transactions with related parties are based on market prices.

The management's salaries, remuneration and pension expenses are presented in Note 3.2.

### Transactions with associated companies and joint ventures

EUR million	2022	2021
Sales	12.9	17.8
Purchases	91.1	114.4
Non-current receivables	2.0	0.8
Accounts receivables and other receivables	2.4	4.5
Accounts payable and other liabilities	4.9	7.2

## 8. Other notes

### 8.1 Commitments and contingencies

#### Pending disputes

During the past few years companies belonging to Metsä Group have acted as sellers in many share transactions giving normal seller's securities. It is not impossible that demands against these companies are made regarding the given securities and that these securities could result in extra costs for the companies.

#### Contingent liabilities

EUR million	2022	2021
Own liabilities for which collateral has been provided	9.0	11.3
Floating charges	0.5	0.5
Chattels mortgages	0.6	0.8
<b>Total collateral provided for own liabilities</b>	<b>1.0</b>	<b>1.3</b>
Leases not yet commenced to which the Group is committed		18.0
Other commitments given on own behalf	8.5	22.7
Commitments given on the behalf of associated companies and joint ventures	0.1	0.1
<b>Total</b>	<b>9.6</b>	<b>42.0</b>

#### Commitments related to property, plant and equipment

EUR million	2022	2021
Payments due in following 12 months	576.6	738.8
Payments due later	7.9	414.7
<b>Total</b>	<b>584.5</b>	<b>1,153.5</b>

### 8.2 Events after the financial period

Metsä Group's innovation company Metsä Spring invested in Fiberwood, a start-up that develops new kinds of thermal insulation materials from the forest industry's side streams. Fiberwood's products offer a sustainable and natural alternative to mineral wool- and polystyrene-based insulation solutions. The company will begin constructing a test production line at its facilities in Järvenpää in Finland. Side streams from Metsä Group's mills can be used to produce insulation material. In addition to green construction, Fiberwood's fossil free material is used to develop cushioning for a variety of packages.

In February 2023, Metsä Tissue announced it would be increasing its production of fresh fibre tissue paper at the Mariestad mill in Sweden. The value of the investment, to be implemented in 2023–2025, is approximately EUR 370 million, making it one of Metsä Tissue's and the entire tissue paper industry's largest investments in Europe.

With the investment, Metsä Tissue will strengthen its position as a forerunner in tissue paper industry investments in Sweden and Scandinavia and contribute to the security of supply of key hygienic tissue paper products by expanding local production. The volume of tissue paper production will increase from approximately 75,000 tonnes at present to around 145,000 tonnes per year.

The mill expansion includes the construction of a new tissue paper machine, new converting lines, automated storage and new office facilities. The renewed mill will feature the best available technology, significantly improving environmental efficiency in terms of water, noise and atmospheric emissions. The environmental efficiency goals will also be supported by increased fresh fibre production. The investment will add around 100 new jobs at the mill, and indirectly around 2,000 person-years during construction.

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## Parent company income statement

(Finnish accounting standard, FAS)

EUR	Note	1.1.–31.12.2022	1.1.–31.12.2021
<b>SALES</b>	2	2,186,389,312.71	1,997,268,295.18
Change in stocks of finished and unfinished products		3,951,628.22	-836,621.99
Production for own use		135,780.11	170,948.18
Other operating income	3, 4	261,948,143.36	102,602,774.06
Materials and services			
Materials, consumables and goods			
Purchases during the financial period		-1,386,622,720.03	-1,330,745,563.54
Changes in inventories		3,013,418.45	15,448,473.58
External services	5	-553,025,679.69	-478,189,912.77
Employee costs	5	-173,637,718.52	-153,917,637.26
Depreciations and impairment charges	3, 6	-18,281,932.22	-19,399,470.54
Other operating expenses	3, 5	-120,391,156.32	-100,292,640.90
		-2,248,945,788.33	-2,067,096,751.43
<b>OPERATING RESULT</b>		203,479,076.07	32,108,644.00
Financial income and expenses	7		
Income from Group companies		200,604,561.46	65,373,856.06
Income from participating interest		185,000.00	3,009,641.25
Income from other financial investments		276.30	3,587,900.24
Other interest and financial income		3,924,611.45	994,867.33
Exchange rate differences		-1,261,362.79	952,115.17
Value adjustments on non-current investments		-5,560,359.25	0.00
Interest expenses and other financial expenses		-2,176,403.17	-1,843,388.55
		195,716,324.00	72,074,991.50
<b>RESULT BEFORE APPROPRIATIONS AND TAXES</b>		399,195,400.07	104,183,635.50
Appropriations			
Change in depreciation differences	6	-6,125,243.01	-10,665,452.52
Group contribution		-16,840,330.00	-1,765,000.00
		-22,965,573.01	-12,430,452.52
<b>INCOME TAXES</b>	8	-36,494,434.98	-4,008,306.87
<b>RESULT FOR THE FINANCIAL PERIOD</b>		339,735,392.08	87,744,876.11

## Parent company balance sheet

EUR	Note	31.12.2022	31.12.2021	EUR	Note	31.12.2022	31.12.2021
<b>ASSETS</b>				<b>MEMBERS' FUNDS AND LIABILITIES</b>			
<b>NON-CURRENT ASSETS</b>				<b>MEMBERS' FUNDS</b>	13		
<b>Intangible assets</b>	9			Members' capital			
Intangible assets		7,526,577.68	11,670,981.51	Participation shares		273,851,370.76	268,929,335.82
Other intangible assets		2,968,538.51	102,577.59	Additional shares Metsä1		828,201,282.95	0.00
Advance payment and construction in progress		71,918,252.01	22,228,644.50	Additional shares A		451,081,265.72	1,192,180,495.67
		82,413,368.20	34,002,203.60	Additional shares B		145,311,424.00	163,415,363.60
<b>Tangible assets</b>	9			Transfer of refundable members' capital to liabilities for the waiting period		-97,767,460.23	-123,180,005.60
Land and water areas		7,596,371.07	7,596,450.07	Other reserves			
Buildings and constructions		42,104,786.76	43,049,061.15	Reserve for invested unrestricted equity		500,569,772.06	500,333,298.63
Machinery and equipment		104,317,268.25	109,607,142.38	General reserve I		3,939,904.28	3,939,904.28
Other tangible assets		6,316,208.79	6,732,854.36	General reserve II		67,401,740.00	67,401,740.00
Advance payment and construction in progress		11,969,313.70	4,931,896.95	Value adjustment reserve		475,107.51	-681,648.37
		172,303,948.57	171,917,404.91	Retained earnings		439,867,075.52	444,573,381.29
<b>Investments</b>	10, 11, 20			Result for the financial period		<b>339,735,392.08</b>	<b>87,744,876.11</b>
Shares in Group companies		2,047,305,512.77	1,977,833,087.43			<b>2,952,666,874.65</b>	<b>2,604,656,741.43</b>
Receivables from Group companies		14,951,717.42	15,781,795.03				
Shares in Associated companies		941,409.81	7,671,974.36	<b>Appropriations</b>			
Other shares and holdings		2,059,972.42	2,071,493.91	Accumulated depreciation difference	6	<b>70,298,275.32</b>	<b>64,173,032.31</b>
		2,065,258,612.42	2,003,358,350.73				
<b>Total non-current assets</b>		<b>2,319,975,929.19</b>	<b>2,209,277,959.24</b>	<b>Provisions</b>	14	<b>706,507.26</b>	<b>308,716.92</b>
<b>CURRENT ASSETS</b>							
<b>Inventories</b>				<b>LIABILITIES</b>			
Materials and consumables		139,217,749.34	136,204,330.89	<b>Non-current liabilities</b>	16		
Unfinished products		2,305,719.60	1,872,788.11	Other liabilities		11,250,860.70	48,228,169.00
Finished products		10,043,435.21	6,524,738.47			11,250,860.70	48,228,169.00
Advance payments		29,740,028.56	38,508,999.92	<b>Current liabilities</b>	17		
		181,306,932.71	183,110,857.39	Loans from financial institutions		23.63	9,974.39
<b>Non-current receivables</b>	12			Advance payments		3,753,103.75	3,209,625.46
Receivables from Group companies		9,975,175.79	43,125,000.00	Accounts payable		171,945,256.33	138,971,000.78
Deferred tax	15	22,524.57	232,155.48	Payables to Group companies		44,847,390.27	18,224,398.68
Prepayments and accrued income		342,876.47	0.00	Payables to participating interest		421,560.47	649,535.83
		10,340,576.83	43,357,155.48	Other liabilities		101,268,415.15	87,399,005.12
<b>Current receivables</b>	12			Accruals and deferred income		159,829,233.24	118,338,295.84
Accounts receivables		79,159,701.44	69,265,384.27			482,064,982.84	366,801,836.10
Receivables from Group companies		907,013,723.21	564,551,540.01	<b>Total liabilities</b>		<b>493,315,843.54</b>	<b>415,030,005.10</b>
Receivables from Associated companies		1,134,002.86	1,657,616.98				
Other receivables		9,437,290.38	6,515,784.66	<b>TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES</b>		<b>3,516,987,500.77</b>	<b>3,084,168,495.76</b>
Prepayments and accrued income		8,617,546.85	6,432,197.73				
		1,005,362,264.74	648,422,523.65				
<b>Total receivables</b>		<b>1,015,702,841.57</b>	<b>691,779,679.13</b>				
<b>Cash and cash equivalents</b>		<b>1,797.30</b>	<b>0.00</b>				
<b>Total current assets</b>		<b>1,197,011,571.58</b>	<b>874,890,536.52</b>				
<b>TOTAL ASSETS</b>		<b>3,516,987,500.77</b>	<b>3,084,168,495.76</b>				

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# Parent company cash flow statement

EUR	31.12.2022	31.12.2021
<b>Cash flow from operating activities</b>		
Operating result	203,479,076.07	32,108,644.00
Adjustments to result <sup>a)</sup>	-121,501,764.00	12,984,412.69
Interest received	3,924,611.45	4,582,538.57
Interest paid	-1,705,959.83	-1,375,412.99
Dividends received	200,789,837.76	68,383,726.31
Other financial items, net	-1,121,998.33	-428,602.47
Income Taxes paid	-32,015,840.56	-2,831,311.38
Change in working capital <sup>b)</sup>	44,499,022.62	6,789,384.55
	296,346,985.18	120,213,379.28
<b>Cash flow arising from investing activities</b>		
Acquisition of shares	-73,101,950.18	-228,379,400.01
Investments in tangible and intangible assets	-67,234,389.91	-32,914,700.43
Proceeds from disposal of shares and businesses	146,679,549.25	26,752,088.74
Capital distribution	0.00	27,296,859.68
Proceeds from sale of tangible and intangible assets	2,158,250.00	2,395,703.23
Increase and decrease of non-current receivables, net	32,806,947.74	68,962,500.00
	41,308,406.90	-135,886,948.79
<b>Cash flow before financial activities</b>	<b>337,655,392.08</b>	<b>-15,673,569.51</b>
<b>Cash flow arising from financial activities</b>		
Interest paid on members' capital	-71,612,871.97	-66,277,120.72
Increase in non-current liabilities	0.00	-99,356.33
Increase or decrease in interest bearing current liabilities, net	-9,950.76	9,974.36
Increase or decrease in interest bearing current receivables, net	-320,329,114.81	-28,760,373.01
Increase in members' capital	54,298,342.76	110,545,392.65
	-337,653,594.78	15,418,516.95
<b>Change in cash and cash equivalents</b>	<b>1,797.30</b>	<b>-255,052.56</b>
Cash and cash equivalents at beginning of period	0.00	255,052.56
Change in cash and cash equivalents	1,797.30	-255,052.56
<b>Cash and cash equivalents at end of period</b>	<b>1,797.30</b>	<b>0.00</b>
<sup>a)</sup> Adjustments to operating result		
Depreciations and impairment charges	18,281,932.22	19,399,470.54
Gains or losses on sale of fixed assets	-140,181,486.56	-6,320,417.25
Change in provisions	397,790.34	-94,640.60
Total	-121,501,764.00	12,984,412.69
<sup>b)</sup> Change in working capital		
Inventories	1,603,421.78	-23,463,968.54
Current receivables, non-interest bearing	-36,132,364.50	-4,531,435.03
Current liabilities, non-interest bearing	79,027,965.34	34,784,788.12
Total	44,499,022.62	6,789,384.55

# Notes to the parent company financial statements

## 1. Accounting principles

Metsäliitto Cooperative's financial statements have been prepared in accordance with Finnish Accounting Standards (FAS).

## Transaction in foreign currency

Transactions in foreign currency have been recognised at the exchange rate on the day of the transaction. At the balance sheet date, receivables and liabilities denominated in foreign currency have been translated into euros at the exchange rate quoted by the European Central Bank at the balance sheet date. Net exchange gains/losses have been recognised to financial income and expenses in the income statement.

## Derivative financial instruments

Metsäliitto Cooperative is using derivative financial instruments only for hedging from currency, interest and commodity risks. As from the beginning of year 2018 financial derivatives has been valued to present value by using alternative procedure according to Finnish accounting act., chapter 5 § 2a. Governance and principles applied for financial derivatives has been introduced in Group financial statement notes of the accounts 5.6 and 5.7.

## Sales

Sales are calculated after deduction of indirect sales taxes, trade discounts and other items adjusting sales.

## Long-term compensations

Share-based payments and other long-term compensations are booked to period, where employee has indelible right to the granted shares. As from year 2022 other long-term compensations has been booked to period when right is born.

## Pensions and pension funding

Statutory pension security is handled by pension insurance companies outside the Metsä Group. In addition to statutory pension security, some salaried employees have supplementary pension arrangements which are either insured or are an unfunded liability of the company. Pension insurance premiums have been periodised to correspond to the accrual based wages and salaries given in the financial statements.

## Leasing

Lease payments are treated as rental expenses.

## Income taxes

Income tax in the income statement include the income tax of the taxable result for the period, adjustments to taxes of previous period and deferred taxes. Deferred taxes are calculated from temporary differences due to differences in assets and liabilities bookkeeping value compared to taxable value. Deferred tax has been calculated by using tax base confirmed by Finnish tax authorities.

## 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 machinery	10–40 years
Medium heavy machinery	10–20 years
Lightweight machinery and equipment	3–15 years
Other tangible assets	3–10 years

Depreciation is not recorded on the purchase cost of land and water areas.

