Metsä Group
Climate Transition Plan 2025

Contents

We are building a climate-resilient future

Climate change is challenging the foundations of societies and the economy. It is crucial that we reduce the use of fossil fuels and raw materials if we are to curb global warming and safeguard the living conditions on Earth for future generations. Forests and wood-based products play a unique role in the defossilization of the economy – forests sequester and store carbon, provide renewable raw materials and enable the substitution of fossil resources.

Metsä Group's mission is to create added value to our owner-members holistically and with a long term perspective. We develop our operations in alignment with ecological, economic and social sustainability principles. Long-term climate work is at the core of our strategy and everything we do, and we strongly support the EU's target of achieving climate neutrality by 2050.

Our business advances both the bioeconomy and the circular economy. We produce first-class products from northern wood sustainably and efficiently. Our main businesses are pulp, paperboard, tissue and greaseproof papers, sawn timber and wood products for construction, and wood supply and forest services. We are also developing new applications for wood fibre and our production side streams – for example, in 2025 we piloted the capturing of wood-based carbon dioxide at our Rauma pulp mill. Our investigation of the construction of a larger capturing plant and the development of an overall concept is ongoing. Biobased carbon dioxide can be utilized as a raw material in many hydrogen economy's products such as chemicals, fuels and materials.

In recent years, we have made deliberate and strategic progress in our climate work: our Scopes 1 and 2 fossil carbon dioxide emissions have decreased 61% from 2018 levels, and regarding Scopes 1 and 2 we have already achieved the 1.5°C Paris-aligned 2030 reduction target. Assessing and reducing Scope 3 emissions is challenging, and requires continuous development and close collaboration with partners. We are currently focusing particularly on reducing Scope 3 emissions from the logistics which we purchase ourselves – our target is a 30% reduction per tonne-kilometre from the 2022 level by 2030.

In Metsä Group's business strengthening the climate resilience requires a strategic approach that links climate and nature. In commercial forests we must find a balance between economic profitability, climate change mitigation and adaptation and measures promoting biodiversity. The impacts of climate change are already visible also in Finnish forests. Rising temperatures, extreme weather conditions and changes in species mean we must adapt and act proactively. In the spring of 2023, we committed to developing regenerative forestry with the aim of verifiably improving the state of forest nature in Finland by 2030.

This climate transition plan provides a holistic view of Metsä Group's climate targets and actions to achieve them. Adapting to climate change and mitigating its impacts require systemic changes. In achieving these collaboration and dialogue between the various actors in society play a key role.

Metsä Group's climate transition plan 2025 is a step towards this shared goal – a sustainable, renewable and climate-resilient future.

Jussi Vanhanen
President and CEO, Metsä Group

This is Metsä Group

Metsä Group is a Finnish forest industry group that operates internationally. Metsä Group refines renewable wood raw material into every day products and offers forest services. Our parent company Metsäliitto is a cooperative with over 90,000 members who own forest in Finland. We have set strategic sustainable development 2030 targets which guide our operations.

A considerable share of the wood raw material procured by Metsä Group originates from the cooperative's owner members Finnish forests. This creates long-term insight and stability over generations. In 2023, Metsä Group initiated the program targeting to regenerative forestry. The aim is to verifiably improve the state of Finnish forest nature by 2030 together with the forest owners.

Advancing the bioeconomy and circular economy is at the core of Metsä Group's strategy and operations.

Five business areas and the innovation company Metsä Spring form a united group. Metsä Group focuses on pulp, paperboard, tissue and greaseproof papers, sawn timber, wood products for construction, and wood supply and forest services. The projects related to new products furthest along are textile fibre and moulded fibre-based packaging, developed in demo plants.

Metsä Group has set strategic sustainable development 2030 targets, many of which are related to climate change.

