Metsä Group’s sustainability year 2024

Metsä Group’s official Sustainability Statement has been published as part of the Annual Review.

The Sustainability Statement presents the accounting principles for sustainability indicators.

Wood-based products from northern forests

Metsä

Summary of materiality assessment

THEME	TOPIC	SUB-TOPIC	MATERIALITY	2030 TARGET SET
E – ENVIRONMENT				
1. Safeguarding biodiversity and the ecological sustainability of forest use	E1 Climate change	Climate change mitigation	12	√
		Climate change adaptation	8	√
		Energy	9	√
	E2 Pollution	Pollution of air, water and soil	5	
		Microplastics	5	
2. Mitigating climate change and reducing emissions	E3 Water and marine resources	Water	6	√
3. Resource efficiency and sustainable production	E4 Biodiversity and ecosystems	Direct impact drivers of biodiversity loss	11	√
		Impacts on the state of species and the extent and condition of ecosystems	11	√
		Impacts and dependencies on ecosystem services	12	√
	E5 Resource use and circular economy	Resource inflows, including resource use	8	√
		Resource outflows related to products and services	10	
		Waste and side streams	8	√

THEME	TOPIC	SUB-TOPIC	MATERIALITY	2030 TARGET SET
S – SOCIAL RESPONSIBILITY				
4. Respecting everyone and doing the right thing	S1 Own workforce	Equal treatment and opportunities for all	9	√
		Health and safety	11	√
		Other working conditions	6	√
5. Promoting safety and wellbeing at work		Other work-related rights	6	
	S2 Workers in the value chain	Equal treatment and opportunities for all	9	√
		Health and safety	11	√
		Other working conditions	9	√
		Other work-related rights	7	√
	S3 Affected communities	Communities' economic, social and cultural rights	7	
		Rights of indigenous peoples	9	
	S4 Consumers and end-users	Personal safety of consumers and end-users	8	
		Information-related impacts on consumers and end-users	6	
G – GOVERNANCE				
6. Doing the right thing, innovation and open-minded cooperation	G1 Business conduct	Corporate culture	8	√
		Corruption and bribery	6	
		Management of relationships with suppliers, including payment practices	8	√
7. The significance of forest-based bioeconomy to society		Protection of whistle-blowers	5	
		Political influence and lobbying activities	7	

Metsä

The materiality assessment scale is described in Metsä Group's Sustainability Statement.

Progress in the 2030 sustainability targets in 2024*

TARGET	2030 TARGET	2024 ACTUAL	2024 PROGRESS	UN SDG
E – ENVIRONMENT				
Securing biodiversity and ecologically sustainable forestry				
Retention trees on regeneration felling sites, %	100	97	🟨	13, 15
High biodiversity stumps on harvesting sites, %	100	98	🟨	13, 15
Spruce as the only tree species after young stand management, %	0	26	🟥	13, 15
Measures promoting biodiversity, number	10,000	6,586	🟩	13, 15
Mitigating climate change and reducing emissions				
Energy efficiency index, base year 2018	90	104	🟥	7, 12, 13
Fossil-based carbon dioxide emissions (Scope 1 + Scope 2, market-based), t	0	781,961	🟨	12, 13
Fossil-free raw materials and packaging materials, share of dry tonnes, %	100	99.2	🟨	9, 12
Amount of forest regeneration and young stand management from the 2018 level, %	+30	18	🟩	13, 15
Amount of forest fertilisation from the 2018 level, %	+50	−22	🟥	13, 15
Share of continuous cover forestry in peatland forest regeneration, %	30	15	🟥	13, 15
Amount of carbon stored in wood products from the 2018 level, %	+30	-25	🟥	12, 13
Resource efficiency and sustainable production				
Reduction in process water use per produced tonne from the 2018 level, %	-35	-11	🟨	6, 12
Process waste delivered to landfills, t	0	14,696	🟨	12

TARGET	2030 TARGET	2024 ACTUAL	2024 PROGRESS	UN SDG
S – SOCIAL RESPONSIBILITY				
Respecting everyone and doing the right thing				
Anonymous recruitment for vacancies open to all, %	100	99.1	🟩	5, 8
Women in management positions, %	>30	20	🟥	5, 8
Promoting safety and wellbeing at work				
Total Recordable Incident Frequency (TRIF), own workforce	0	5.2	🟨	8
Employee job satisfaction	AAA	A+	🟥	5, 8
G – GOVERNANCE				
Innovation and open-minded cooperation, and the significance of forest-based bioeconomy to society				
Ethics index	100	79	🟥	5, 8
Traceability of raw materials, share of total purchases, %	100	93	🟨	9, 12
Share of certified wood, %	>90	93	🟩	15
Suppliers' commitment to the Supplier Code of Conduct, share of total purchases, %	100	99.1	🟨	8, 12
Supplier assessments and audits of core suppliers, %	100	70	🟩	8, 12
Joint sustainability targets with partner suppliers, %	100	100	🟩	12, 13

Metsä

*Metsä Group updated its 2030 sustainability target from 2025 onwards. You can read about the updated targets on our website.

Progress in 2024 compared with the previous year.
Exceeds target (significant progress) 🟩
On target (progress as planned) 🟨
Short of target (no progress or weaker performance) 🟥

Material and energy streams

Inflows of material and energy streams

Wood-based raw materials, 1,000 t

Wood	19,344
Purchased pulp	98
Recycled fibre	183

Other raw materials, 1,000 t

Process chemicals	98
Coatings, binders and pigments	288
Packaging materials	100

Water intake 1,000 m³

Surface water	343,581
Groundwater	710

Purchased energy, TWh

Purchased electricity and heat, renewable wood-based	0.3
Purchased electricity and heat, other renewable	0.2
Purchased electricity and heat, fossil based	0.5
Purchased electricity and heat, nuclear power	1.3
Fossil-based fuels	0.6

Outflows of material and energy streams

Products, 1,000 t

Pulp	3,238
BCTMP	504
Paperboard	1,539
Tissue papers	474
Greaseproof papers	56
Wood-based fuels	2,398
Other bioproducts (tall oil and turpentine)	126
Mechanical wood products, m³	2,000

Self-generated renewable biofuels, TWh

Consumed in the Group's own production	24
Sold to third parties	2.4

By-products, 1,000 t

Fertilising and soil improvement (lime, ash, sandy bark)	95
Industrial use (lime dust, ash, de-inking sludge)	48
Energy use (de-inking sludge, sandy bark)	20