## Inventories

Inventories are measured at acquisition cost or a lower net realisable value. In measuring inventories, the FIFO principle is observed or, alternatively, the weighted average price method. The acquisition cost of finished goods and work in progress include raw materials, direct wages and salaries, depreciation and other direct cost as well as a product focused share of variable and fixed production costs at normal level of production. Net realisable value is the estimated sales price less cost of production and sales.

## Provisions

Future costs and losses which no longer accrue any corresponding income and for the payment of which the parent company is obligated or committed and for which the monetary value can be reasonably assessed are included in the income statement under the appropriate expense item according to their nature and in the balance sheet under provisions.

## Appropriations

Finnish tax legislation offers the possibility to deduct expenses prematurely from the profit for the financial period and to transfer them to the balance sheet as provisions. The items are taken into account in tax filings only if they have been entered in the accounts. These items are presented in the appropriations in the income statement. The most substantial of these appropriations is the depreciation difference on fixed assets.

## Terminology

In its financial reporting, Metsäliitto Cooperative has started to primary use the word "result" to describe the financial result. Secondary the words "profit" or "loss" can be used, if the word "result" for some reason does not fit in the context. The term "surplus" and "deficit" can also be used if there is a need to show a connection to the Cooperatives Act or to the rules of the cooperative.

EUR 2022 2021

## 2. Sales by market area

	2022	2021
Finland	1,802,752,979.13	1,713,088,028.34
Other EU-countries	229,057,309.90	166,272,768.75
Other European countries	74,525,331.91	55,982,336.66
Other countries	80,053,691.77	61,925,161.43
Total	2,186,389,312.71	1,997,268,295.18

## 3. Extraordinary items

	2022	2021
Other operating income		
Gain on sales of apartment shares	0.00	5,449,630.69
Gain on sales of Finsilva Oyj shares	125,280,717.50	0.00
Gain on sales of Suomen metsäsijoitus Oy shares	13,088,717.95	0.00
	138,369,435.45	5,449,630.69
Other operating expenses		
Loss on sales of apartment shares	0.00	1,381,345.71
Value adjustment related to advance payments of Russia trade	290,703.60	0.00
Compensation for closing Operail waggon contract	1,029,127.50	0.00
	1,319,831.10	1,381,345.71
Extraordinary items in operating income	137,049,604.35	4,068,284.98

## 4. Other operating income

	2022	2021
Rental income, external	947,031.04	968,723.15
Service revenue, external	110,582,471.39	91,559,768.55
Gains from sale of tangible and intangible assets	140,413,930.81	7,711,986.51
Other operating income	10,004,710.12	2,362,295.85
Total	261,948,143.36	102,602,774.06

Gains on sales of assets include year 2022 EUR 125,280,717.50 gains on sales of Finsilva Oyj shares and EUR 13,088,717.95 gains on sales of Suomen Metsäsijoitus Oy shares.

## 5. Operating expenses

	2022	2021
External services		
Distribution costs	289,017,959.67	247,654,091.66
Other external services	264,007,720.02	230,535,821.11
Total	553,025,679.69	478,189,912.77
Employees costs		
Wages, salaries and fees	102,910,367.75	95,708,254.19
Share based expenses	70,034.63	4,104,996.98
Other long term expenses	16,532,686.00	3,662,859.64
Social security expenses		
Pension expenses	27,721,539.54	23,614,709.58
Other social security expenses	26,403,090.60	26,826,816.87
Total	173,637,718.52	153,917,637.26
Salaries and remunerations paid to management		
Chief Executive Officer and Managing director, Deputy Managing Director	3,818,928.67	3,437,716.23
Board members and executive group	698,154.39	675,440.00
Board of governors, fees	257,600.00	302,800.00
Total	4,774,683.06	4,415,956.23

From latest Share-based fee arrangement earning period 2019–2021 was paid total 307,351 Metsä Board B-series shares in year 2022.

Other long-term reward arrangement is 31.12.2022 concerning 46 persons of mother entity Metsäliitto Cooperative. From arrangement earning period 2020–2022 it is possible to earn total 690,285 synthetic shares, from earning period 2021–2023 total 695,420 synthetic shares and from earning period 2022–2024 total 685,663 synthetic shares.

Additional information of share-based payments are presented in Group's Note 3.3. and other fees paid to management are presented in Group's Note 3.4.

## Directors' pension commitments

President and CEO Ilkka Hämmälä's age of retirement is according to Finnish Act of employer retirement. Ilkka Hämmälä is also participant in arrangement

of Metsä Group directors benefit based additional pension. Based of additional pension arrangement the level of the President and CEO pension is maximum 60% of the total salaries under employee pension, which is calculated according to previous 5 year period salaries before retirement. If Presidents and CEO's employment in Metsä Group is terminated before retirement, he is entitled to paid-up policy. Some Metsäliitto Cooperative directors have, depending on employment start, separate benefit based additional pension insurance, where retirement age is 62 years.

Management's salaries, wages and pension commitments are presented in Group's Note 3.2.

The President and CEO, the members of the Board of Directors and their deputies and other similar institutions key persons have not been granted loans and no guarantees or other guarantees have been issued for them.

	2022	2021
<b>Average amount of personnel</b>	2,129	2,089

EUR	2022	2021
<b>Other operating expenses</b>		
Rents and other property expenses	9,389,236.02	8,727,782.66
Services bought	83,532,289.98	70,128,052.37
Loss on sale of non-current assets	31,941.35	1,391,569.26
Other operating expenses		
Voluntary social costs	4,804,201.46	4,299,283.52
Travel expenses	6,076,715.22	4,217,272.10
Advertising and marketing Costs	4,755,769.10	3,753,721.11
Other	11,801,003.19	7,774,959.88
Total	120,391,156.32	100,292,640.90
<b>Auditor's fee</b>		
Audit	230,000.00	208,369.08
Auditors' opinions	0.00	6,100.00
Tax services	13,500.00	0.00
Other service	339,383.85	134,928.75
Total	582,883.85	349,397.83

The auditor is KPMG Oy Ab.

EUR	2022	2021
<b>6. Depreciation and impairment charges</b>		
Depreciation according to plan		
Intangible rights	4,316,254.36	5,174,028.15
Goodwill	0.00	106,501.20
Other intangible assets	21,863.63	89,277.81
Buildings and constructions	2,697,883.14	2,672,424.26
Machinery and equipment	10,243,161.11	10,227,304.68
Other tangible assets	1,002,769.98	1,129,934.44
	18,281,932.22	19,399,470.54
Depreciations and impairment charges total	18,281,932.22	19,399,470.54
Change in depreciation differences	6,125,243.01	10,665,452.52
Total depreciation	24,407,175.23	30,064,923.06
Depreciation difference at the beginning of the financial year	64,173,032.31	53,507,579.79
Change in depreciation differences	6,125,243.01	10,665,452.52
Depreciation difference at the end of the financial year	70,298,275.32	64,173,032.31
<b>7. Financial income and expenses</b>		
Income from non-current investments		
Dividend income		
From Group companies	200,604,561.46	65,373,856.06
From participating interests	185,000.00	3,009,641.25
From others	276.30	229.00
Total	200,789,837.76	68,383,726.31
Interest income from non-current assets		
From Group companies	0.00	3,587,671.24
Total	0.00	3,587,671.24
Total income from non-current assets	200,789,837.76	71,971,397.55
Other interest and financial income		
Interest income from Group companies	3,895,438.13	959,333.55
Other interest income	29,173.32	35,533.78
Total	3,924,611.45	994,867.33
Exchange rate differences recognized in financial income and expenses		
Exchange rate differences on sales	-442,781.86	389,552.27
Exchange rate differences on purchases	-11,132.27	-18,671.28
Exchange rate differences on financing	-807,448.66	581,234.18
Total	-1,261,362.79	952,115.17
Impairments of investments in fixed assets	-5,560,359.25	0.00
Interest and other financial expenses		
Interest expenses for the same Group companies	-150,946.17	-63,328.64
Other interest expenses	-1,555,013.66	-1,312,084.35
Other financial expenses	-470,443.34	-467,975.56
Total	-2,176,403.17	-1,843,388.55
Financial income and expenses total	195,716,324.00	72,074,991.50

EUR	2022	2021
<b>8. Income taxes</b>		
Taxes for the period	36,572,587.80	3,959,759.64
Taxes for previous periods	1,405.24	-1,706.43
Deferred taxes	-79,558.06	18,928.11
Other direct taxes	0.00	31,325.55
Total	36,494,434.98	4,008,306.87

**9. Intangible and tangible assets**

<b>Intangible rights</b>		
Acquisition costs 1.1.	74,050,471.60	73,434,621.93
Increases	171,850.53	1,201,157.05
Decreases	-17,541,269.83	-722,307.38
Transfers between items	0.00	137,000.00
Acquisition costs 31.12.	56,681,052.30	74,050,471.60
Accumulated depreciation and impairment charges 1.1.	-62,379,490.09	-57,927,769.32
Accumulated depreciation of deductions and transfers	17,541,269.83	722,307.38
Depreciation and write-downs for the financial year	-4,316,254.36	-5,174,028.15
Accumulated depreciation and impairment on 31.12.	-49,154,474.62	-62,379,490.09
Book value 31.12.	7,526,577.68	11,670,981.51
<b>Goodwill</b>		
Acquisition costs 1.1.	0.00	1,074,965.47
Decreases	0.00	-1,074,965.47
Acquisition costs 31.12.	0.00	0.00
Accumulated depreciation and impairment charges 1.1.	0.00	-968,464.27
Accumulated depreciation of deductions and transfers	0.00	1,074,965.47
Depreciation and write-downs for the financial year	0.00	-106,501.20
Accumulated depreciation and impairment on 31.12.	0.00	0.00
Book value 31.12.	0.00	0.00
<b>Other intangible assets</b>		
Acquisition costs 1.1.	4,467,599.60	4,507,964.70
Increases	2,749,754.99	0.00
Decreases	-2,582,278.63	-40,365.10
Transfers between items	138,069.56	0.00
Acquisition costs 31.12.	4,773,145.52	4,467,599.60
Accumulated depreciation and impairment charges 1.1.	-4,365,022.01	-4,316,109.30
Accumulated depreciation of deductions and transfers	2,582,278.63	40,365.10
Depreciation and write-downs for the financial year	-21,863.63	-89,277.81
Accumulated depreciation and impairment on 31.12.	-1,804,607.01	-4,365,022.01
Book value 31.12.	2,968,538.51	102,577.59
<b>Advance payments and work in progress</b>		
Acquisition costs 1.1.	22,228,644.50	7,992,012.87
Increases	49,827,677.07	15,048,483.77
Decreases	0.00	-811,852.14
Transfers between items	-138,069.56	0.00
Acquisition costs 31.12.	71,918,252.01	22,228,644.50

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EUR	2022	2021
<b>Intangible assets total</b>		
Acquisition costs 1.1.	100,746,715.70	87,009,564.97
Increases	52,749,282.59	16,249,640.82
Decreases	-20,123,548.46	-2,649,490.09
Transfers between items	0.00	137,000.00
Acquisition costs 31.12.	133,372,449.83	100,746,715.70
Accumulated depreciation and impairment charges 1.1.	-66,744,512.10	-63,212,342.89
Accumulated depreciation of deductions and transfers	20,123,548.46	1,837,637.95
Depreciation and write-downs for the financial year	-4,338,117.99	-5,369,807.16
Accumulated depreciation and impairment on 31.12.	-50,959,081.63	-66,744,512.10
Book value 31.12.	82,413,368.20	34,002,203.60
<b>Land and water areas</b>		
Acquisition costs 1.1.	7,596,450.07	7,821,203.07
Increases	0.00	52,000.00
Decreases	-79.00	-276,753.00
Acquisition costs 31.12.	7,596,371.07	7,596,450.07
Accumulated depreciation and impairment on 31.12.	0.00	0.00
Book value 31.12.	7,596,371.07	7,596,450.07
<b>Buildings and constructions</b>		
Acquisition costs 1.1.	94,270,071.20	89,944,130.54
Increases	1,872,262.08	2,275,788.95
Decreases	-6,773,929.72	-256,735.02
Transfers between items	-118,287.02	2,306,886.73
Acquisition costs 31.12.	89,250,116.54	94,270,071.20
Accumulated depreciation and impairment charges 1.1.	-51,221,010.05	-48,805,320.81
Accumulated depreciation of deductions and transfers	6,773,563.41	256,735.02
Depreciation and write-downs for the financial year	-2,697,883.14	-2,672,424.26
Accumulated depreciation and impairment on 31.12.	-47,145,329.78	-51,221,010.05
Book value 31.12.	42,104,786.76	43,049,061.15
<b>Machinery and equipment</b>		
Acquisition costs 1.1.	327,613,986.34	319,800,225.86
Increases	2,082,279.04	10,657,942.93
Decreases	-5,178,441.03	-2,169,010.39
Transfers between items	3,024,306.96	-675,172.06
Acquisition costs 31.12.	327,542,131.31	327,613,986.34
Accumulated depreciation and impairment charges 1.1.	-218,006,843.96	-211,624,952.84
Accumulated depreciation of deductions and transfers	5,025,142.01	3,845,413.56
Depreciation and write-downs for the financial year	-10,243,161.11	-10,227,304.68
Accumulated depreciation and impairment on 31.12.	-223,224,863.06	-218,006,843.96
Book value 31.12.	104,317,268.25	109,607,142.38

EUR	2022	2021
<b>Other tangible assets</b>		
Acquisition costs 1.1.	19,092,073.06	17,536,610.32
Increases	233,731.54	106,362.75
Decreases	-1,707,305.54	-290,627.39
Transfers between items	353,397.97	1,739,727.38
Acquisition costs 31.12.	17,971,897.03	19,092,073.06
Accumulated depreciation and impairment charges 1.1.	-12,359,218.70	-9,841,298.09
Accumulated depreciation of deductions and transfers	1,706,300.44	-1,387,986.17
Depreciation and write-downs for the financial year	-1,002,769.98	-1,129,934.44
Accumulated depreciation and impairment on 31.12.	-11,655,688.24	-12,359,218.70
Book value 31.12.	6,316,208.79	6,732,854.36
<b>Advance payments and work in progress</b>		
Acquisition costs 1.1.	4,931,896.95	4,055,521.88
Increases	10,296,974.66	4,384,817.12
Decreases	-140.00	0.00
Transfers between items	-3,259,417.91	-3,508,442.05
Acquisition costs 31.12.	11,969,313.70	4,931,896.95
<b>Total tangible assets</b>		
Acquisition costs 1.1.	453,504,477.62	439,157,691.67
Increases	14,485,247.32	17,476,911.75
Decreases	-13,659,895.29	-2,993,125.80
Transfers between items	0.00	-137,000.00
Acquisition costs 31.12.	454,329,829.65	453,504,477.62
Accumulated depreciation and impairment charges 1.1.	-281,587,072.71	-270,271,571.74
Accumulated depreciation of deductions and transfers	13,505,005.86	2,714,162.41
Depreciation and write-downs for the financial year	-13,943,814.23	-14,029,663.38
Accumulated depreciation and impairment on 31.12.	-282,025,881.08	-281,587,072.71
Book value 31.12.	172,303,948.57	171,917,404.91

During years 2022 and 2021 interest expenses were not capitalised.