27 production units in 7 European countries

Sales:
68% EMEA
13% America
19% APAC

CDP has recognised Metsä Board with a triple 'A' score for leadership on **climate change, forests** and **water security.**

In the EcoVadis ranking Metsä Board, Metsä Fibre and Metsä Tissue scored the **highest recognition level, "Platinum".**

METSÄ GROUP

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

Sales
EUR 5.8 billion

Comparable operating result
EUR -85 million

Personnel
8,800

Pulp and sawn timber **METSÄ FIBRE**	Paperboard **METSÄ BOARD**	Tissue and grease-proof papers **METSÄ TISSUE**	Wood products **METSÄ WOOD**	Wood supply and forest services
OWNERSHIP Metsäliitto Cooperative 55.2% Metsä Board 24.9% Itochu Corporation 19.9%	Metsäliitto Cooperative 52% (69% of votes) The company is listed on Nasdaq Helsinki.	Metsäliitto Cooperative 100%	Metsäliitto Cooperative 100%	Metsäliitto Cooperative 100%
SALES EUR 2.6 billion	EUR 1.8 billion	EUR 1.1 billion	EUR 0.5 billion	EUR 2.5 billion
PERSONNEL 1,400	1,900	2,400	1,600	600

METSÄ SPRING Innovation company

Metsä Group's Climate transition plan towards 2030

Climate transition plan presents our strategic ambition and governance on climate matters, as well as our climate actions related to forest services, production, products and the value chain.

Key 2030 climate targets

- 2030 Emission reduction targets
  - Zero tonnes of fossil Scopes 1 and 2 CO_2 emissions
  - 30%/tkm reduction in greenhouse gas emissions from logistics purchased by Metsä Group from the 2022 level (Scope 3, category 4)
- Other climate related strategic 2030 targets

Key advocacy areas

- Advancing regenerative forestry
- Identifying and harnessing the climate benefits of renewable carbon and related products
- Accelerating the circular bioeconomy

Operating areas

Strengthening carbon sequestration and biodiversity in forests

Reducing GHG emissions in own operations and value chain

Improving resource efficiency in production

Increasing the substitution benefit and long-term carbon storage of products

More renewable carbon from side streams and products into material loops

Exploring the technical capture of bio-based carbon dioxide

Development of carbon accounting

Risk management

Good governance

Strengthening capabilities and cooperation

Advocacy

01

Building of climate resilience as a strategic foundation

Promoting sustainable development is a key crosscutting theme in Metsä Group's strategy. Building resilience in a changing climate requires a strategic approach that links climate and nature.

Climate risk analysis as a basis for resilience analysis

Resilience is the corner stone of a successful business. Analyzing the physical climate risks and transition risks is an important part of the work aiming at maintaining and strengthening resilience.

In 2025, Metsä Group's key climate transition risks were updated. The most significant physical climate risks were assessed to be the same as in the previous year.

A thorough climate risk analysis covering the sub-topics and sub-sub topics of the European Sustainability Reporting Standards was carried out in 2024. The analysis included physical risks, transition risks, and opportunities in the Group's own operations and value chain.

Internal climate risk workshops were attended by experts and management from Metsä Group's business areas and operations, and the material used in them included two climate scenarios (RCP 1.9 and RCP 8.5) provided by the Intergovernmental Panel on Climate Change (IPCC), reports from the Finnish Meteorological Institute and scientific articles. The RCP 1.9 scenario limits the increase in global mean temperature to 1.5 °C. In the RCP 8.5 scenario emissions continue to increase at the current rate and the global mean temperature increases on average by 4.3 °C by 2100.

The analysis comprised a short-term (less than one year), mid-term (1–5 years) and long-term (more than 5 years) review. In the assessment of transition risks, Metsä Group's continuous advocacy work and the related analysis of the operating environment played a key role.

Location of production units supports competitiveness in a changing climate

The physical climate risks of Metsä Group's production units and key supply chain locations were analysed by an external partner in 2024. The results did not indicate any significant risks related to Metsä Group's production units. This indicates that the location of production units supports the Group's competitiveness in a changing climate. In addition to the present, the analysis included the years 2030 and 2040 and was carried out with geolocation-based modelling for several different climate scenarios.