Waste, 1,000 t

Reused waste	387
Landfill waste	18
Hazardous waste	3.5

Emissions to air 1,000 t

Greenhouse gas, CO_2e*	887
Biogenic carbon, CO_2	9,762
Sulphur (SO_2)	0.3
Nitrogen oxides (NO_x)	6.2
Particles (PM2.5)	0.8

Emissions to water, t

Wastewater discharges, 1,000 m³	110,994
Nitrogen (N)	390
Adsorbable organic halogen (AOX)	327
Chemical oxygen demand (COD)	33,006
Biological oxygen demand (BOD)	1,086
Phosphorus (P)	38
Suspended solids	3,027

Metsä

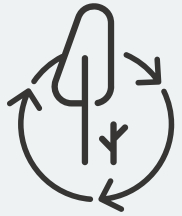
* Market-based Scope 1 and Scope 2 emissions

Environment

Metsä

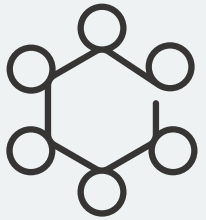
E1 – Climate change

Our key operating areas to implement the climate transition plan



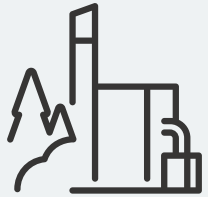
Strengthening carbon sequestration and biodiversity in forests

Reduction of fossil CO_2 emissions



More renewable carbon from side streams into material loops

Developing technical capture of bio-based CO_2



Aiming at fossil-free and resource efficient mills

Increasing the substitution benefits of products

Developing carbon accounting

Increasing the long-term carbon storage in products

Metsä

Greenhouse gas emissions and energy in our own operations

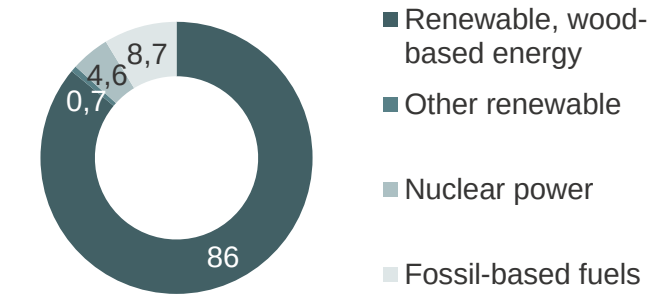
In production, we mitigate climate change through investments and measures to replace fossil fuels with renewable fuels and fossil-free electricity in all production units and power plants.

For example, power plants will switch to fossil-free fuels and energy, improve energy efficiency, and reduce water consumption.

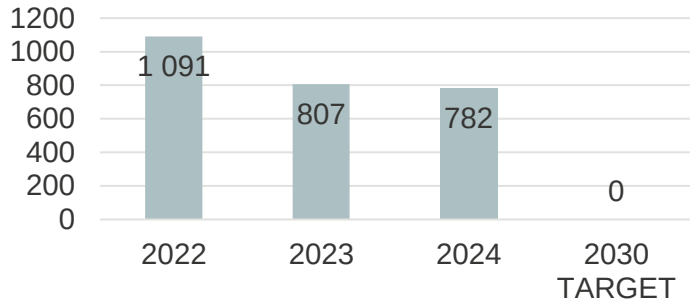
2024 in brief

- We carried out a climate risk analysis.
- We made smaller investments and saved energy with operational energy efficiency measures.
- We carried out a study on the large-scale biogenic carbon capture from the flue gases of a bioproduct mill.
- We prepared and published a climate transition plan.

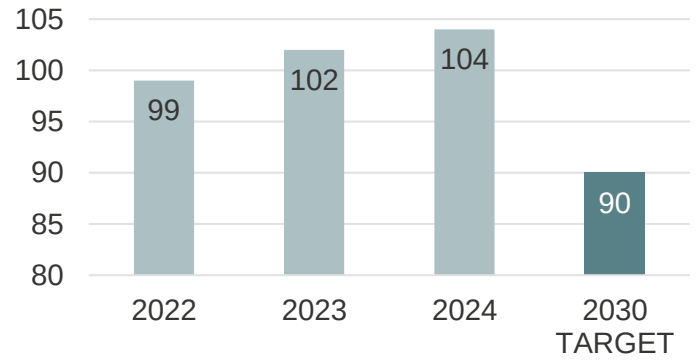
Total energy consumption by energy source in 2024, %



Fossil-based carbon dioxide emissions from our own operations (Scope 1 + Scope 2, market-based), 1,000 t