EUR	2022	2021
<b>10. Investments</b>		
<b>Shares in Group companies</b>		
Acquisitions costs 1.1.	1,977,833,087.43	1,776,982,843.13
Increases	76,586,828.61	229,707,315.00
Decreases	-7,114,403.27	-28,857,070.70
Acquisitions costs 31.12.	2,047,305,512.77	1,977,833,087.43
<b>Shares in participating companies</b>		
Acquisitions costs 1.1.	7,671,974.36	28,585,544.17
Decreases	-6,730,564.55	-20,913,569.81
Acquisitions costs 31.12.	941,409.81	7,671,974.36
<b>Other shares and holdings</b>		
Acquisitions costs 1.1.	2,071,493.91	1,789,124.40
Increases	4,930.30	357,000.01
Decreases	-16,451.79	-74,630.50
Acquisitions costs 31.12.	2,059,972.42	2,071,493.91
<b>Total investments and holdings</b>		
Acquisitions costs 1.1.	1,987,576,555.70	1,807,357,511.70
Increases	76,591,758.91	230,064,315.01
Decreases	-13,861,419.61	-49,845,271.01
Acquisitions costs 31.12.	2,050,306,895.00	1,987,576,555.70
<b>Receivables from Group companies</b>		
Acquisitions costs 1.1.	15,781,795.03	89,750,483.00
Increases	0.00	1,031,312.03
Decreases	-830,077.61	-75,000,000.00
Acquisitions costs 31.12.	14,951,717.42	15,781,795.03
<b>Receivables total</b>		
Acquisitions costs 1.1.	15,781,795.03	89,750,483.00
Decreases	-830,077.61	-75,000,000.00
Acquisitions costs 31.12.	14,951,717.42	15,781,795.03
<b>Investments total</b>		
Acquisitions costs 1.1.	2,003,358,350.73	1,897,107,994.70
Increases	76,591,758.91	231,095,627.04
Decreases	-14,691,497.22	-124,845,271.01
Acquisitions costs 31.12.	2,065,258,612.42	2,003,358,350.73

EUR	2022	2021
<b>11. Fair values of financial investment in non-current assets</b>		
<b>Stock exchange listed shares</b>		
Book value	686,017,012.10	626,193,432.79
Fair value	1,590,067,114.96	1,488,701,657.38
Difference	-904,050,102.86	-862,508,224.59
The fair value of the listed Metsä Board Corporation shares exceeds the book value by EUR 904.0 million at 31st December 2022.		
<b>12. Receivables</b>		
<b>Non-current receivables</b>		
Receivables from group companies		
Loans	9,975,175.79	43,125,000.00
Total	9,975,175.79	43,125,000.00
Receivables from others		
Deferred tax assets	22,524.57	232,155.48
Accrued income	342,876.47	0.00
Total	365,401.04	232,155.48
Total non-current receivables	10,340,576.83	43,357,155.48
<b>Current receivables</b>		
Receivables from group companies		
Accounts receivable	80,824,483.66	61,913,467.29
Loans	819,916,341.81	499,587,227.00
Prepayments and accrued income	6,272,897.74	3,050,845.72
Total	907,013,723.21	564,551,540.01
Receivables from participating companies		
Accounts receivable	1,134,002.86	1,657,616.98
Total	1,134,002.86	1,657,616.98
Receivables from others		
Accounts receivable	79,159,701.44	69,265,384.27
Other receivables	9,437,290.38	6,515,784.66
Prepayments and accrued income	8,617,546.85	6,432,197.73
Total	97,214,538.67	82,213,366.66
Total current receivables	1,005,362,264.74	648,422,523.65
<b>Accrued income from group companies, current, specification</b>		
Derivative receivables	844,780.01	366,383.89
Group contribution, receivable	0.00	205,000.00
Transfer pricing	1,323,937.99	0.00
ICT-services	3,521,511.83	1,941,129.83
Interest receivables	456,612.91	186,039.65
Others	126,055.00	352,292.35
Total	6,272,897.74	3,050,845.72
<b>Accrued income from others, current, specification</b>		
Insurances	0.00	26,897.98
License receivables	7,880,324.60	5,694,862.73
Others	737,222.25	710,437.02
Total	8,617,546.85	6,432,197.73
Total receivables	1,015,702,841.57	691,779,679.13

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EUR	2022	2021
<b>13. Members' funds</b>		
Members' capital		
Participation shares 1.1.	268,929,335.82	259,301,775.40
Paid-in members' capital	5,128,646.86	7,927,707.00
Subscription from interests to members' capital	1,447,836.87	641,255.99
Refund of members' capital	-7,941,144.41	-7,889,344.18
Accelerated refund of basic shares	6,286,695.62	8,947,941.61
Total *)	273,851,370.76	268,929,335.82
Transfer of refundable members' capital to liabilities for the waiting period	-1,368,725.78	-3,298,080.64
Participation shares 31.12.	272,482,644.98	265,631,255.18
Additional shares Metsä1 1.1.		
Paid-in additional shares	90,856,970.37	0.00
Subscription from interests to additional shares	31,717,159.00	0.00
Refund of surplus as additional shares Metsä1	6,820,033.00	0.00
Equity bonus based fund amendment	18,961,320.96	0.00
Modification from additional shares A	679,926,475.33	0.00
Refund of additional shares	-80,675.71	0.00
Total	828,201,282.95	0.00
Transfer of refundable members' capital to liabilities for the waiting period	-21,048,415.59	0.00
Additional shares Metsä1 31.12.	807,152,867.36	0.00
Additional shares A 1.1.	1,192,180,495.67	1,068,874,435.76
Paid-in additional shares	7,044,019.98	109,137,485.76
Subscription from interests to additional shares	0.00	43,432,746.00
Equity bonus based fund amendment	-16,759,486.92	7,017,476.17
Transfer to Metsä1 additional shares	-679,926,475.33	0.00
Refund of additional shares	-51,457,287.68	-36,281,648.02
Total	451,081,265.72	1,192,180,495.67
Transfer of refundable members' capital to liabilities for the waiting period	-16,133,372.16	-51,936,420.66
Additional shares A 31.12.	434,947,893.56	1,140,244,075.01
Additional shares B 1.1.	163,415,363.60	169,838,173.50
Paid-in additional shares	-2,021.30	4,474,874.60
Refund of additional shares	-18,101,918.30	-10,897,684.50
Total	145,311,424.00	163,415,363.60
Transfer of refundable members' capital to liabilities for the waiting period	-59,216,946.70	-67,945,504.30
Additional shares B 31.12.	86,094,477.30	95,469,859.30
Other reserves		
Reserve for invested unrestricted equity 1.1.	500,333,298.63	500,260,257.36
Refund of A-equity bonus	236,473.43	73,041.27
Reserve for invested unrestricted equity 31.12.	500,569,772.06	500,333,298.63
General reserve I 1.1.	3,939,904.28	3,939,904.28
General reserve I 31.12.	3,939,904.28	3,939,904.28
General reserve II 1.1.	67,401,740.00	67,401,740.00
General reserve II 31.12.	67,401,740.00	67,401,740.00
Value adjustment reserve 1.1.	-681,648.37	120,284.71
Addition	1,156,755.88	0.00
Decrease	0.00	-801,933.08
Value adjustment reserve 31.12.	475,107.51	-681,648.37

EUR	2022	2021
Profit/loss for previous financial year 1.1.	532,318,257.40	526,888,961.06
Interest paid	-71,612,871.97	-66,277,120.72
Refund of surplus	-7,800,063.90	0.00
Used for accelerated refund of participation shares	-6,286,695.62	-8,947,941.61
Used for A-equity bonus	-471,776.10	-7,090,517.44
Used to raise equity of Metsä1 additional shares	-6,279,774.29	0.00
Profit/loss for previous financial year 31.12.	439,867,075.52	444,573,381.29
Profit/loss for the period	339,735,392.08	87,744,876.11
Total members' funds	2,952,666,874.65	2,604,656,741.43
*) Unpaid participation shares		
Total called-up members' capital	223,054,033.00	219,839,012.00
Participation shares paid	-227,261,166.27	-223,492,406.00
Unpaid participation shares	-4,207,133.27	-3,653,394.00
The amount available for redemption of capital		
Participation shares**)	273,851,370.76	268,929,335.82
Additional shares Metsä1 **)	828,201,282.95	0.00
Additional shares A **)	451,081,265.72	1,192,180,495.67
Additional shares B **)	145,311,424.00	163,415,363.60
Reserve for invested unrestricted equity	500,569,772.06	500,333,298.63
Retained earnings	779,602,467.60	532,318,257.40
Depreciation difference less tax liability	56,238,620.26	51,338,425.85
Total	3,034,856,203.35	2,708,515,176.97
***) Transfer of refundable members' capital to liabilities for the waiting period	97,767,460.23	123,180,005.60

In accordance with Metsäliitto Cooperative's rules under Section 16 one third of the distributable funds shown in the balance sheet confirmed for the preceding financial period can be used for refunding of participation shares and additional shares.

Additional information of basic and additional shares has been introduced in Group financial statement note 5.1

**14. Provisions**

Provisions for pension		
1.1.	33,684.00	34,778.00
Increase	336.00	0.00
Decrease	0.00	-1,094.00
31.12.	34,020.00	33,684.00
Provisions for unemployment pension costs		
1.1.	151,032.92	244,579.52
Decrease	-9,545.66	-93,546.60
31.12.	141,487.26	151,032.92
Other provisions		
1.1.	124,000.00	124,000.00
Increase	407,000.00	0.00
31.12.	531,000.00	124,000.00
Total provisions		
1.1.	308,716.92	403,357.52
Increase	407,336.00	0.00
Decrease	-9,545.66	-94,640.60
31.12.	706,507.26	308,716.92

EUR	2022	2021
<b>15. Deferred tax receivables and liabilities</b>		
Deferred tax receivables		
Provisions	141,301.45	61,743.38
Financial instruments	0.00	170,412.10
Netting against liability	-118,776.88	0.00
<b>Total</b>	<b>22,524.57</b>	<b>232,155.48</b>
Deferred tax liabilities		
Financial instruments	-118,776.88	0.00
Netting against receivable	118,776.88	0.00
<b>Total</b>	<b>0.00</b>	<b>0.00</b>
Deferred tax receivables in balance sheet	22,524.57	232,155.48
Deferred tax of depreciation difference not posted to balance sheet in 2022 is 14.1 million euros (12.8).		
<b>16. Non-current liabilities</b>		
Liabilities to others		
Other liabilities		
Transfer of refundable members' capital to liabilities for the waiting period, additional shares B	11,250,860.70	48,228,169.00
<b>Total</b>	<b>11,250,860.70</b>	<b>48,228,169.00</b>
Total non-current liabilities	11,250,860.70	48,228,169.00

EUR	2022	2021
<b>17. Current liabilities</b>		
Liabilities from Group companies		
Advance payment	15,432,257.30	4,686,537.70
Accounts payable	12,283,877.03	10,203,677.30
Other liabilities	145,901.95	1,333,720.49
Accruals and deferred income	16,985,353.99	2,000,463.19
<b>Total</b>	<b>44,847,390.27</b>	<b>18,224,398.68</b>
Liabilities from participating interests		
Accounts payable	421,560.47	649,535.83
<b>Total</b>	<b>421,560.47</b>	<b>649,535.83</b>
Liabilities from other		
Advance payment	3,753,103.75	3,209,625.46
Accounts payable	171,945,256.33	138,971,000.78
Other liabilities		
Due members' capital transferred to liabilities during the waiting period	86,516,599.53	74,951,836.60
Other liabilities	14,751,839.25	12,457,142.91
Accruals and deferred income	159,829,233.24	118,338,295.84
<b>Total</b>	<b>436,796,032.10</b>	<b>347,927,901.59</b>
<b>Total current liabilities</b>	<b>482,064,982.84</b>	<b>366,801,836.10</b>
Current liabilities include due members' capital transferred to liabilities		
Participation shares	1,368,725.78	3,298,080.64
Additional shares Metsä-1	21,048,415.59	0.00
Additional shares A	16,133,372.16	51,936,420.66
Additional shares B	47,966,086.00	19,717,335.30
<b>Total</b>	<b>86,516,599.53</b>	<b>74,951,836.60</b>
Accruals and deferred income, current, external		
Personnel expenses	53,432,222.25	39,680,403.09
Accruals of purchases	79,865,836.87	63,462,870.71
Pension insurance premiums	2,996,463.18	2,661,077.95
Other insurance premiums	479,570.78	959,852.46
Others	23,055,140.16	11,574,091.63
<b>Total</b>	<b>159,829,233.24</b>	<b>118,338,295.84</b>

## 18. Financial Instruments

### Financial derivatives 2022

EUR	Nominal value	Fair value			Fair value	
		Assets	Liabilities	Fair value total	Fair value with Profit/Loss impact	with Fair value to Fair value reserve
<b>Currency derivatives total</b>	45,222,458.02	844,780.01	145,901.95	698,878.06	104,993.67	593,884.39
Derivatives total	45,222,458.02	844,780.01	145,901.95	698,878.06	104,993.67	593,884.39

### Financial derivatives 2021

EUR	Nominal value	Fair value			Fair value	
		Assets	Liabilities	Fair value total	Fair value with Profit/Loss impact	with Fair value to Fair value reserve
<b>Currency derivatives total</b>	72,157,122.64	366,383.89	1,333,720.49	-967,336.60	-115,276.14	-852,060.46
Derivatives total	72,157,122.64	366,383.89	1,333,720.49	-967,336.60	-115,276.14	-852,060.46

All derivative agreements of Metsäliitto Cooperative have been made in hedging purpose and cash flow hedge accounting according to IFRS 9 has been applied in major part of the agreements financial statements of Metsäliitto Cooperative. Only the part of currency derivatives that is related to hedging of accounts receivables and accounts payable is not directed to hedge accounting. Currency derivatives have been made to hedge Wood Products Industry's currency cash flow and they mature fully during 2023.