According to projections, Finnish forests will have to deal with a temperature increase of several degrees during their life-cycle due to climate change. Adapting to climate change requires adapting to both acute threats such as extreme weather phenomena and chronic threats caused by the impact of climate change on water availability, tree harvesting conditions, growth conditions of different tree species, and storm, drought, forest fire, insect, and fungal damage in forests, for example.

Key physical climate risks

Type	Description of risk/opportunity	Impact analysis in climate scenarios IPCC 1.5 °C and 4.3 °C	Key management activities
Acute threats	• **Risk:** Storms, droughts and floods cause production interruptions or hinder the transport of raw materials and products. • **Opportunity:** According to analysis of the physical climate risks of production units carried out in 2024, the physical risks related to Metsä Group's production units are significantly below average, which supports the Group's competitiveness in a changing climate.	• The risks have significantly greater impacts in the 4.3 °C scenario than in the 1.5 °C scenario.	• Metsä Group prepares for the risks caused by extreme weather phenomena in risk assessments at both the company and production unit levels. Examples of measures include ensuring adequate wood stocks, water surface management with dam systems and electricity supply in exceptional situations. • Plans for alternative partners or transport routes are in place in the supply chain
Chronic threats	• **Risk:** Harvesting conditions deteriorate due to the lack of snow and frost, as well as increasing precipitation. • **Risk:** Finnish forests will face a significant increase in temperature during their life-cycle. As a result, the risks of damage caused by storms, floods, forest fires, droughts, and pest insects increase. Emissions from peatland forests increase as the temperature rises. In addition, there are changes in the prevalence of tree species, and non-native species can cause problems in forests.	• The temperature increase caused by climate change is different in different parts of the world. In the 4.3 °C scenario, the long-term (2050) increase in Finland is estimated to be 6–7 C degrees. The effects of risks are more likely and greater in the long than in the short term. • While the increase in the mean temperature is smaller in the 1.5 °C scenario, it is still significant.	• Metsä Group's wood procurement always takes weather conditions and their variation in harvesting into account. Wood is harvested only when conditions allow. If necessary, wood terminals can be utilised to balance the variation caused by harvesting conditions. • Metsä Group's regenerative forestry principles and sustainable forest management services support forests' adaptation to climate change and promote forest biodiversity. A tangible example is the Metsä Group Plus forest management service.