Energy efficiency index

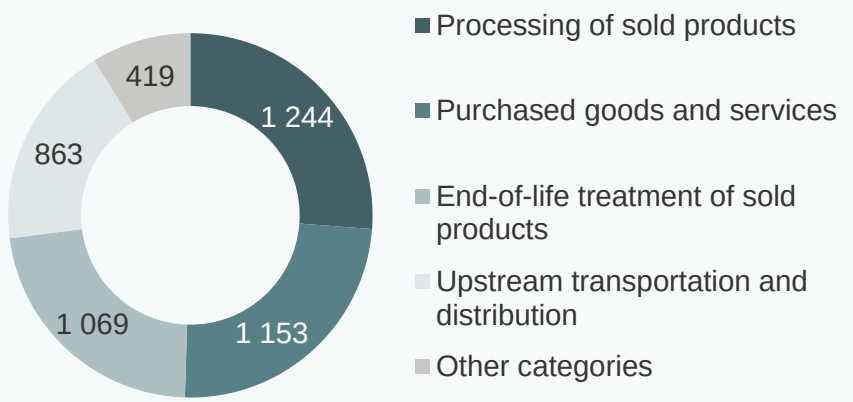


Metsä

Greenhouse gas emissions in the value chain

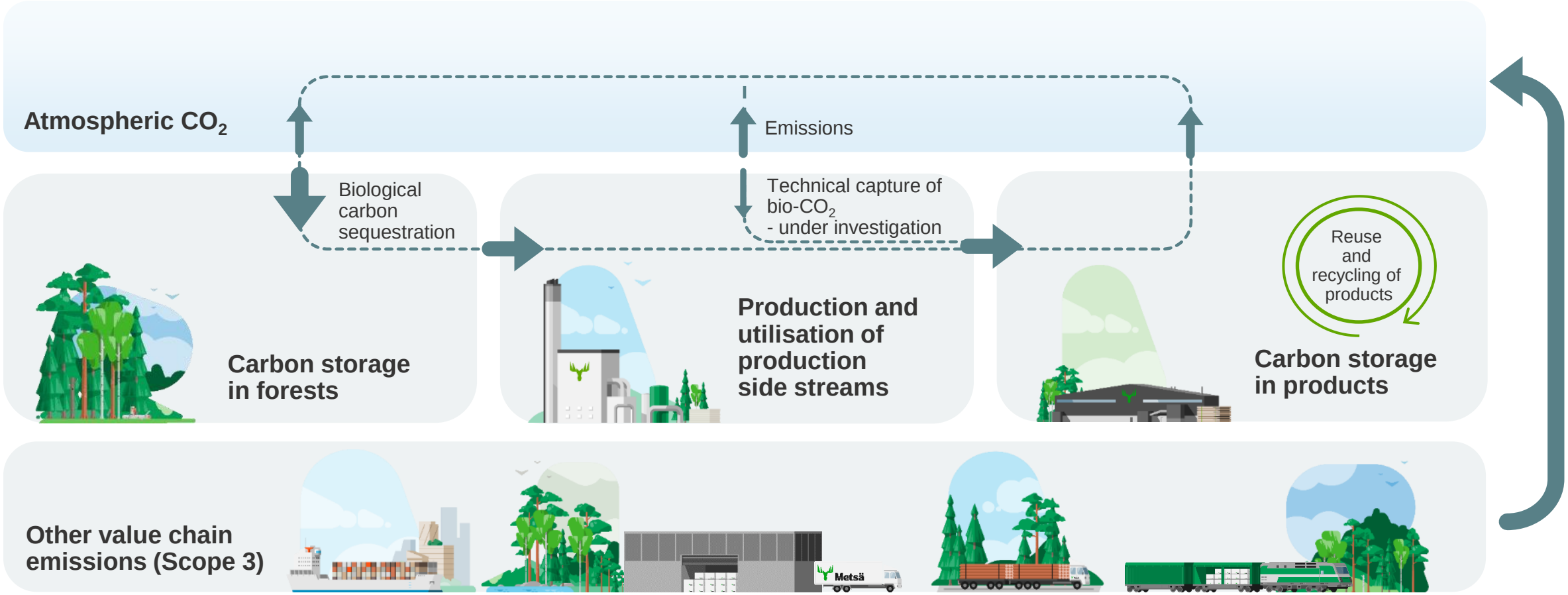
- Scope 3 emissions accounted for around 84% of all Metsä Group’s greenhouse gas emissions in 2024.
- We encourage suppliers to set emissions reduction targets as part of the Supplier Code of Conduct.
- We set joint emissions reduction targets with suppliers to reduce emissions in the value chain. A joint emissions reduction target has been set with VR Group, Navalis Shipping, Royal Wagenborg and Andritz, for example.
- Since the beginning of 2025, our target is to reduce greenhouse gas emissions in Category 4, “Upstream Transportation and Distribution”, by 30% per tonne-kilometre.
- Logistics emissions are reduced by optimising routes, minimising transport distances and optimising fill rates, for example. In the latest investments at the Kemi bioproduct mill and Rauma sawmill, the payload of transport units has been maximised, and fossil-free fuels are favoured in product transports from mills to ports.

Significant Scope 3 GHG emissions in the value chain in 2024, 1,000 tCO_2e



Metsä

Carbon sequestration, storage and greenhouse gas emissions in Metsä Group's value chains



Metsä

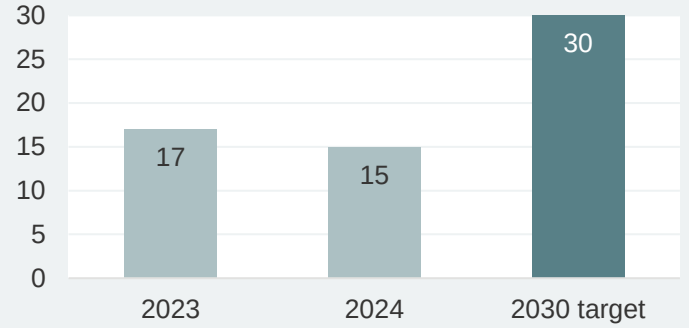
Carbon balance of forests

- In the spring of 2023, Metsä Group committed to the principles of regenerative forestry. Strengthening biodiversity has many positive impacts on forest health and growth potential, including an increased capacity to adapt to climate change. Read more about biodiversity under section E4.
- We use the international forest certification systems PEFC and FSC®. In 2024, certified wood accounted for 93% of the wood we purchased.
- Our key practical measures to mitigate climate change include:
  - Rapid forest regeneration after regeneration felling
  - Early cleaning and thinning
  - Forest fertilisation
  - Increasing the use of continuous cover forestry in peatlands
- In 2024, we made better progress than planned in the targets set for forest regeneration and young stand management. The progress made in the share of continuous cover forestry in peatland forest regeneration and the amount of forest fertilisation did not match the targets set.

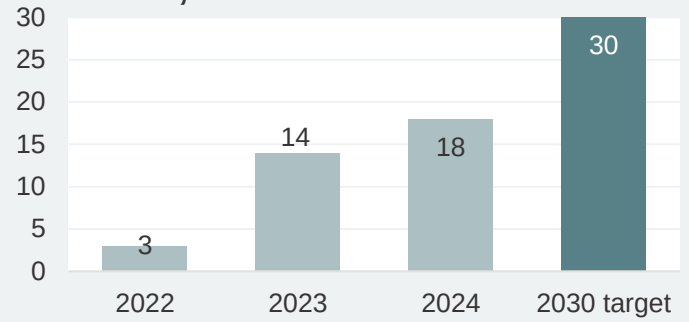
FSC®-C014476

PEFC/02-31-03

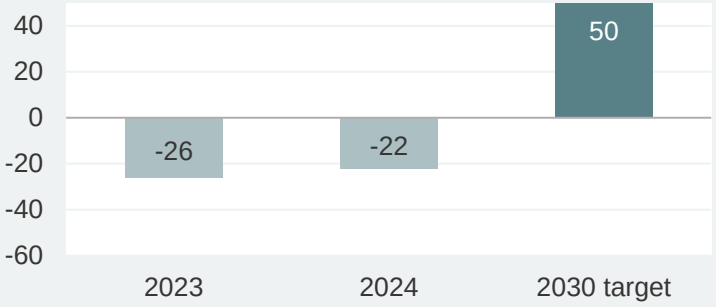
Share of continuous cover forestry in peatland forest regeneration, %