Description of Group finance risk control and principles applied to derivatives is added to Group financial statement notes 5.6 and 5.7.

### Fair values

EUR	The fair value hierarchy of financial assets and liabilities 2022				Total
	Level 1	Level 2	Level 3		
Financial liabilities recognised at fair value					
Derivative liabilities		145,901.95			145,901.95

EUR	The fair value hierarchy of financial assets and liabilities 2021				Total
	Level 1	Level 2	Level 3		
Financial liabilities recognised at fair value					
Derivative liabilities		1,333,720.49			1,333,720.49

Description of fair value financial assets and liabilities classification principles is added to Group financial statement note 5.7.

## 19. Commitments and contingencies

### Commitments and contingencies

During latest 12 months there has not been any legal proceedings or arbitrations that have or will have considerable impact on financial status of Metsäliitto Cooperative. Metsäliitto Cooperative has no information of any other future legal proceedings.

EUR	2022	2021
<b>Commitments and contingencies</b>		
For own and for affiliated companies		
Guarantees and counter-indemnities	588,529,812.00	556,116,913.00
Leasing commitments		
Less than 12 months	10,255,850.40	10,140,064.03
For later years	43,854,330.72	53,675,824.09
Total		
Guarantees and counter-indemnities	588,529,812.00	556,116,913.00
Leasing commitments	54,110,181.12	63,815,888.12
Commitments total	642,639,993.12	619,932,801.12
Investment commitments		
Less than 12 months	4,347,205.09	9,365,682.07
For later years	1,460,044.97	2,405,493.33
Total	5,807,250.06	11,771,175.40

## 20. Shares on 31 December 2022

	Country	Parent company share of ownership %	Group share ownership %	Number of shares	Net book value EUR
<b>Affiliated companies</b>					
Kemi Shipping Oy	Finland	100.00		280,000	3,022,400.00
Kumpuniemen Voima Oy	Finland	53.97		34	462,368.79
Metsä Forest Latvia SIA	Latvia	100.00		670	3,258,886.72
Metsä Board Oyj <sup>1)</sup>	Finland	50.16		177,339,302	686,017,012.10
Metsä Fibre Oy	Finland	50.10	62.59	38,135	769,718,680.09
Metsä Forest Eesti AS	Estonia	100.00		150,000	1,145,825.66
Metsä Forest Sverige AB	Sweden	100.00		5,000	702,510.62
Metsä Group Asia Co. Ltd	China	100.00			1,792,420.12
Metsä Group Services Sp. z.o.o.	Poland	100.00		100	1,999,627.68
Metsä Group Treasury Oy	Finland	100.00		50,000	10,236,220.47
Metsä Spring Oy	Finland	100.00		100	40,200,000.00
Metsä Tissue Oyj	Finland	100.00		9,118,588	453,329,696.96
Metsä Wood Deutschland GmbH	Germany	100.00			11,947,611.09
Metsä Wood Eesti AS	Estonia	100.00		1,000	30,000,000.00
Metsä Wood Holland B.V.	Netherlands	100.00			142,949.02
Metsä Wood Schweiz AG	Switzerland	100.00		200	750,000.00
Metsä Wood UK Ltd	Great Britain	100.00		30,000,000	32,579,303.45
Metsä Wood USA Inc.	USA	100.00		1,000	0.00
OOO Metsä Forest Podporozhye	Russia	100.00			0.00
OOO Metsä Forest St. Petersburg	Russia	100.00		100	0.00
<b>Total</b>					<b>2,047,305,512.77</b>

<sup>1)</sup> Parent company share of votes 68.24%

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Associated companies	Country	Parent company share of ownership %	Group share ownership %	Number of shares	Net book value EUR
Lohjan Biolämpö Oy	Finland	51.00		867,000	868,360.00
Metsäteho Oy	Finland	24.00		40	67,275.17
Perkaus Oy	Finland	33.33		2,500	5,774.64
<b>Total</b>					<b>941,409.81</b>

Other shares	Country	Parent company share of ownership %	Group share ownership %	Number of shares	Net book value EUR
Ab Sydösterbottens Ishall-Suupohjan Jäähalli Oy	Suomi	9.49		50	0.00
Asunto Oy Tapiolan Jalava, shares 2,107–2,219	Finland			113	592,857.42
Asunto Oy Tapiolan Jalava, shares 2,220–2,259	Finland			40	357,000.00
Asunto Oy Tapiolan Jalava, shares 417–528	Finland			112	562,647.36
Asunto Oy Tapiolan Jalava, storages	Finland				5,027.95
Asunto Oy Tapiolan Tammi, storages	Finland				445.60
Botniagolf Oy	Finland			1	0.00
China Office of Finnish Industries Oy	Finland			1	1000.00
CLIC Innovation Oy	Finland			119	150,000.00
E-P:n Sahojen Oy	Finland	2.22		8	0.00
Estonia Golf & Country Club	Estonia			2	23,851.54
Finnforest-Nexfor B.V.	Netherlands	100.00		90,000	0.00
Harjattula Golf Oy	Finland			1	8,543.96
Kainuun Puhelinosuuskunta (KPO)	Finland			3	905.69
Kerigolf Oy	Finland			2	504.56
Kiinteistö Oy Tapiolan Jalopuupysäköinti, ap 447	Finland			1	35,502.71
Kiinteistö Oy Tapiolan Jalopuupysäköinti, ap 448	Finland			1	35,502.71
Messilä Golf Oy	Finland			2	18,796.68
Misawa Homes of Finland	Finland			400	67,275.17
Osuuskunta KPY	Finland			100	0.00
Oy Nordgolf Ab	Finland			2	12,834.10
Oy Telefooni Invest Ab	Finland			2	0.01
Parikkalan Valo Oy	Finland			172	0.00
Pohjois-Hämeen Puhelin Oy	Finland			300	5,459.26
Pohjolan Voima Oy	Finland			3	1,320.80
Suomen Puukauppa Oy	Finland	10.5		1,401	157,435.30
Tawastia Colf & Country Club	Finland			1	17,497.14
Tennis Tapiola Oy	Finland			35	5,413.76
The Finnish Club and Sauna Ltd	Great Britain			100	150.70
Vapaa-ajan keskus Parra Oy	Finland	3.46		167	0.00
<b>Total</b>					<b>2,059,972.42</b>

# The Board of Directors' proposal for the distribution of profit

## ■ Metsäliitto Cooperative

	EUR
All the disposal of the Representative Council	
reserve for invested unrestricted equity	500,569,772.06
retained earnings from previous year	439,867,075.52
result for the period	339,735,392.08
distributable funds total	1,280,172,239.66

The Board of Directors proposes an interest of		
7.0% to be distributed on participation shares	15,766,629.48	
6.5% to be distributed on Metsä1 additional shares	50,029,423.71	
4.0% to be distributed on additional shares A	18,588,210.84	
1.0% to be distributed on additional shares B	1,481,799.28	85,866,063.31

The surplus reimbursement will be distributed in relation to amount of received industrial roundwood over the past 4 concluded financial periods	15,631,855.20
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to be retained in retained earnings	1,178,674,321.15
<b>Total</b>	<b>1,280,172,239.66</b>

If the Representative Council approves the above proposal, the members' funds will be

Members' funds	
Members' capital	
Participation shares	273,851,370.76
Metsä1-additional shares *)	842,348,111.91
Additional shares A *)	451,081,265.72
Additional shares B	145,311,424.00
Due members' capital transferred to liabilities for the waiting period	-97,767,460.23
Other reserves	
Reserve for invested unrestricted equity	500,569,772.06
General reserve I	3,939,904.28
General reserve II	67,401,740.00
Value adjustment reserve	475,107.51
Retained earnings	678,104,549.09
<b>Total members' funds</b>	<b>2,865,315,785.10</b>

\*) Does not include 1.1.2023 the transferred additional shares A to to Metsä1 additional shares

No material changes have been taken place in respect of the cooperative's financial position after the balance sheet date. The liquidity of the cooperative is good and in the opinion of the Board of Directors, the proposed profit distribution would not compromise the liquidity of the cooperative.

Espoo, 9 February 2023

Jussi Linnaranta Chair	Mikko Mäkimattila Deputy Chair	Taavi Heikkilä
Juha Parpala	Eija Pitkänen	Nina Pärssinen
Ilkka Salonen	Jussi Vanhanen	Ilkka Hämälä President and CEO

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# Auditor's Report

This document is an English translation of the Finnish auditor's report. Only the Finnish version of the report is legally binding.

To the members of Metsäliitto Cooperative

## Report on the Audit of the Financial Statements

### Opinion

We have audited the financial statements of Metsäliitto Cooperative (business identity code 0116300-4) 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 cooperative'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 cooperative'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 cooperative 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 cooperative 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 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.

THE KEY AUDIT MATTER	HOW THE MATTER WAS ADDRESSED IN THE AUDIT
<b>Valuation of tangible and intangible assets (Refer to notes 4.1 and 4.2 to the consolidated financial statements)</b>	
<p>Tangible and intangible assets total EUR 5.3 billion and represent 56 percent of the consolidated total assets. Thereof the carrying amount of goodwill is EUR 0.4 billion and carrying amount of construction in progress EUR 1.8 billion consisting of several significant investment projects.</p> <p>Tangible and intangible assets are allocated to cash-generating units and tested for impairment annually or more frequently if there are indications of impairment. 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 Cooperative'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>
<b>Valuation of inventories (Refer to note 4.5 to the consolidated financial statements)</b>	
<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 1.2 billion 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>
<b>Financial contracts and hedging instruments (Refer to notes 5.5, 5.6 and 5.7 to the consolidated financial statements)</b>	
<p>The financial liabilities amount to EUR 1.5 billion, accounting for 15 percent of the consolidated balance sheet. In addition, the Group has off-balance sheet committed credit facility agreements amounting to EUR 1.3 billion.</p> <p>The Group hedges financial risks with interest rate and foreign currency derivatives and their nominal values amounted to EUR 5.3 billion 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, selecting transactions for testing on a sample basis as well as reconciling the balance sheet values at the balance sheet date to external confirmations.</p> <p>In addition, we evaluated the adequacy of the disclosures relating to financial instruments.</p>
<b>Controls over financial reporting and related IT systems</b>	
<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 management and monitoring 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>

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## 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 cooperative'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 cooperative 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 cooperative'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 cooperative'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 cooperative 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 Representative Council of Metsäliitto Cooperative on 3 May 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 use of the surplus shown on the balance sheet is in compliance with the Cooperative Act. We support that the Members of the Supervisory Board and of the Board of Directors as well as the Managing Director of the parent cooperative should be discharged from liability for the financial period audited by us.

Helsinki, 9 February 2023  
KPMG Oy Ab

Kirsi Jantunen  
Authorized Public Accountant, KHT

## Comparable key ratios and calculation of key ratios

### Comparable key figures

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 Group's case International Financial Reporting Standards as adopted in the EU pursuant to Regulation (EC) No 1606/2002. Performance measures presented in this report qualify as alternative performance measures under the ESMA guidelines.

Metsä Group 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 utilization, operational profitability and debt servicing capabilities.

Reconciliation of operating result under IFRS and comparable operating result as well as EBITDA and comparative EBITDA is presented in this report. Comparable return on capital employed has been calculated using the same adjustments as the comparable operating result, and it has been further adjusted with financial items affecting comparability when applicable. Metsä Group considers the key figures derived in this manner to improve the 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 Group'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 operating result and EBITDA

#### Reconciliation by segment

EUR million	2022	2021
Operating result (IFRS)	1,301.9	873.6
Depreciation and impairment charges	334.5	340.1
EBITDA	1,636.4	1,213.7
Items affecting comparability:		
Forest and forest services industry	3.3	
Pulp and Sawn timber industry	34.4	
Paperboard Industry	-11.7	6.2
Tissue and Greaseproof Papers	-0.5	
Others and eliminations	-97.5	-8.7
Total	-72.0	-2.5
Comparable EBITDA	1,564.4	1,211.2
Depreciation and impairment charges	-334.5	-340.1
Items affecting comparability		
Depreciation:		
Tissue and Greaseproof Papers		
Impairment charges and reversals:	46.5	42.7
Forest and forest services industry	31.3	
Pulp and Sawn timber industry	14.2	34.5
Paperboard Industry	0.9	4.6
Others and eliminations		3.7
Comparable operating profit	1,276.4	913.8

#### Reconciliation by expense and income

EUR million	2022	2021
Operating result (IFRS)	1,301.9	873.6
Depreciation and impairment charges	334.5	340.1
EBITDA	1,636.4	1,213.7
Items affecting comparability		
Other operating income	-124.2	-12.2
Change in inventories	11.9	
Employee costs	8.1	
Other operating expenses	32.1	9.7
Total	-72.0	-2.5
Comparable EBITDA	1,564.4	1,211.2
Depreciation and impairment charges	-334.5	-340.1
Items affecting comparability		
Depreciation		
Impairment charges and reversals	46.5	42.7
Comparable operating profit	1,276.4	913.8

Items with "+" sign = expenses affecting comparability  
Items with "-" sign = income affecting comparability

The description of items affecting comparability is in Note 2.1, Segment information.