Amount of forest regeneration and young stand management from the 2018 level, %



Amount of forest fertilisation from the 2018 level, %



Products

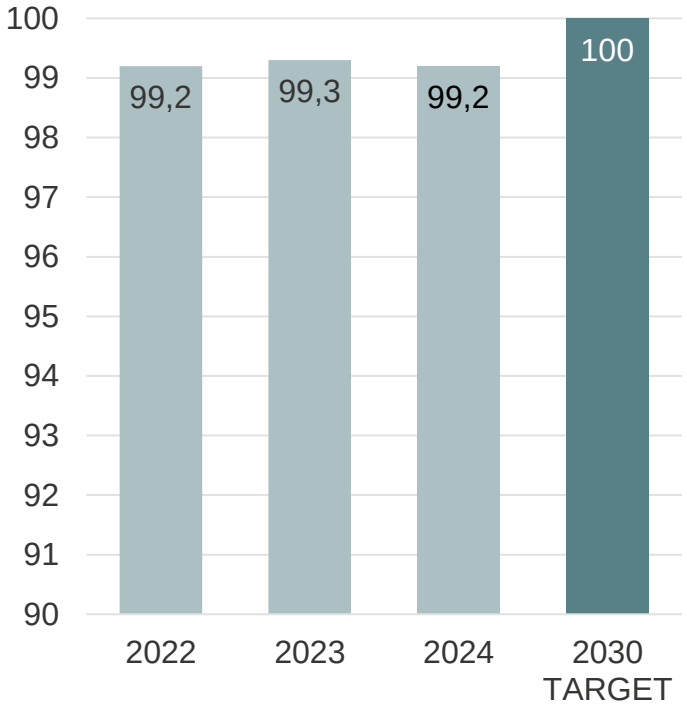
Many of our products replace materials made from non-renewable resources. In addition, our mechanical wood products store carbon.

We aim to replace fossil-based raw materials and packaging materials with fossil-free alternatives by 2030.

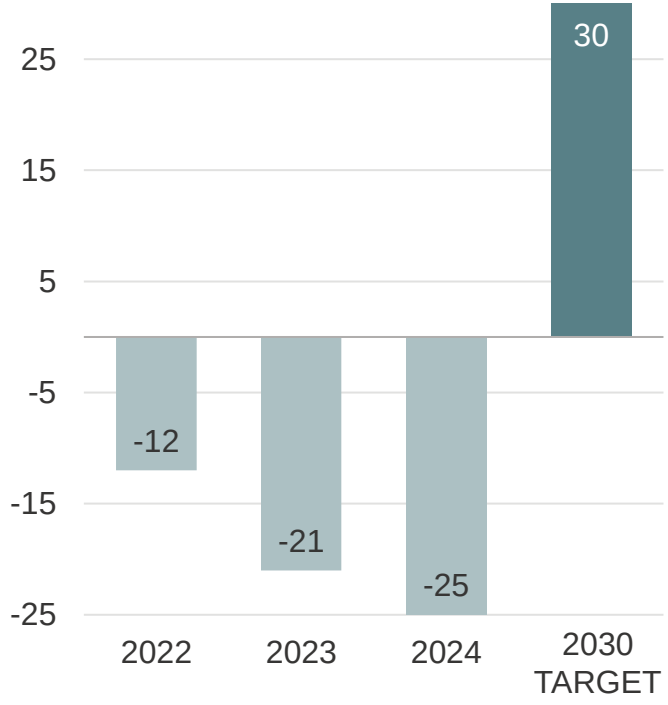
Successes in this area in 2024 included:

- Several mill test runs with new raw materials and materials, including various glues and binders in tissue papers and paperboards, glues for wood products, and protective product wrappings.
- Successful and extensive adoption of wrapping solutions based on recycled plastic.
- In the case of plastic wrapping, we managed to significantly reduce the layer thickness in some applications, thus reducing the use of plastic.

Fossil-free raw materials and packaging materials, share of dry tonnes, %



Amount of carbon stored in wood products from the 2018 level, %



Metsä

E2 – Pollution

Our environmental management is guided by our mills' certified quality, environmental and energy management systems, as well as our environmental management principles.

We ensure environmental protection by complying with valid environmental permits, using the best available techniques, monitoring emissions and developing production processes in accordance with the targets set.

The decrease in air and water emissions in 2024 is largely explained by the market situation and the resulting moderate operating rate of machines. However, we also implemented measures that had an impact on emissions. These include:

- Developing the chemical balance at the Äänekoski production unit, which will promote the reduction of salt emissions.
- Removing the tertiary basin of the Joutseno production unit, which will help prevent the flow of contaminated waters into surrounding waterbodies.
- Renewing storm sewage at the Punkaharju production unit, which will help prevent the flow of contaminated waters into surrounding waterbodies.

Metsä

	2024	2023
Emissions to air, t		
Sulphur (SO_2)	**342**	501
Nitrogen oxides (NO_x)	**6,213**	5,935
Particles (PM2.5)	**785**	460
Emissions to water, t		
Adsorbable organic halogen (AOX)	**327**	385
Chemical oxygen demand (COD)	**33,006**	41,947
Biological oxygen demand (BOD)	**1,086**	1,460
Phosphorus (P)	**38**	44
Nitrogen (N)	**390**	478
Suspended solids	**3,027**	3,815

E3 – Water and marine resources

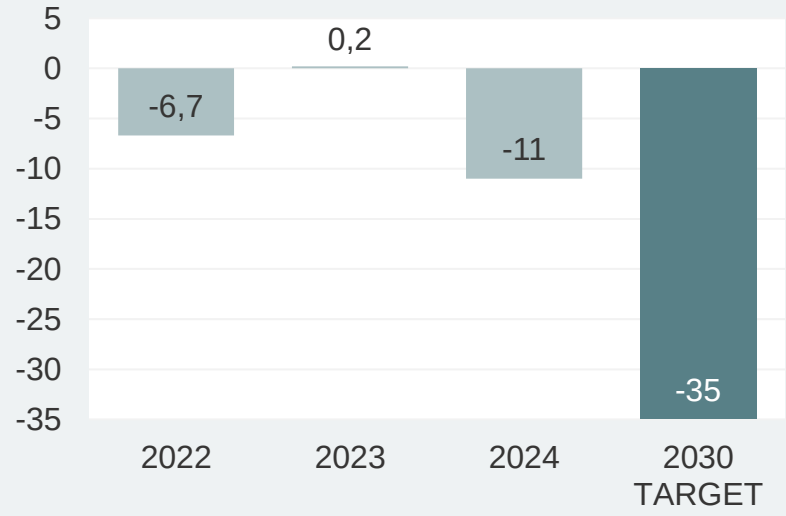
Resource efficiency is a key part of our environmental policy. We are committed to reducing our water use.