### Calculation of key ratios

Comparable key figures	Specification	The grounds for using key figures
<b>PROFITABILITY</b>		
Operating result	= $\frac{\text{Result before income tax, financial income and -expenses, exchange gains and losses and share of results from associated companies and joint ventures}}{\text{Members' funds total (average)}}$	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	= $\frac{\text{Operating result before depreciation, amortisation and impairment charges}}{\text{Members' funds total}}$	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 (%) ROE	= $\frac{\text{Result before tax - income taxes}}{\text{Members' funds total (average)}}$	The key figures describe the Group's ability to produce a profit with the assets invested in the Group by shareholders
Return on capital employed (%) ROCE	= $\frac{\text{Result before tax -/+ net exchange gains/losses + interest and other financial expenses}}{\text{Balance total - non-interest-bearing liabilities (average)}}$	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
<b>FINANCING</b>		
Equity ratio (%)	= $\frac{\text{Members' funds total}}{\text{Total assets - advance payments received}}$	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 (%)	= $\frac{\text{Interest-bearing net liabilities}}{\text{Members' funds total}}$	The key figure describes the Group's capital structure and financial position.
Interest-bearing net liabilities	= $\text{Interest-bearing liabilities - cash and cash equivalent - interest-bearing receivables}$	The key figure describes the Group's indebtedness
<b>OTHERS</b>		
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

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# Quarterly data

EUR Million	Yearly		Quarterly							
	2022	2021	Q4/2022	Q3/2022	Q2/2022	Q1/2022	Q4/2021	Q3/2021	Q2/2021	Q1/2021
<b>Income statement</b>										
<b>Sales by segments</b>										
Wood Supply and Forest Services	2,133.3	2,022.9	574.5	521.1	520.3	517.4	502.6	497.2	506.6	516.5
Wood Products Industry	662.3	580.0	157.4	159.9	174.5	170.4	141.3	141.8	156.2	140.7
Pulp and Sawn Timber Industry	3,070.7	2,628.1	756.1	833.7	808.3	672.6	721.5	693.1	652.3	561.1
Paperboard Industry	2,479.6	2,084.1	599.8	647.3	650.5	582.0	518.5	516.1	555.8	493.7
Tissue and Greaseproof Papers	1,197.0	946.7	344.3	316.7	281.3	254.7	259.2	239.4	224.5	223.6
Other operations	19.8	10.0	4.8	4.9	5.1	5.0	3.2	2.4	2.1	2.2
Eliminations	-2,582.5	-2,254.8	-695.5	-660.9	-617.8	-608.3	-586.1	-575.2	-555.3	-538.3
<b>Sales total</b>	<b>6,980.2</b>	<b>6,017.0</b>	<b>1,741.4</b>	<b>1,822.7</b>	<b>1,822.3</b>	<b>1,593.8</b>	<b>1,560.2</b>	<b>1,514.8</b>	<b>1,542.3</b>	<b>1,399.6</b>
<b>Operating result by segments</b>										
Wood Supply and Forest Services	-10.9	36.4	11.1	11.1	-38.6	5.6	10.0	11.3	6.7	8.4
Wood Products Industry	54.8	18.6	19.3	14.8	11.6	9.1	-0.7	5.4	6.8	7.0
Pulp and Sawn Timber Industry	845.5	613.7	215.1	290.6	184.4	155.4	182.3	225.9	168.0	37.6
Paperboard Industry	531.5	375.9	94.7	153.4	142.6	140.7	90.8	99.4	103.7	82.0
Tissue and Greaseproof Papers	-3.0	-9.7	28.8	-4.6	-9.2	-18.0	-23.2	-3.7	0.7	16.4
Other operations	111.5	-18.8	1.7	-3.8	-5.6	119.3	-9.5	-0.2	-1.4	-7.7
Eliminations	-227.6	-142.5	-54.7	-64.9	-37.3	-70.7	-28.6	-64.7	-41.3	-8.0
<b>Operating result total</b>	<b>1,301.9</b>	<b>873.6</b>	<b>315.9</b>	<b>396.7</b>	<b>248.0</b>	<b>341.3</b>	<b>221.2</b>	<b>273.4</b>	<b>243.2</b>	<b>135.8</b>
Operating result, comparable	1,276.4	913.8	310.9	391.1	330.2	244.2	219.8	278.0	242.1	173.9
-"-, % of sales	18.3	15.2	18.1	21.8	13.6	21.4	14.1	18.3	15.7	12.4
Share of results from associated companies and joint ventures	-4.8	-2.2	-0.1	-0.7	-2.7	-1.3	-0.8	-0.8	2.1	-2.7
Net exchange gains/losses	-4.6	-3.7	-4.7	4.6	-1.4	-3.0	-0.9	-0.1	-2.4	-0.3
Financial income and expenses	-22.8	-35.9	-1.8	-4.5	-9.4	-7.4	-4.0	-9.8	-10.6	-11.4
<b>Result before tax</b>	<b>1,269.8</b>	<b>831.7</b>	<b>309.2</b>	<b>396.1</b>	<b>234.4</b>	<b>329.6</b>	<b>215.4</b>	<b>262.6</b>	<b>232.3</b>	<b>121.4</b>
Income taxes	-271.1	-174.7	-55.7	-82.6	-62.4	-70.5	-51.1	-52.4	-47.8	-23.4
<b>Result for the period</b>	<b>998.7</b>	<b>657.0</b>	<b>253.6</b>	<b>313.6</b>	<b>172.1</b>	<b>259.1</b>	<b>164.3</b>	<b>210.2</b>	<b>184.5</b>	<b>98.0</b>
<b>Operating result, comparable</b>	<b>2022</b>	<b>2021</b>	<b>Q4/2022</b>	<b>Q3/2022</b>	<b>Q2/2022</b>	<b>Q1/2022</b>	<b>Q4/2021</b>	<b>Q3/2021</b>	<b>Q2/2021</b>	<b>Q1/2021</b>
Wood Supply and Forest Services	23.7	36.4	9.7	5.2	3.3	5.6	10.0	11.3	6.7	8.4
Wood Products Industry	54.8	18.6	19.3	14.8	11.6	9.1	-0.7	5.4	6.8	7.0
Pulp and Sawn Timber Industry	894.1	648.2	215.4	290.9	232.5	155.4	182.3	225.9	168.0	72.1
Paperboard Industry	520.7	386.6	100.8	152.5	145.9	121.5	91.3	104.0	102.5	88.8
Tissue and Greaseproof Papers	-3.4	-9.7	28.8	-4.6	-9.7	-18.0	-23.2	-3.7	0.7	16.4
Other operations and eliminations	-213.6	-166.3	-63.0	-67.7	-53.4	-29.4	-39.9	-64.9	-42.6	-18.9
<b>Total</b>	<b>1,276.4</b>	<b>913.8</b>	<b>310.9</b>	<b>391.1</b>	<b>330.2</b>	<b>244.2</b>	<b>219.8</b>	<b>278.0</b>	<b>242.1</b>	<b>173.9</b>
<b>Key ratios</b>	<b>2022</b>	<b>2021</b>	<b>Q4/2022</b>	<b>Q3/2022</b>	<b>Q2/2022</b>	<b>Q1/2022</b>	<b>Q4/2021</b>	<b>Q3/2021</b>	<b>Q2/2021</b>	<b>Q1/2021</b>
Equity ratio, %	60.6	61.1	60.6	60.2	59.7	59.9	61.1	60.5	59.5	57.6
Net gearing ratio, %	3	-4	3	1	1	-2	-4	-1	-1	-2
Interest-bearing net liabilities, EUR million	177	-185	177	82	47	-99	-185	-66	-59	-68
Return on capital employed, %	19.9	15.5	18.2	23.8	15.3	22.1	14.7	18.5	17.2	9.8
Comparable, %	19.5	16.2	18.0	23.5	20.5	15.8	14.7	18.8	17.2	12.6
Return on equity, %	19.0	15.1	18.2	23.7	13.6	21.1	13.9	18.5	17.1	9.7
Comparable ROE, %	18.9	16.0	18.1	23.0	19.9	15.2	14.6	18.8	17.0	12.7

# Five years in figures

EUR million	2022	2021	2020	2019	2018
Sales	6,980	6,017	5,055	5,473	5,709
EBITDA	1,636	1,214	679	790	1,128
-"-, comparable	1,564	1,211	671	799	1,133
- % of sales	22.4	20.1	13.3	15.0	19.9
Operating result	1,302	874	376	374	843
-"-, comparable	1,276	914	368	495	849
- % of sales	18.3	15.2	7.3	9.0	14.9
Result for the period	999	657	262	239	613
Non-current assets	5,835	4,561	3,899	3,867	4,019
Inventories	1,237	1,038	966	980	991
Other current assets	2,359	2,281	1,955	1,848	1,883
Total assets	9,415	7,891	6,851	6,727	6,893
Members' funds	4,135	3,574	3,092	2,927	2,751
Non-controlling interest	1,566	1,240	823	849	905
Non-current liabilities	1,596	1,281	1,515	1,561	1,506
Current liabilities	2,117	1,789	1,405	1,375	1,731
Total members' funds and liabilities	9,415	7,891	6,851	6,727	6,893
Return on capital employed, %	19.9	15.5	7.2	7.3	16.6
-"-, comparable	19.5	16.2	7.1	9.6	16.8
Return on equity, %	19.0	15.1	6.8	6.4	18.5
-"-, comparable	18.9	16.0	6.6	9.7	18.7
Equity ratio, %	60.6	61.1	57.2	56.2	53.1
Net gearing ratio, %	3	-4	4	10	13
Net cash flow from operating activities	1,227	1,023	667	485	761
Interest-bearing liabilities	1,457	1,164	1,389	1,469	1,553
Interest-bearing financial assets	1,280	1,348	1,221	1,096	1,089
Interest-bearing net liabilities	177	-185	168	374	463
Total investments	1,500	994	401	260	275
Depreciation and impairment charges	334	340	304	416	285
Personnel, average	9,587	9,619	9,392	9,624	9,464
Personnel, at the end of year	9,155	9,533	9,213	9,265	9,310
- of whom in Finland	5,135	5,329	5,055	4,929	4,834

Calculation of key ratios and definition of comparable key ratios is presented in part "Calculation of key figures".

# Corporate Governance Statement 2022

## ■ Introduction

This statement concerning Metsä Group's Corporate Governance has been given as a separate report and published simultaneously with Metsä Group's Financial Statements and the Board of Directors' Report. Metsäliitto Cooperative is a Finnish cooperative and the parent company of Metsä Group. In this statement, Metsäliitto Cooperative is referred to when a matter is discussed from the parent company's perspective only. The decision making and administration of Metsä Group companies complies with the Cooperatives Act, the Limited Liability Companies Act, the Securities Markets Act, the rules of the cooperative, procedures approved by the administrative bodies, and the policies and guidelines approved by the Board of Directors of Metsäliitto Cooperative and the Executive Management Team of the Group. Metsäliitto Cooperative's rules are available in full on Metsä Group's website under "Metsä Group's corporate governance principles". Metsä Group prepares its financial statements and interim reports in accordance with the International Financial Reporting Standards (IFRS). The financial statements are published in Finnish and English. Metsä Group's head office is located in Espoo, Finland. The registered office of the parent company, Metsäliitto Cooperative, is in Helsinki, Finland.

## ■ Corporate Governance Code

Metsä Group's parent company Metsäliitto Cooperative complies with the Finnish Corporate Governance Code issued by the Securities Market Association; however, it takes into account the special characteristics of the cooperative form of incorporation, stating the deviations from the code and their rationale. In accordance with the opinion issued by the Finnish Central Chamber of Commerce in January 2006, corporations with an extensive ownership base, extensive operations, or considerable regional or national significance should comply with the Corporate Governance Code to the extent possible, taking their special characteristics into consideration in accordance with the "comply or explain" principle. The Corporate Governance Code is available on the website of the Securities Market Association at [www.cgfinland.fi/en/](http://www.cgfinland.fi/en/). The corporate governance system of Metsä Group's parent company Metsäliitto Cooperative deviates from the recommendations of the Corporate Governance Code as follows:

- According to the Corporate Governance Code, the members of the Board of Directors are elected by the Annual General Meeting. According to the rules of Metsäliitto Cooperative, the members of the Board of Directors are elected by the Supervisory Board. Thus, the election of Metsäliitto Cooperative's Board of Directors deviates from the recommendation of the Corporate Governance Code on the election of the Board of Directors. The competence regulations that deviate from the recommendation ensure that cooperative corporate governance is realised.

- According to the Corporate Governance Code, the members of the Board of Directors are elected for a term of office of one (1) year at a time. According to the rules of Metsäliitto Cooperative, the term of office of the members of the Board of Directors is three years at a time. The board members' three-year term of office has been deemed necessary to secure the continuity of decision-making and board work.

## ■ Main administrative bodies

Metsäliitto Cooperative's administrative bodies are the Representative Council, Supervisory Board, Board of Directors and the CEO, who also acts as the President and CEO of Metsä Group. The bodies separately specified below in this statement assist the administrative bodies in their decision-making and prepare their decisions. According to the rules of Metsäliitto Cooperative, the administrative personnel of Metsäliitto Cooperative must not work for companies or other organisations operating either directly or indirectly in the same sector as the cooperative or its Group companies or participate in the administration of such companies or organisations.

### Representative Council

The Representative Council uses the supreme decision-making power belonging to the members in Metsäliitto Cooperative in matters assigned to it by law and rules. The Representative Council substitutes for the meeting of the cooperative in Metsäliitto Cooperative. The meeting of the Representative Council discusses the matters specified in the Cooperatives Act and the rules of Metsäliitto Cooperative, as well as other matters mentioned in the invitation to the meeting.

The main tasks of the Representative Council are to:

- Decide on adopting the financial statements;
- Decide on the distribution of profit to the members;
- Decide on discharging the Supervisory Board, Board of Directors and CEO/President and CEO from liability;
- Elect the members of the Supervisory Board and the auditors and decide on their remuneration.

A full member of Metsäliitto Cooperative can be elected to the Representative Council. Persons who are employed by the Cooperative or its Group company or who are members of Metsäliitto's Supervisory Board or Board of Directors are not eligible to stand for election to the Representative Council. The election of the Representative Council is carried out every four years by postal voting, a communications link or some other technical means. Each member has one vote. The election is carried out by election districts so that the number of representatives elected from each district equals the number of Metsäliitto Cooperative members on the list of voters for the district in question who are entitled

to vote on 1 January of the election year, divided by 2,300 and the remainder counted as one. The election districts are confirmed by the Supervisory Board, and they are determined according to Metsäliitto Cooperative's district organisations as a rule. In accordance with the rules, the Representative Council convenes once a year in the spring. The Representative Council, the Supervisory Board or the Board of Directors may decide to arrange an extraordinary meeting. An extraordinary meeting must also be convened if demanded by at least one tenth of the Representative Council members. Unless otherwise required by the Cooperatives Act for certain matters, the Representative Council is convened by the Supervisory Board at least seven days before the meeting with a written invitation to the meeting sent to every member of the Representative Council, which must mention the matters to be discussed in the meeting. Each Representative Council member has one vote in the meeting. Amending the rules of Metsäliitto Cooperative requires that the amendment proposal is supported by a minimum of two-thirds of the members present at the meeting of the Representative Council. In addition to the members of the Representative Council, the President and CEO of Metsä Group, the Chair of the Board of Directors and, as a general rule, the members of the Board of Directors and Supervisory Board are present at meetings of the Representative Council. In addition, the auditors are also present at the Annual General Meeting of the Representative Council. The composition of the Representative Council is presented on Metsä Group's website under "Management and administration".

### District Committees

In accordance with the rules of Metsäliitto Cooperative, there is a District Committee in each wood supply district. The District Committee comprises the members of the Representative Council, Supervisory Board and Board of Directors elected from the District's area, as well as candidates not elected in the election of the representative council, in the order of their personal number of votes. Each District has twice as many committee members as the number of representatives elected from the District's area, but always with a minimum of five (5) candidates not elected to the Representative Council in the election. The guidelines approved by the Supervisory Board specify the tasks of the District Committee. According to the regulations, the main task of the District Committee is to promote communication and interaction between the members and the Metsäliitto Cooperative wood supply district in question through its operations.

### Supervisory Board

The rules of Metsäliitto Cooperative specify that the Supervisory Board is a part of Metsäliitto's administrative model. This aims to ensure the realisation of sufficient governance by the owners and the commitment of the members to the Cooperative's decision-making. Strategic and

other far-reaching decisions, however, belong to the powers of Metsäliitto Cooperative's Board of Directors, and operational management to the executive management. The rules of the Cooperative specify the tasks of the Supervisory Board. The main task of the Supervisory Board is to ensure that the Cooperative is managed in accordance with the rules and the decisions of the Representative Council and the Supervisory Board.

In addition to this, the Supervisory Board:

- elects and dismisses members of the Board of Directors and decides on their remuneration;
- gives the Board of Directors instructions on far-reaching matters and matters that are of importance in principle;
- provides the Representative Council with an opinion on the financial statements.

The Supervisory Board elects a chair and deputy chair from among its members for one (1) year at a time and invites a secretary. The Supervisory Board convenes as summoned by the chair as often as necessary, or as proposed by the Board of Directors. The Supervisory Board constitutes a quorum when more than half the members are present. The opinion favoured by the majority will be the final decision. If the votes are even, the chair has the casting vote, and even elections are decided by lot. The Supervisory Board comprises a minimum of twenty and a maximum of thirty members elected by the Representative Council from among the members of the Cooperative. In addition, the Representative Council may, at the proposal of the Supervisory Board, elect a maximum of three expert members to the Supervisory Board. The term of office of a member of the Supervisory Board begins after the Annual General Meeting of the Representative Council that elected him or her and runs until the Annual General Meeting of the Representative Council three years later. The purpose of the three-year term of office is to ensure continuity in decision-making. Regional equality is taken into consideration when electing the members of the Supervisory Board. A member of the Board of Directors may not be a member of the Supervisory Board. The composition of the Supervisory Board is presented on Metsä Group's website under "Management and administration".

### Nomination Committee of the Supervisory Board

A special Nomination Committee elected from among the members of the Supervisory Board prepares the election of the members of the Board of Directors in accordance with procedures approved for it. In addition, the Nomination Committee makes a proposal for the fees paid to the Board of Directors. The Nomination Committee comprises six members of the Supervisory Board as well as the Chair and the Deputy Chair of the Supervisory Board. The Chair of the Supervisory Board acts as the Chair of the Nomination Committee, and the secretary of the Board of Directors

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acts as the secretary. The Committee may invite the Chair of the Board of Directors to attend their meetings as an expert member. The Supervisory Board elected the following persons to the Nomination Committee in its meeting held on 28 April 2022: Matti Alatalo, Mats Brandt, Jari Laineenoja, Pirkko Laitinen, Matti Turtiainen and Ilkka Uusitalo. Furthermore, Juha Paajanen, Chair of the Supervisory Board, and Ahti Siponen, Deputy Chair, are members of the Nomination Committee based on their positions.

#### Information on the meetings of the Supervisory Board in 2022

In 2022, the Supervisory Board had 34 members, four of them personnel representatives elected by different personnel groups. There were no expert members on the Supervisory Board in 2022. The Supervisory Board convened four times, and the members' attendance rate was 98%.

#### Board of Directors

According to the rules of Metsäliitto Cooperative and in accordance with legislation, the Board of Directors is charged with ensuring that Metsäliitto Cooperative and Metsä Group's operations and administration are appropriately arranged. The Board of Directors has drawn up a charter for its operations that specifies in greater detail the operating principles followed in the decision-making of the Board of Directors. The charter is available in full on Metsä Group's website under "Metsä Group's corporate governance principles."

The tasks of the Board of Directors include:

- Appointing and dismissing the CEO, who also serves as the President and CEO of Metsä Group, unless otherwise decided by the Board of Directors;
- Confirming the tasks of the CEO/President and CEO and the terms of the service contract, and monitoring that they take care of the Cooperative's running administration in accordance with the instructions and orders of the Board of Directors;
- Appointing and dismissing the directors immediately subordinate to the CEO and the President and CEO if appointed;

- Deciding on how share payments are collected and on the issue of additional shares and their terms and conditions;
- Approving the strategy and annual budget of the Cooperative and the Group, and supervising compliance with them;
- Signing the financial statements and consolidated financial statements, and presenting them to the Supervisory Board for audit;
- Preparing matters to be processed at the meetings of the Supervisory Board;
- Deciding on the remuneration and other benefits of the CEO/President and CEO and other senior management on the HR Committee's proposal;
- Deciding on other matters that, taking into account the extent and quality of the operations of the Cooperative, are unusual and far-reaching.

The Board of Directors elects a chair and a possible deputy chair from amongst its members for one year at a time. The chair of the Supervisory Board has the right to attend the Board of Directors' meetings. The Board of Directors convenes as summoned by the chair, as often as necessary. The President and CEO prepares the meetings of the Board of Directors. The Board of Directors is quorate when more than half the members of the Board are present. If the votes are equal, the chair has the casting vote. Minutes must be kept of the meetings of the Board of Directors. The Board of Directors regularly appraises its operation and procedures by conducting an annual self-assessment.

#### Composition and term of office of the Board of Directors

The Supervisory Board elects the Board of Directors of Metsäliitto Cooperative. The Board of Directors comprises a minimum of five and a maximum of eight members. As a rule, a Board member's term of office commences at the beginning of the calendar year following the meeting of the Supervisory Board that elected them and runs for three years at a time. When preparing the nominations of the members of the Board of

Directors, the Supervisory Board's Nomination Committee considers their qualifications, experience and available time, and also ensures that the composition of the Board includes diverse expertise. In 2022, the Chair of the Board of Directors was Jussi Linnaranta, the Deputy Chair was Timo Saukkonen, and the members were Taavi Heikkilä, Mikko Mäkimattila, Juha Parpala, Nina Pärssinen, Ilkka Salonen and Jussi Vanhanen. At its meeting held in October 2022, Metsäliitto Cooperative's Supervisory Board re-elected the outgoing members Jussi Linnaranta and Mikko Mäkimattila for a new three-year term and elected Eija Pitkänen as a new member. Timo Saukkonen retired from the Board of Directors on 31 December 2022.

According to the decision made by the Board of Directors in January 2023, the Chair of the Board of Directors in 2023 will be Jussi Linnaranta and the Deputy Chair will be Mikko Mäkimattila. Further details about the Board members are available on Metsä Group's website under "Management and administration".

#### Independence of Board members and diversity of the Board of the Directors

According to the overall evaluation by the Board of Directors, all members of the Board are independent of Metsäliitto Cooperative. The cooperative does not have such significant owner-members as referred to in the Corporate Governance Code of whom the members of the Board of Directors would be dependent. In December 2016, the Board of Directors approved the principles concerning the diversity of the Board of Directors. According to the principles, the successful management of the tasks of the Board of Directors and its committees requires a diverse composition, competence and experience, as well as the consideration of the personal qualities of individual members. Metsäliitto Cooperative has identified, in addition to knowledge of the forestry and forest industry sector, experience in demanding business management tasks and an international operating environment as essential in terms of the Board of Director's diversity. Other factors identified as promoting diversity include the board members' mutually complementary educational backgrounds, management experience in various segments of business operations, and a diverse age and gender distribution. It is Metsäliitto Cooperative's goal that both genders be represented on the Board of Directors. The Supervisory Board's Nomination Committee observes these principles when preparing proposals on the composition of the Board of Directors presented to the Supervisory Board. The Board of Directors was composed of eight members, most of whom have an academic degree. The members of the Board of Directors have significant experience in demanding governance and management duties from a number of sectors, and of international business operations. Several board members are distinguished members of society. The Supervisory Board's Nomination Committee observes the diversity principles and goals when preparing proposals on the composition of the Board of Directors.

#### Board Committees

In order to ensure that the Board of Directors' tasks are effectively carried out, Metsäliitto Cooperative's Board of Directors has an Audit Committee and an HR Committee. The committees do not have the authority to make decisions independently; the Board of Directors makes the decisions on matters based on the preparation of the Committees. The Board of Directors elects the members of the committees from among its members.

#### Audit Committee

The Audit Committee assists the Board of Directors in performing its supervision task. In this task, the committee assesses and supervises matters related to financial reporting, auditing, internal audit and risk management in accordance with procedures approved for it. The Audit Committee comprises a minimum of three members, most of whom are independent of the company, elected annually by the Board of Directors from among its members. In addition, the chair of the Supervisory Board has the right to attend the Audit Committee's meetings. The President and CEO and the Group's Chief Financial Officer also attend the meetings of the Audit Committee, except when the Audit Committee wishes to convene without the presence of the executive management. The Audit Committee regularly reports to the Board of Directors on its operations and observations. In 2022, the Chair of the Audit Committee was Ilkka Salonen. The other members of the committee in 2022 were Jussi Linnaranta, Mikko Mäkimattila and Jussi Vanhanen. They will all continue as members of the Audit Committee in 2023.

#### HR Committee

The purpose of the HR Committee is to assist the Board of Directors in ensuring that Metsä Group has appropriate and competitive incentive systems, and successor and development planning in accordance with the procedure approved by the Board of Directors. In its task, the committee presents matters such as the terms of the employment relationship of CEO and President and CEO, incentive systems for the senior management, and key principles in the senior management's contracts to the Board of Directors for decision. In addition, the HR Committee presents the annual targets for the senior management to the Board of Directors for approval and monitors their realisation. Furthermore, the committee processes matters related to the incentive systems of the senior management and presents them for the decision of the Board of Directors. The Board of Directors annually elects three members to the HR Committee from among its members. The majority of the members of the HR Committee must be independent of Metsä Group. The President and CEO and the Group's SVP, HR also attend the meetings of the HR Committee, except when the committee wishes to convene without the presence of the executive management. The HR Committee regularly reports to the Board of Directors on its operations. In 2022, the Chair of the HR Committee was Taavi Heikkilä, and the members were Jussi Linnaranta, Nina Pärssinen and Timo Saukkonen. Heikkilä will continue as the Chair of the committee in 2023. Linnaranta and Pärssinen will continue as members of the HR Committee in 2023. Eija Pitkänen was elected as a new member of the committee.

#### Information on the meetings of the Board of Directors and its Committees in 2022

The Board of Directors convened 17 times in 2022. Of the members of the Board, Linnaranta, Heikkilä, Mäkimattila, Salonen, Saukkonen and Vanhanen attended all the meetings. Parpala and Pärssinen attended 16 meetings. The Board members' attendance rate was 99%. The Audit Committee convened four times. The attendance rate of the members of the Audit Committee was 94%. The HR Committee convened six times, and the members' attendance rate was 100%.

#### Metsäliitto Cooperative's Board of Directors on 31 December 2021

Member of the Board of Directors	Member of the Board of Directors since	Year of birth	Education	Participation (own, under common ownership and by controlled corporations) in Metsäliitto Cooperative on 31 December 2022 (EUR)	Shares (own and by controlled corporations) in Metsä Board Corporation on 31 December 2022 (number of)
Jussi Linnaranta Chair	2017	1972	M.Sc. (Agriculture and Forestry), agronomist	239,539	29,801 (B share)
Timo Saukkonen Deputy Chair	2007	1963	M.Sc. (Agriculture and Forestry), forester	164,926	16,831 (B share)
Taavi Heikkilä	2021	1962	M.Sc. (Econ.), vuorineuvos (Finnish honorary title)	6,240	-
Mikko Mäkimattila	2020	1971	M.Sc. (Agriculture and Forestry), agronomist	115,899	-
Juha Parpala	2009	1967	Agrologist	49,972	1,087 (B share)
Nina Pärssinen	2021	1961	LL.M.	676	-
Ilkka Salonen	2018	1965	M.Sc. (Econ.)	114,655	-
Jussi Vanhanen	2021	1971	MBA, LL.M.	714	4,000 (B share)

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## President and CEO

Metsäliitto Cooperative has a CEO, who also acts as the President and CEO of Metsä Group, unless otherwise decided by the Board of Directors. Currently, the President and CEO of Metsä Group also acts as the CEO of Metsäliitto Cooperative. The President and CEO is appointed by the Board of Directors. The President and CEO is charged with the management of the operations of Metsä Group in accordance with the law and regulations, as well as the decisions and instructions of the governing bodies. The President and CEO is in charge of arranging the running administration of the cooperative and supervising its financial administration. President and CEO Ilkka Härmälä (M.Sc. (Eng.), born in 1961) has acted as the CEO of Metsäliitto Cooperative as of 1 January 2018 and as the President and CEO of Metsä Group since 1 April 2018. Further details about the President and CEO are available on Metsä Group's website under "Management and administration".