Metsä Group's measures aimed at reducing process water use include investments in processes and wastewater treatment, as well as continuous process development. The measures will improve water recycling and reduce water withdrawals from waterbodies.

2024 in brief

- Due to the gas explosion at the Kemi bioproduct mill, the targets of the Kemi board mill's development programme for more efficient water and energy use were not fully achieved in 2024.
- Other measures adopted to increase the efficiency of water use were mainly implemented as changes in operating methods or through personnel training. For example, by making more efficient use of the washing press that removes water residues from pulp bleaching at the Äänekoski bioproduct mill, the amount of water in the pulp washing stages was reduced, which led to record-low process water use at the mill.

Reduction in process water use per produced tonne from the 2018 level, %



Metsä

E4 – Biodiversity and Ecosystems

Regenerative forestry

- In 2023, we committed to the principles of regenerative forestry. The aim of regenerative forestry is to transfer forests from one generation to the next in a more vibrant condition and to measurably verify the improvement in the state of forest nature by 2030.
- The Metsä Group Plus service is a tangible example of promoting regenerative forestry. The model includes measures that safeguard and improve the state of forest nature more comprehensively than is required by current standard practices. The use of these measures is agreed in connection with wood trade and orders for young stand management.

Regenerative land use

- Regenerative land use means supporting biodiversity in the built environment such as around our production units. We also aim to strengthen the state of nature at our production units by 2030. Biodiversity plans will be drawn up for all mill sites and surrounding areas in the Group's ownership. The Kemi mill area and its surroundings will serve as a pilot site.

Metsä

2024 in brief

Metsä Group actively participated in the preparation of a biodiversity roadmap for the wood processing industry in cooperation with other operators.

In our funding programme for nature projects, we funded 26 Finnish biodiversity management and restoration projects with a total of EUR 600,000.

The biodiversity plan of our pilot site in Kemi progressed as planned.

Progress in our 2030 sustainability targets for forest biodiversity matched or exceeded the targets, with the exception of the target for spruce as the only tree species after young stand management. In this respect, Metsä Group will increase training for its own personnel and forest management entrepreneurs, and enhance communication with forest owners.

We updated the due diligence system for wood supply to meet the requirements of the Deforestation Regulation.

Number of Finnish biodiversity management and restoration projects funded in the nature programme

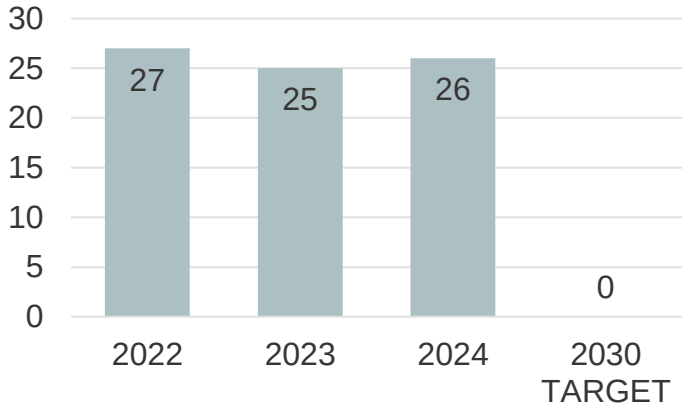
26

Measures promoting biodiversity, number

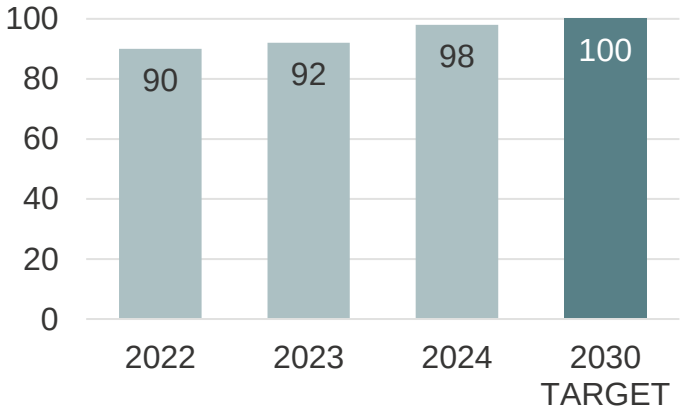
6,586

Target: 10,000

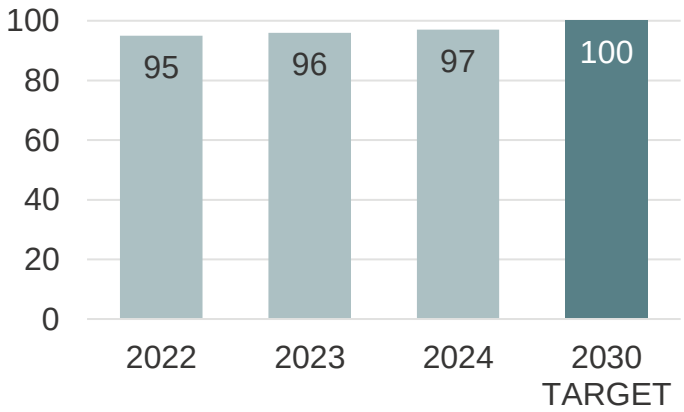
Spruce as the only tree species after young stand management, %



High biodiversity stumps on harvesting sites, %



Retention trees on regeneration felling sites, %



Metsä

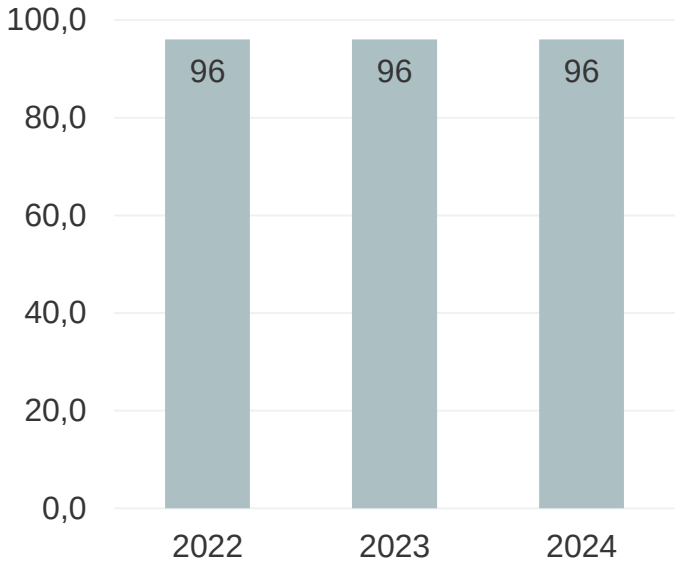
E5 – Resource use and circular economy

- We use raw materials resource-efficiently so that no waste is generated in production. We make full use of our wood raw material.
- We aim to recover all production side streams. Most of our production side streams are already recovered.
- As a rule, our products and their packaging materials can be reused or recycled in accordance with local recycling systems and the product's end use.