## Executive Management Team

Metsä Group has an Executive Management Team, with the Group's President and CEO as its chair. The Executive Management Team assists the President and CEO in the planning and operational management of business operations and prepares proposals for the Board of Directors, such as business strategies, budgets and significant investments. In addition to the President and CEO, the Executive Management Team includes the Group's CFO, the Group's Executive Vice President, Strategy, the Executive Vice Presidents of Metsä Forest and Metsä Wood, and the CEOs of Metsä Fibre Oy, Metsä Board Corporation and Metsä Tissue Corporation. The Executive Management Team convenes as summoned by the Chair, primarily once a month, and additionally whenever necessary. Metsä Group's Executive Management Team is composed of President and CEO Ilkka Härmälä, Vesa-Pekka Takala (Metsä Group's CFO, Deputy Managing Director of Metsäliitto Cooperative), Sari Pajari-Sederholm (Metsä Group's EVP, Strategy), Juha Jumppanen (EVP of Metsä Forest), Jaakko Anttila (EVP of Metsä Wood), Ismo Nousiainen (CEO of Metsä Fibre), Mika Joukio (CEO of Metsä Board Corporation) and Esa Kaikkonen

## Metsä Group's Executive Management Team on 31 December 2022

Member of the Executive Management Team (since)	Position at Metsä Group	Year of birth	Education	Participation (own, under common ownership and by controlled corporations) in Metsäliitto Cooperative on 31 December 2022 (EUR)	Shares (own and by controlled corporations) in Metsä Board Corporation on 31 December 2022 (number of)
Ilkka Härmälä (2008)	President and CEO	1961	M.Sc. (Eng.)	-	287,349 (B share)
Vesa-Pekka Takala (2010)	CFO, Metsä Group Deputy Managing Director Metsäliitto Cooperative	1966	M.Sc. (Econ.)	58,802	155,123 (B share)
Sari Pajari-Sederholm (2021)	Executive Vice President, Strategy	1968	M.Sc. (Eng.)	-	78,057 (B share)
Juha Mäntylä (2008)	COO, Metsäliitto Cooperative	1961	M.Sc. (agriculture and forestry)	612,255	265,659 (B share)
Juha Jumppanen (2022)	Executive Vice President, Metsä Forest	1977	M.Sc. (Agriculture and Forestry), forester	3,562	14,465 (B share)
Jaakko Anttila (2022)	Executive Vice President, Metsä Wood	1977	M.Sc. (Eng.)	-	21,282 (B share)
Ismo Nousiainen (2018)	CEO of Metsä Fibre	1966	M.Sc. (Eng.)	-	54,075 (B share)
Mika Joukio (2012)	CEO, Metsä Board Corporation	1964	M.Sc. (Eng.)	185,978	352,500 (B share)
Esa Kaikkonen (2008)	CEO, Metsä Tissue Corporation	1969	LL. M.	-	71,178 (B share)

(CEO of Metsä Tissue Corporation). Further details about the members of the Executive Management Team are available on Metsä Group's website under "Management and administration".

## Internal control, internal audit and risk management

Profitable business requires that operations are monitored continuously and with adequate efficiency. Metsä Group's internal control covers Metsä Group's business units and head office functions. Internal control produces transparency to the efficiency and appropriateness of internal operations, as well as the reliability of financial reporting and compliance with the relevant laws and regulations. The functionality of internal control is evaluated by Metsä Group's internal audit. Internal control is implemented throughout the organisation. Internal control methods include internal guidelines and reporting systems that support control. The principles, objectives and responsibilities of Metsä Group's internal control and the principles of internal audits are described below. Metsä Group's executive management, risk management director and internal audit are responsible for composing the principles above, and the Board of Directors for ultimately ratifying them.

## Internal control

In Metsä Group, internal control covers the control of financial and business operations from a risk-oriented perspective. Internal control is implemented by the Board of Directors, the Audit Committee and the executive management, as well as the entire personnel. Internal control refers to those management activities that seek to ensure:

- Metsä Group's corporate social responsibility performance;
- Achievement of the objectives set for Metsä Group and the economical, appropriate and efficient use of resources;
- Appropriate management of operational risks;
- Reliable and correct financial and other management information;
- Adherence to external regulations and internal policies;

- Good practices in relations with external stakeholders (e.g. suppliers, customers, social actors);
- Sufficient security of people, operations, information and property; and
- Arrangement of adequate and suitable manual and IT systems to support operations.

Internal control is divided into (i) proactive control, such as defining Metsä Group's values and general operational and business principles, as well as its goals and strategy; (ii) daily control, such as general control and follow-up with business processes, operational management systems and work guidelines; and (iii) subsequent control, such as different management evaluations and inspections, comparisons and verifications, the aim of which is to ensure that the goals are met and that the agreed operational and control principles are followed. Metsä Group's corporate culture, governance and the approach to control together create the basis for the entire process of internal control.

## Internal monitoring of the financial reporting process, credit control and authorisation rights

The financial organisations of the business areas and the Group are responsible for financial reporting. The units and business areas report the financial figures each month. Business area controllers check the monthly performance of units from each business area and report them further to the Group's financial administration. The profitability development and business risks and opportunities of business areas are discussed monthly at the meetings of Metsä Group's Executive Management Team attended by the senior management of Metsä Group and of each business area, as well as at financial management team meetings attended by the Group CFO and director of finance and the CFO of each business area, among others. The results are reported to the Board of Directors of Metsäliitto Cooperative each month. The results of the business areas are additionally reported to the Boards of Directors of their parent companies each month. Metsä Group's Controllers' Manual describes the reporting and control regulations and the reporting procedure in detail. Credit control in Metsä Group is carried out by each business area in accordance with the Group's credit control policy and the business area-specific credit control policy based on it. Credit control is carried out by the Group's central credit control organisation in cooperation with the management of the business areas. Authorisation rights concerning expenses, significant contracts and investments have been continuously specified for different organisation levels, according to the decision-making order confirmed by the board and the authority separately granted by the President and CEO and other management personnel. Investment approval and follow-up are carried out by the business areas and the group's financial administration according to the decision-making order and investment policy approved by the Board of Directors. The most significant investments are prepared in cooperation with the group's technology unit and, when required by the decision-making policy, submitted to the group's Executive Management Team for review and to the Board of Directors of the group's parent company or the business area's parent company for approval. The technology unit ensures that the final reporting and follow-up monitoring of these projects are implemented in accordance with the investment policy.

## Internal audit

Internal audit is an independent and objective assessment, assurance and consulting activity designed to add value to Metsä Group and improve its operations. Internal audit assists the Board in its supervisory role and supports Metsä Group 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. Audit work is carried out in compliance with the internal audit guideline ratified by the Audit Committee. The internal audit function reports to the Audit Committee on operations and to the President and CEO on administration. Internal audit draws up a six-monthly action plan which is approved by the Audit Committee. The audit work is risk-based and focuses on the Group's activities and units that are considered to be key to achieving the objectives set for the operations. Internal audit, in cooperation with the audit function, ensures that the plans are coordinated to allow adequate coverage of audit work and to avoid duplication of work. Similarly, cooperation is carried out with other assurance functions within the Group, such as risk management, internal controls and compliance. An audit report on the results of the audit is shared with the Group's President and CEO, the CFO, the management of the audited entity and the persons in charge. The audit reports are provided to the auditor. Internal audit 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.

An annual summary report of the internal audit activities is prepared for the Board of Directors.

## Risk management

Risk management is an essential part of Metsä Group's standard business planning and leadership. Risk management is part of daily decision-making, operations follow-up and internal control, and it promotes the objectives set by the company and ensures that they are met. Linking business management effectively with risk management is based on the operational principles confirmed by Metsäliitto Cooperative's Board of Directors. The aim of the principles is to maintain risk management as a process that is well defined, understandable and sufficiently practical. Risks and their development are reported on a regular basis to the board's Audit Committee. Centralised risk management also takes care of the coordination and competitive bidding for Metsä Group's insurance coverage. The most crucial objective of risk management is to identify and evaluate those risks, threats and opportunities that may have an impact on the implementation of the strategy and on the achievement of short-term and long-term objectives. The most significant investment proposals also include a separate risk review. The business areas regularly evaluate and monitor the risk environment and related changes as part of their annual and strategic planning. The risks identified and their means of control are reported to the company's management, Audit Committee and Board of Directors 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.

## Risk management responsibilities

Risk management responsibilities in Metsä Group are divided as follows:

- The Board of Directors is responsible for Metsä Group's risk management and confirms the company's risk management policy
- The Audit Committee evaluates the adequacy of Metsä Group's risk management and the essential risk areas and provides the Board with related proposals.
- The President and CEO and the members of the Executive 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 Group's risk management director is in charge of the development and coordination of the risk management process, the performance of the risk assessment and essential insurance decisions.
- Business areas and Group Services identify and evaluate the essential risks related to their own areas of responsibility in their planning processes, prepare for them, take the necessary preventive action and report on the risks as agreed.

## Risk management process

The essential elements of Metsä Group's risk management include implementing a comprehensive corporate risk management process that supports the entire business, protecting property and ensuring business continuity, Metsä Group's 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.

The tasks of risk management are to:

- Ensure that all 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 on the basis of best available information and financial aspects;
- Ensure that Metsä Group's objectives are met;
- Fulfil the expectations of stakeholders;
- Protect property and ensure disruption-free business continuity;

- Optimise the profit/loss possibility ratio;
- Ensure the management of Metsä Group's overall risk exposure and minimise the overall risks.

The most significant risks and uncertainties that Metsä Group is aware of are described in the report of the Board of Directors.

## Insider guidelines

Metsä Group complies with the EU's market abuse regulation (Regulation (EU) No 596/2014 of the European Parliament and of the Council; hereinafter referred to as "MAR"), securities market legislation, and the insider guidelines of the parent company Metsäliitto Cooperative and the subsidiary Metsä Board Corporation, prepared in accordance with rules and instructions drawn up by the Helsinki stock exchange. Metsä Group requires every employee to follow the insider regulations. Under Article 14 of MAR and Chapter 51 of the Criminal Code of Finland, a person in possession of insider information may not: (i) engage or attempt to engage in insider dealing by acquiring or disposing of the company's financial instruments under their own or a third party's name; (ii) recommend that another person engage in insider dealing or induce another person to engage in insider dealing; or (iii) disclose inside information to another person unless this occurs as part of the normal performance of work, tasks or the profession. Insider guidelines aim to enable the people considered the company's insiders to hold shares in the company openly while maintaining public trust in trading and price formation with the company's securities. Metsä Group only recommends long-term investments and the use of purchase programmes. Insiders are provided with instructions and training at frequent intervals. Following MAR's entry into force on 3 July 2016, Metsä Group companies no longer have public insiders, nor do they maintain permanent company-specific insider registers, but rather only project- or event-specific insider lists. The lists include information on persons participating in insider projects who are not allowed to trade the financial instruments of the company in question during the project. Metsäliitto Cooperative has defined its managers as referred to in MAR to include the members of the Supervisory Board, the members of the Board of Directors, and the President and CEO. The managers in question and their related parties are obligated to inform the company and the Financial Supervisory Authority of their transactions in Metsäliitto Cooperative's

financial instruments, and Metsäliitto Cooperative will publish such transactions as stock exchange releases. The aforementioned persons are subject to a closed period of 30 calendar days prior to the publication of Metsä Group's interim reports and financial statements, during which time the managers may not trade in Metsäliitto Cooperative's financial instruments. In addition to the managers subject to the disclosure obligation the company specifies such other persons who, in the course of their duties, participate in the preparation of interim reports and financial statements and may not trade in Metsäliitto Cooperative's financial instruments during the closed period. Metsäliitto Cooperative did not have any traded financial instruments in circulation on a regulated market on 31/12/2022. Metsä Board Corporation has defined its managers as referred to in MAR to include the members of the Board of Directors and the President and CEO. The managers in question and their related parties are obligated to inform the company and the Financial Supervisory Authority of their transactions concerning Metsä Board's shares and financial instruments, and Metsä Board will publish such transactions as stock exchange releases. The aforementioned persons are subject to a closed period of 30 calendar days prior to the publication of Metsä Group's interim reports and financial statements, during which time the managers may not trade Metsä Board's financial instruments. In addition to the managers subject to the disclosure obligation, the company specifies such other persons who, in the course of their duties, participate in the preparation of interim reports and financial statements and may not trade Metsä Board's shares or financial instruments during the closed period.

## Related party transactions

Metsäliitto Cooperative and its Group companies assess and monitor related party transactions. Related parties are determined in accordance with International Accounting Standards (IAS 24), and they include, among others, all group companies and the members of the Board of Directors and the Executive Management Team, as well as their immediate family members. Any conflicts of interest are taken into account in decision-making and, in accordance with the Corporate Governance Code, each Group company maintains a list of the members of its related parties. Transactions between Group companies are carried out on an arm's length basis and, where necessary, external valuations are also used to prepare decisions on related party transactions.

## Audit

According to the rules of Metsäliitto Cooperative, Metsäliitto Cooperative has one auditor, which must be an auditing firm authorised by the Finland Chamber of Commerce. The Representative Council elects the auditor to review the accounts for the year underway, and their task ends at the closure of the next annual meeting of the Representative Council. The task of the auditor is to audit the financial statements and accounting of the Group and the parent company and the administration of the parent company. The auditor provides a statutory auditor's report to the members of Metsäliitto Cooperative in connection with the annual financial statements and regularly reports on their observations to the Board of Directors and the management of Metsä Group. In accordance with the resolution of the Representative Council meeting in the spring of 2022, Metsäliitto Cooperative's auditor for 2022 is KPMG Oy Ab, firm of authorised public accountants, with Kirsi Jantunen, APA, as the Auditor-in-Charge. In 2022, companies belonging to Metsä Group paid a total of EUR 1,502,000 (EUR 1,300,000 in 2021) in audit fees to KPMG in Finland and internationally and a total of EUR 97,000 (79,000) to other audit firms. In addition, KPMG was paid EUR 411,000 (271,000) in Finland and internationally for services not related to the actual audit, while other audit firms were paid EUR 1,676,000 (1,287,000).

# Metsäliitto Cooperative's Representative Council

Members of Metsäliitto Cooperative elect a Representative Council from among the members every four years by mail, telecommunications or by some other technical device. The Representative Council is the highest decision-making body.