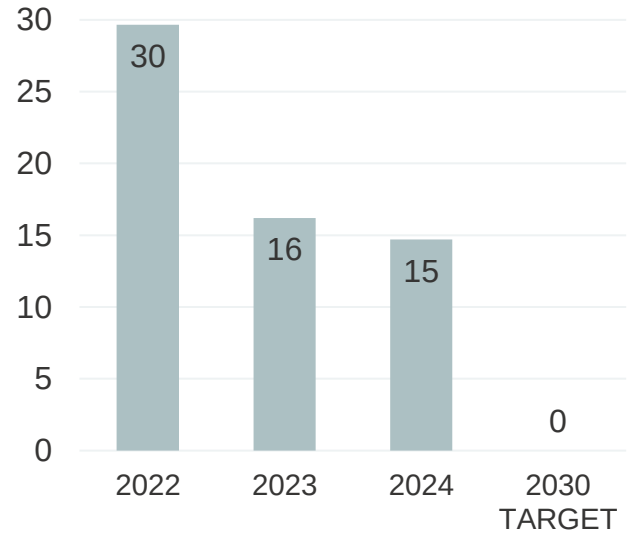
2024 in brief

- Process waste was increasingly utilised as side streams.
  For example, batches of green liquor dregs have been used in earthworks and submitted for testing in new applications.
- Metsä Group committed to the national circular economy green deal. The participants in the green deal set 2035 targets and commit to actions that promote a low-carbon circular economy. We set the target of commercialising three significant new products or solutions based on Metsä Group's side streams by 2035.

Utilised side streams and waste, %



Process waste sent to landfills, 1,000 t



Metsä


Social
responsibility
Metsä

S1 – Own workforce

- The sustainability of the company's workforce is guided by applicable legislation, as well as operating principles comprising Metsä Group's values and policies, such as the Code of Conduct, as well as the HR policy guiding leadership and skills development, the Metsä for all vision and management systems.
- We are committed to promoting the diversity, equality and inclusion (DEI) of our workforce.
- Occupational safety is guided by our safety management system consisting of the Corporate Security Policy and the safety principles, standards, processes and work instructions. All production units comply with the ISO 45001 occupational health and safety standard.

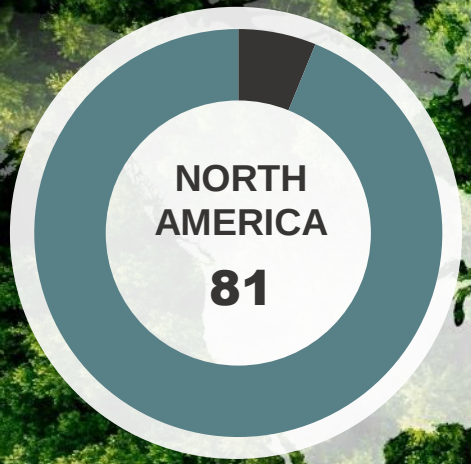
2024 in brief

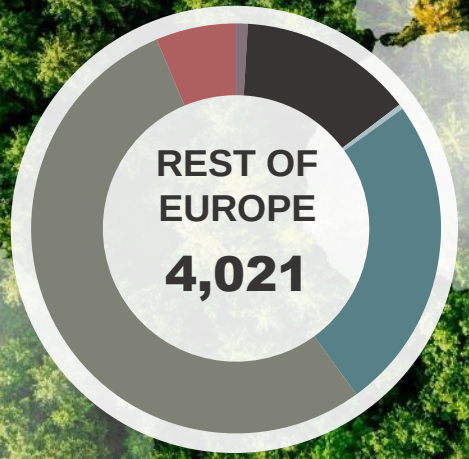
- Anonymous recruitment was used to fill 99% of open vacancies in 2024.
- In 2024, the level of our employee commitment was A+.
- Competence development continued in the Finance, Sales, Procurement, Sustainability and Leadership Academies. Planning was also initiated for a Production Academy.
- As a continuation of the DEI workshops, a training programme focusing on mental safety themes was launched for occupational safety and health committees.
- In 2024, the key focal areas of safety work were the implementation of Metsä Group's core safety rules and the safety management training programme.
- Efforts to promote wellbeing at work continued and special attention was paid on supporting the employees' musculoskeletal condition and mental wellbeing.
- An individual shift work model was initiated at all production units in Finland. The experiences were positive, and the trial will continue in 2025.

Metsä

Achieving world-class results together

We employ around **10,000** professionals.



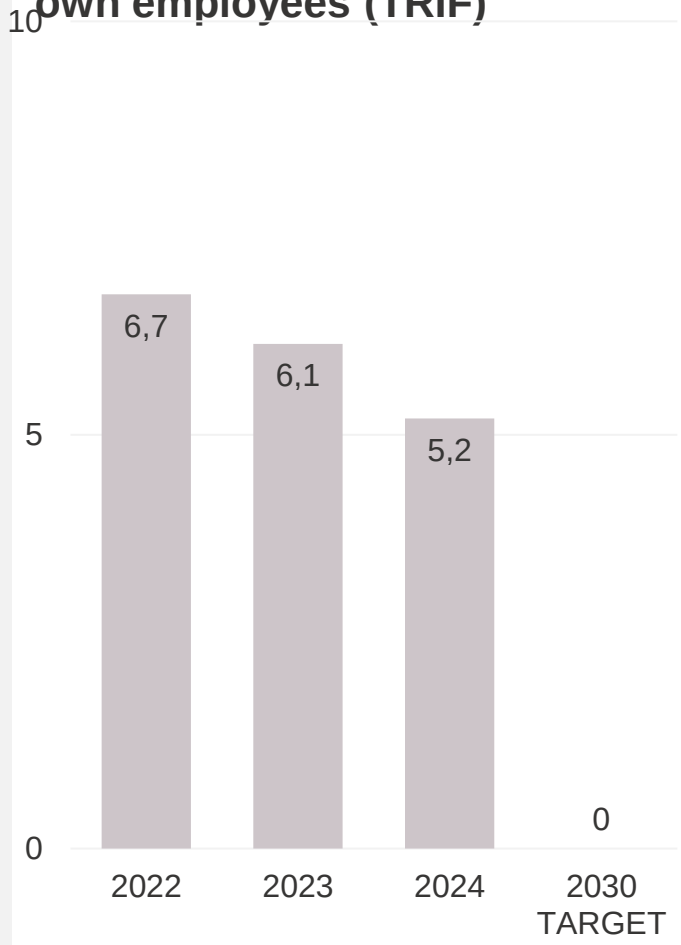


- Wood Supply and Forest Services
- Metsä Wood
- Metsä Fibre
- Metsä Board
- Metsä Tissue
- Metsä Group, others