<b>Aikio Kaarlo</b>	Forestry Engineer	Kuusamo
<b>Airaksinen Seppo</b>	Forest Owner	Vantaa
<b>Anttila Juha</b>	Farmer	Mänttä-Vilppula
<b>Björknäs Roger</b>	Farmer	Kristiinankaupunki
<b>Finne Christer</b>	Farmer	Mustasaari
<b>Halkilahti Jaakko</b>	Farmer	Salo
<b>Hall Hans</b>	Farming Entrepreneur	Leppävirta
<b>Havanka Pentti</b>	Logger, Smallholder farmer	Ruovesi
<b>Isomuotia Harri</b>	Forester	Hämeenkyrö
<b>Kallio Maarit</b>	Agrologist, Farmer	Sastamala
<b>Kiviranta Esko</b>	Farmer, Senior Lawyer	Sauvo
<b>Korpela Liisa</b>	Forester, Rural Entrepreneur	Kärkölä
<b>Koskinen Jaakko</b>	Farming Entrepreneur	Hamina
<b>Könönen Katri</b>	Farmer	Tohmajärvi
<b>Körhämö Jani</b>	Forester, Game manager	Pälkäne
<b>Laitinen Markku</b>	Farming and Forestry Entrepreneur	Kangasniemi
<b>Laukkanen Mika</b>	Farming and Forestry Entrepreneur	Tuusniemi
<b>Leikola Mikko</b>	Farmer	Lohja
<b>Lyömiö Matti</b>	Agrologist	Mäntyharju
<b>Miettinen Petri</b>	Farming Entrepreneur	Juva
<b>Mikkonen Eeva</b>	Forestry Engineer, Salesperson	Rääkkylä
<b>Moilanen Heli</b>	Public Health Nurse	Paltamo
<b>Moilanen Jussi</b>	Forest Technician	Suomussalmi
<b>Morri Tiina</b>	Forestry Entrepreneur	Virrat
<b>Nyman Jan-Ove</b>	Agronomist	Kokkola
<b>Orjala Jari</b>	Farming Entrepreneur, Full-time Teacher	Kannus

<b>Palohuhta Reijo</b>	Forestry Entrepreneur	Evijärvi
<b>Perttu Antti-Jussi</b>	Bachelor of Natural Resources, Farming Entrepreneur	Eura
<b>Pietilä Juho</b>	Farming Entrepreneur	Loimaa
<b>Pietilä Timo</b>	Forestry Engineer, Pensioner	Liminka
<b>Purhonen Petri</b>	Farmer	Enonkoski
<b>Pättilä Antti</b>	Forester	Iisalmi
<b>Raininko Tuomo</b>	Farming and Forestry Entrepreneur	Kankaanpää
<b>Ryymän Jaakko</b>	Forest Owner	Iisalmi
<b>Saari Ensio</b>	Forestry Engineer	Isokyrö
<b>Saatsi Esko</b>	Rural Director	Nurmes
<b>Saviniemi Timo</b>	Farming and Forestry Entrepreneur	Hämeenlinna
<b>Savola Mikko</b>	Member of Parliament	Ähtäri
<b>Soronen Mauno</b>	Vicar	Haapavesi
<b>Stenman-Kässi Liisa</b>	Agrologist	Uurainen
<b>Säynätjoki Ilkka</b>	Farmer	Kuhmoinen
<b>Tapaninen Teuvo</b>	Pensioner	Sodankylä
<b>Tiusanen Matti</b>	Farming and Forestry Entrepreneur	Äänekoski
<b>Torppa Pekka</b>	Farmer	Toivakka
<b>Tyskas Kim</b>	Farmer, Salesperson	Lapinjärvi
<b>Törmikoski Jari</b>	Farmer	Raahelä
<b>Uotila Kirsi</b>	Forestry Entrepreneur	Helsinki
<b>Vuorela Jorma</b>	Farmer	Kurikka
<b>Yli-Antola Kimmo</b>	Farming and Forestry Entrepreneur	Laitila
<b>Yli-Korhonen Jarmo</b>	Farmer	Kauhajoki
<b>Ylimartimo Aatto</b>	Farmer	Tervola
<b>Ylä-Outinen Päivi</b>	Farmer	Lappeenranta

# Metsäliitto Cooperative's Supervisory Board

The Supervisory Board's duty is to supervise the appropriate management of Metsäliitto Cooperative in compliance with the relevant regulations, the Supervisory Board's decisions, and in the interests of Metsäliitto Cooperative. It also supervises the implementation of the Representative Council's decisions and elects Metsäliitto Cooperative's Board of Directors.

Chair		Deputy Chair			
<b>Paajanen Juha</b>	Farming and Forestry Entrepreneur	Savonlinna	<b>Siponen Ahti</b> Master of Social Sciences	Kiuruvesi	
<b>Members</b>					
<b>Alatalo Matti</b>	Farmer	Soini	<b>Lauttia Petri</b>	Farmer	Hämeenlinna
<b>Brandt Mats</b>	Agrologist	Kokkola	<b>Lillandt Anders</b>	Farmer	Kristiinankaupunki
<b>Haikkonen Aila</b>	Master of Science, Farming Entrepreneur	Pori	<b>Lukkarinen Jouni</b>	Farming Entrepreneur	Pielavesi
<b>Hatva Teuvo</b>	Forestry Entrepreneur	Kajaani	<b>Mulari Keijo</b>	Farming Entrepreneur	Suomussalmi
<b>Haukilahti Tapani</b>	Farmer	Veteli	<b>Mäkinen Laura</b>	Engineer	Petäjävesi
<b>Hiekkä Matti</b>	Farmer, Entrepreneur	Ikaalinen	<b>Niemelä Henry</b>	Farmer	Lapua
<b>Hirvonen Ville</b>	Agrologist	Rääkkylä	<b>Pekonen Kari</b>	Farming Entrepreneur	Parikkala
<b>Ketola Jyrki</b>	Director	Helsinki	<b>Rousu Simo</b>	Forestry Entrepreneur	Ylitornio
<b>Kontinen Kati</b>	Forester	Mikkeli	<b>Sarvijärvi Janne</b>	Farming Entrepreneur	Ylöjärvi
<b>Kulmala Airi</b>	Specialist, Farmer	Nousiainen	<b>Savolainen Jyrki</b>	Farmer	Laukaa
<b>Laatikainen Markus</b>	Executive Manager	Posio	<b>Turtiainen Matti</b>	Master of Science (Agr. and For.), Agronomist	Savonlinna
<b>Laineenoja Jari</b>	Agronomist, Financing Manager	Huittinen	<b>Uusitalo Ilkka</b>	Farmer	Salo
<b>Laitinen Pirkko</b>	Agronomist	Utajärvi	<b>Virmala Jukka</b>	Entrepreneur	Kurikka
<b>Lalli Jarmo</b>	Farming Entrepreneur	Pöytyä	<b>Wasström Anders</b>	Farming Entrepreneur	Raasepori
<b>Personnel representatives</b>					
<b>Hämäläinen Jari</b>	Production foreman	Savonlinna			
<b>Koljonen Timo</b>	Solution Owner	Helsinki			
<b>Kuhlampi Rauno</b>	Forest Specialist, Wood trade and Forest Services	Seinäjoki			
<b>Kääriäinen Osmo</b>	Chief Shop Steward	Sumiainen			

# Metsäliitto Cooperative's Board of Directors

## JUSSI LINNARANTA

b. 1972

M.Sc (Agriculture and Forestry)  
Agronomist  
Member of the Board since 2017,  
Chairman of the Board since 2020

Participation (own, under common  
ownership and by controlled  
corporations) in Metsäliitto Cooperative  
on 31 December 2022: EUR 239,539

Shares (own and by controlled  
corporations) in Metsä Board  
Corporation on 31 December 2022:  
29,801 (B-share)



## MIKKO MÄKIMATTILA

b. 1971

M.Sc (Agriculture and Forestry)  
Agronomist  
Member of the Board since 2020  
Vice Chairman of the Board since 2023

Participation (own, under common  
ownership and by controlled  
corporations) in Metsäliitto Cooperative  
on 31 December 2022: EUR 115,899

Shares (own and by controlled  
corporations) in Metsä Board  
Corporation on 31 December 2022:  
0 (B-share)



## TAAVI HEIKKILÄ

b. 1962

M.Sc. (Econ)  
Vuorineuvos (Finnish honorary title)  
Member of the Board since 2021

Participation (own, under common  
ownership and by controlled  
corporations) in Metsäliitto Cooperative  
on 31 December 2022: 6,240 euros

Shares (own and by controlled  
corporations) in Metsä Board  
Corporation on 31 December 2022:  
0 (B-share)



## JUHA PARPALA

b. 1967

Agrologist  
Member of the Board since 2009

Participation (own, under common  
ownership and by controlled  
corporations) in Metsäliitto  
Cooperative on 31 December 2022:  
EUR 49,972

Shares (own and by controlled  
corporations) in Metsä Board  
Corporation on 31 December 2022:  
1,087 (B-share)



## EIJA PITKÄNEN

b. 1961

M.Sc. (Food microbiology)  
Member of the board since 2023

Participation (own, under common  
ownership and by controlled  
corporations) in Metsäliitto  
Cooperative on 31 December 2022:  
EUR 260

Shares (own and by controlled  
corporations) in Metsä Board  
Corporation on 31 December 2022:  
0 (B-share)



## NINA PÄRSSINEN

b. 1961

LL.M.  
Member of the Board since 2021

Participation (own, under common  
ownership and by controlled  
corporations) in Metsäliitto  
Cooperative on 31 December 2022:  
EUR 676

Shares (own and by controlled  
corporations) in Metsä Board  
Corporation on 31 December 2022:  
0 (B-share)



## ILKKA SALONEN

b. 1965

M.Sc (Econ)  
Member of the Board since 2018

Participation (own, under common  
ownership and by controlled  
corporations) in Metsäliitto Cooperative  
on 31 December 2022: EUR 114,655

Shares (own and by controlled  
corporations) in Metsä Board  
Corporation on 31 December  
2022: 0 (B-share)



## JUSSI VANHANEN

b. 1971

MBA, LL.M.  
Member of the Board since 2022

Participation (own, under common  
ownership and by controlled  
corporations) in Metsäliitto  
Cooperative on 31 December  
2022: EUR 714

Shares (own and by controlled  
corporations) in Metsä Board  
Corporation on 31 December  
2022: 4,000 (B-share)



# Metsä Group Executive Management Team

## ILKKA HÄMÄLÄ

b. 1961

M.Sc (Engineering)  
Vuorineuvos, (Finnish honorary title)  
CEO and President, Metsä Group  
CEO, Metsäliitto Cooperative  
Member of the Executive  
Management Team since 2008

Participation in Metsäliitto Cooperative on  
31 December 2022: 0

Shares owned in  
Metsä Board Corporation  
on 31 December 2022:  
287,349 (B-share)



## JAAKKO ANTILA

b. 1977

M.Sc (Engineering)  
EVP, Metsä Wood  
Member of the Executive  
Management Team since 2022

Participation in Metsäliitto Cooperative on  
31 December 2022: 0

Shares owned in  
Metsä Board Corporation  
on 31 December 2022:  
21,282 (B-share)



## MIKA JOUKIO

b. 1964

M.Sc (Technology)  
MBA  
CEO, Metsä Board Corporation  
Member of the Executive  
Management Team since 2012

Participation in Metsäliitto Cooperative on  
31 December 2022: EUR 185,978

Shares owned in  
Metsä Board Corporation  
on 31 December 2022:  
352,500 (B-share)



## ESA KAIKKONEN

b. 1969

LL.M, trained on the bench  
CEO, Metsä Tissue Corporation  
Member of the Executive  
Management Team since 2008

Participation in Metsäliitto Cooperative on  
31 December 2022: 0

Shares owned in  
Metsä Board Corporation  
on 31 December 2022:  
71,178 (B-share)



## JUHA JUMPPANEN

b. 1977

M.Sc. (Agriculture and Forestry), Forester  
EVP, Metsä Forest  
Member of the Executive  
Management Team since 2022

Participation in Metsäliitto Cooperative  
on 31 December 2022: EUR 3,562

Shares owned in  
Metsä Board Corporation  
on 31 December 2022:  
14,465 (B-share)



## ISMO NOUSIAINEN

b. 1966

M.Sc (Engineering)  
CEO, Metsä Fibre Oy  
Member of the Executive  
Management Team since 2018

Participation in Metsäliitto Cooperative  
on 31 December 2022: 0

Shares owned in  
Metsä Board Corporation  
on 31 December 2022:  
54,075 (B-share)



## SARI PAJARI-SEDERHOLM

b. 1968

M.Sc (Engineering)  
EVP, Strategy, Metsä Group  
Member of the Executive  
Management Team since 2021

Participation in Metsäliitto Cooperative on  
31 December 2022: 0

Shares owned in  
Metsä Board Corporation  
on 31 December 2022:  
78,057 (B-share)



## VESA-PEKKA TAKALA

b. 1966

M.Sc (Economy)  
Chief Financial Officer, Metsä Group  
Deputy Managing Director, Metsäliitto  
Cooperative  
Member of the Executive  
Management Team since 2010

Participation in Metsäliitto Cooperative on  
31 December 2022: EUR 58,802

Shares owned in  
Metsä Board Corporation  
on 31 December 2022:  
155,123 (B-share)



# Financial reporting

Metsä Group does not comment on the Group's financial performance or similar matters during the silent period from the end of each reporting period until the publication of the period's financial report, apart from substantial changes in market conditions or to rectify incorrect information

## Financial information

The financial reports are published in Finnish and English. Brochures and other publications can be ordered by sending an email to [communications@metsagroup.com](mailto:communications@metsagroup.com) and from the Group's website at [www.metsagroup.com](http://www.metsagroup.com).

Stock exchange releases, interim reports and financial statements are updated on Metsä Group's website in real time. In addition, the website presents the Group's products, customers, sales network, environmental matters and organisation. You can provide feedback on the website. Metsä Group's general email address is [communications@metsagroup.com](mailto:communications@metsagroup.com).

Metsä Group aims to offer company-related information that is up to date and easy to utilise on a regular and open basis. The company aims to provide reliable and truthful information on its operations, financial position and short-term outlook. All investors are treated equally.

Metsä Group publishes its financial reports in 2023 as follows:

Silent period	Financial report	Publishing date
1 January– 8 February 2023	Financial Statements Bulletin for 2022	9 February 2023
1–26 April 2023	Interim Report for January–March 2023	27 April 2023
1–26 July 2023	Half-year Report for January–June 2023	27 July 2023
1–25 October 2023	Interim Report for January–September 2023	26 October 2023

**Metsä Group's** annual reporting includes three parts: Metsä Group's Annual and Sustainability Report, Metsä Group's Annual Brochure, and Metsä Board's Annual and Sustainability Report. Each report is available in both Finnish and English.

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Metsä's year  
2022



Metsä Group  
Annual and  
Sustainability  
Report 2022



Metsä Board  
Annual and  
Sustainability  
Report 2022

The cover material of these reports was produced at the Kyro paperboard mill. The high-yield pulp in the middle layer of the paperboard was produced at the Joutseno mill, and the chemical pulp in the back layer was produced at the Äänekoski bioproduct mill. The coated folding boxboard made from pure fresh fibre is suitable for packaging and graphical end uses.



# Your partner in sustainable growth

**METSÄ GROUP**

P.O. Box 10  
FI-02020 Metsä, Finland  
Visiting address: Revontulenpuisto 2 A  
02100 Espoo, Finland  
Tel. +358 10 4601  
[www.metsagroup.com](http://www.metsagroup.com)