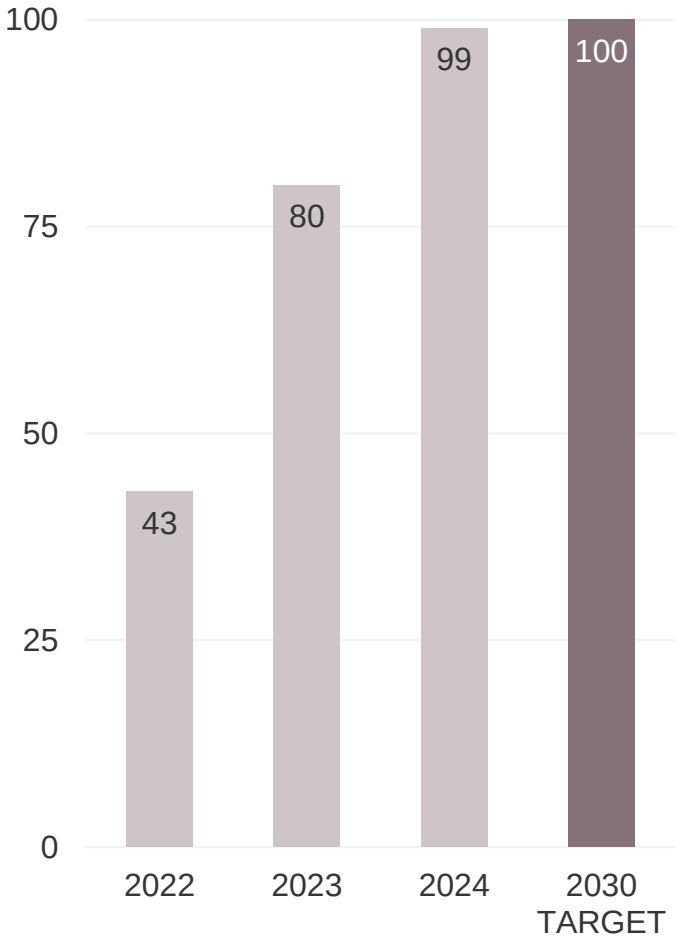
Metsä

Situation on 31 December 2024

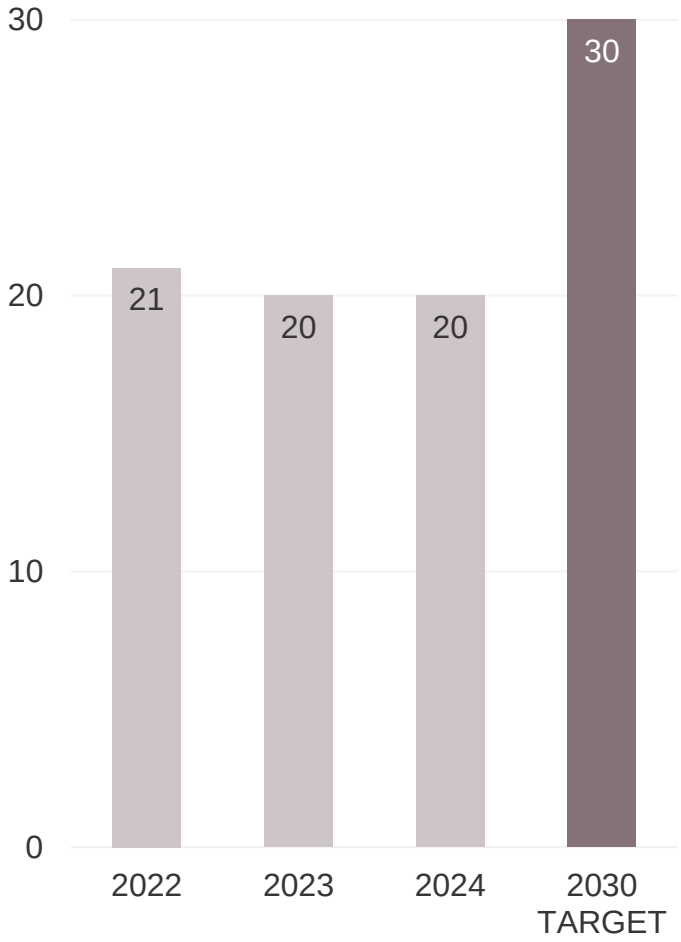
Total recordable incident frequency, own employees (TRIF)



Anonymous recruitment for vacancies open to all, %



Women in management positions, %



Metsä

S2 – Workers in the value chain

- The Supplier Code of Conduct includes requirements related to working conditions, occupational safety and other work-related rights.
  - Suppliers must ensure a safe work environment and comply with the ISO 45001 standard or another equivalent system. They must also respect international human rights and take corrective action if required.
- Suppliers' backgrounds are always checked. The goal of supplier assessments and audits is to ensure that the supplier has adequate means to identify and minimise any impact on the working conditions and other work-related rights of its own employees.
- The model for combating the grey economy, used in strategic construction projects, ensures compliance with laws and collective agreements, and the appropriate handling of taxes and obligations in the subcontracting chain. Spot checks are conducted regularly to detect any deviations. Suppliers' employees receive safety induction and participate in safety walks.

2024 in brief

- We launched occupational safety training requirements for contractors and introduced an application for our Wood Supply personnel working alone in the field.
- Sustainability themes were discussed in the Procurement Academies offered to procurement and logistics personnel. In addition, several personnel training events were organised on the use of EcoVadis supplier assessments in ensuring a sustainable supply chain.

Metsä

S3 – Affected communities

- The main communities affected by Metsä Group include forest owners, mill localities and local residents, the nature around the mills, and the people who earn their livelihood from it, as well as other interested parties.
- Operations are guided by the Code of Conduct and the Supplier Code of Conduct. Forest certification schemes also set out strict criteria for social sustainability. Among other things, they include requirements on safeguarding the rights of indigenous peoples.

2024 in brief

- We operated for the first time in accordance with the new stakeholder engagement operating model and accordingly reported results of stakeholder engagement to the executive management team twice.
- We organised Metsä Group's first cooperation day, which aims to increase cooperation among stakeholders. The cooperation day will become an annual event.

Metsä

S4 – Consumers and end-users

- We comply with legislation protecting human health and the environment, such as the EU Regulation on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), the Classification, Labelling and Packaging Regulation (CLP), legislation on the use of biocides, and product requirements for food safety.
- We are committed to ensuring the product safety across the value chain. In addition to traceable wood fibre, Metsä Group's other raw materials come from reliable suppliers that comply with the Supplier Code of Conduct and product safety requirements.
- Our mills follow good production practices and have appropriate certified quality systems. Mills manufacturing products that are used in direct food contact, such as paperboards, comply with the same product safety requirements as the food industry.
- Product management organisations follow consistent processes to ensure the quality of product management. The processes cover the management of product specifications, basic information and product descriptions, as well as the management of customers' and officials' product requirements across the product life-cycle.

Metsä

Governance and corporate culture

Metsä

G1 – Business conduct

- In addition to applicable legislation, our sustainability is guided by the values, Metsä Group's Code of Conduct and various policies approved by the company's Board of Directors.
- We are committed to operating in accordance with the UN's Guiding Principles on Business and Human Rights, and we require the same of our business partners.
- We support the UN's Global Compact initiative and its principles on human rights, employees, the environment and anti-corruption. Our ethical corporate culture is measured using an ethics index.
- We use the Know Your Business Partner background checks to ensure the sustainability of our suppliers. More detailed supplier assessments and audits focus on our main suppliers and on suppliers operating in industries with identified potential risks related to human rights, corruption or the environment.
- Forest certification helps ensure the sustainability of the wood supply chain.

Metsä

2024 in brief

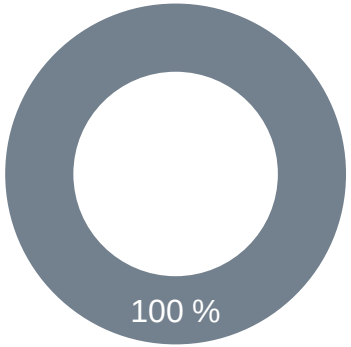
- A human rights impact assessment was conducted at Metsä Group by an external partner. It involved identifying and evaluating direct and indirect impacts across the value chain and the affected communities. Based on the assessment, we also defined a human rights due diligence process and further development measures for the coming years.
- Our activities did not cause any severe human rights impacts, nor were we made aware of any confirmed severe human rights concerns or violations related to our own personnel, value chain workers, the affected communities, or consumers and end-users.
- One confirmed case related to bribery or corruption was brought to our attention, and it led to the termination of one employee's employment relationship and one supplier's contract. A report of an offence was made on the incident.
- We published new anti-corruption principles complementing our previous guidelines.

Ethics index

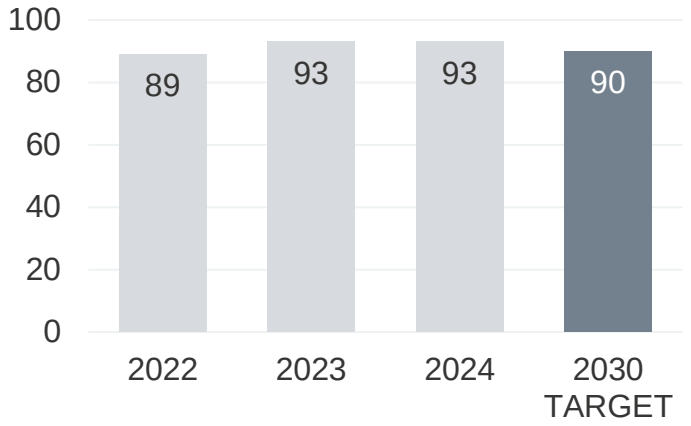
79

2030 target: 100

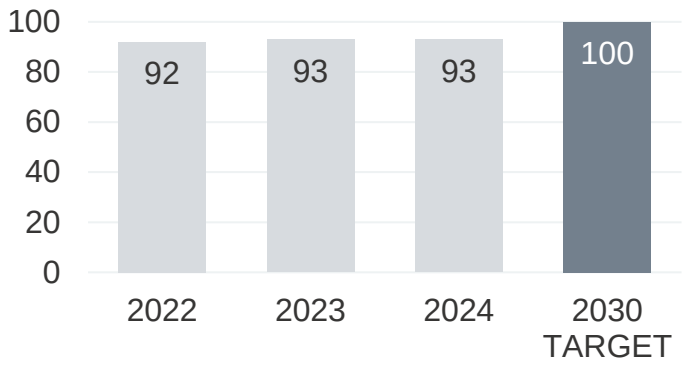
Joint sustainability targets with partner suppliers, %



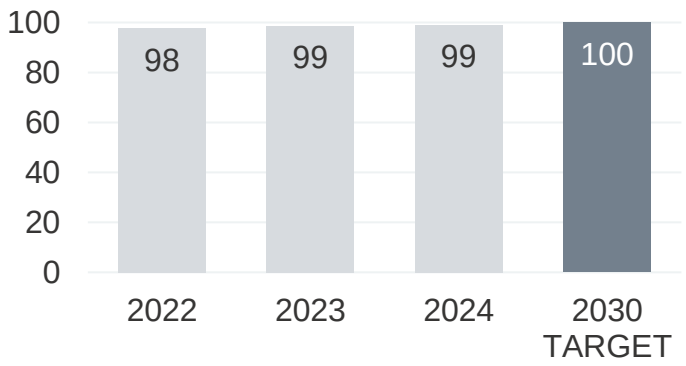
Share of certified wood, %



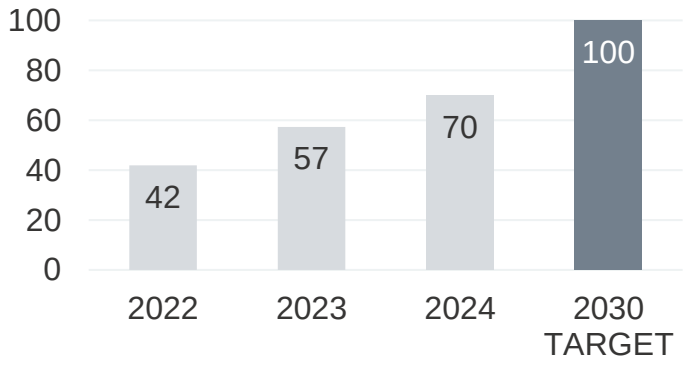
Traceability of raw materials, share of total purchases, %



Suppliers' commitment to the Supplier Code of Conduct, share of total purchases, %



Supplier assessments and audits of core suppliers, %



Metsä


Metsä