Key climate transition risks

Type	Description of risk/opportunity	Impact analysis in climate scenarios IPCC 1.5 °C and 4.3 °C	Key management activities
Policy and regulation	• **Risk:** The availability of wood raw material decreases due to regulatory requirements. The ambiguity and partial inconsistency of regulation increases the risk level. • **Risk:** Nature and carbon compensation schemes justify the continued use of fossil-based raw materials and undermine the market for forest- based products. However, these schemes can provide opportunities for improving forest health, biodiversity and growth. • **Risk:** Changes in legislative environmental targets significantly increase material and logistics costs. Yet these targets can motivate our logistics partners to engage in climate work, which reduces our Scope 3 emissions. • **Risk / opportunity:** Future EU circular economy and product regulations affect the status of renewable raw materials and products. • **Risk:** Political uncertainty.	• Overall, policy and regulatory risks and opportunities are greater in the 1.5 °C scenario than in the 4.3 °C scenario. However, the risk of unclear regulation is also high in the 4.3 °C scenario. • Conflicting or overlapping EU regulatory requirements related to forestry can lead to sub-optimal forest management: both scenarios carry the risk that the benefits of northern semi-natural forestry based on native tree species are not fully recognised. • Due to political uncertainty and EU Omnibus initiatives some actors may lower the ambition level of their climate targets.	• Commitment to developing of regenerative forestry. • The main raw material, wood, is mainly procured from Finnish and Swedish forests, which keeps transport distances reasonable. • Targets for reducing emissions related to logistics. • Science-based advocacy.
Technology and data	• **Risk:** Challenges in obtaining primary data for Scope 3 emission assessment undermine the ability to optimise and monitor the impacts of climate action across the value chain. • **Opportunity:** Through R&D&I, technology development and partnerships, Metsä Group can further improve its energy and material efficiency, and the utilisation of side streams. For example, developing technical capture of wood-based carbon dioxide is a big opportunity.	• In the 4.3 °C scenario, the value chain's motivation to generate and share information about emissions is low, so measuring Scope 3 emissions and committing the value chain to emissions reductions is more difficult than in the 1.5 °C scenario. • Partnerships and funding for development and R&D&I projects that seek to produce climate benefits are more difficult to find in a 4.3 °C scenario than in a 1.5 °C scenario.	• Continuous development of Metsä Group's Scope 3 calculation procedures and emissions reduction measures. • Common climate targets with core suppliers. • Participation in R&D&I forums. • Advocacy on behalf of R&D&I funding programmes for wood-based products that produce climate benefits.
Markets	• **Opportunity:** Customers' climate targets and consumers' increasing awareness of climate change increase the market opportunities for wood-based products produced with high resource efficiency and high share of renewable energy. In the long term, biobased carbon dioxide captured from the pulping process may provide a new wood-based raw material stream.	• In the 4.3 °C scenario, customers show low interest in climate benefits, leading to lower market opportunities than in the 1.5 °C scenario. • In the 1.5 °C scenario, products that store biogenic carbon for 35+ years have significant market pull, as this is encouraged by the EU regulatory framework.	• Cooperation with customers in developing climate- smart solutions. • The provision of sustainability data on Metsä Group's products for the value chain. • The provision of sustainability services to customers.
Reputation	• **Opportunity:** The development of regenerative forestry practices and the work to achieve the 2030 Sustainable Development Goals strengthen the climate benefits and acceptability of Metsä Group's operations. However, there is a risk that Metsä Group is unable to provide stakeholders with sufficient evidence of the climate and nature benefits of regenerative forestry and Metsä Group's products. • **Risk:** General acceptance of the use of fresh fibres in short-lived products decreases.	• In the 4.3 °C scenarios, the verification of impacts has been unsuccessful, and stakeholders have become more indifferent. • In the 1.5 °C scenario, success in verifying the impacts on climate and nature benefits is greater.	• Fact- and science-based communication. • Metrics are developed to better verify the positive climate and nature impacts related to regenerative forestry practices and Metsä Group's products. • Optimisation of the recyclability of fresh fibre products.

Key potential economic impacts of climate-related risks and opportunities

Economic impact	Negative	Positive
	• Metsä Group's main transition risks are related to regulation concerning the use of forests and wood-based energy. If realised, these risks may lead to an increase in costs. • The greatest physical climate risks are related to the anticipation of the climate change adaptability of complex natural ecosystems such as forests. Unexpected sudden changes may reduce the availability of wood raw material, leading to increased costs. • According to the EU's Renewable Energy Directive (RED II), the free allocation of allowances in the EU Emissions Trading System (ETS) will change: free allowances will expire after 2025 for mills that use less than 5 % fossil energy. The EU Emissions Trading System (EU ETS) is currently being updated and, according to current data, free allowances will cease completely after 2030. For more information about emissions allowances, see Intangible assets in Metsä Group's financial statements.	• The location of Metsä Group's production units is a strength, supporting economic competitiveness in a changing climate. • An analysis carried out by an external partner in 2024 concerning the physical climate risks related to the locations of production units and key supply chains indicated a low risk level. • Sectors posing a substantial transition risk, such as the coal, gas or oil industries, do not have a material impact on Metsä Group's net sales, and Metsä Group itself does not conduct related business. Metsä Group's production is still generating fossil-based carbon dioxide emissions, but the company aims by the end of 2030 to transition away from fossil energy sources in its production. This means that after 2030, production will no longer generate fossil-based carbon dioxide emissions – only a small amount of biogenic greenhouse gases that are included in the Scope 1 and Scope 2 emissions is generated. • No such assets at Metsä Group's production units have been identified that could be subject to a material transition risk or might lose value due to regulation related to the green transition (stranded assets). • Many Metsä Group products, such as fibre-based packaging products and wood products for the construction industry, can replace products made from non- renewable raw materials. The target markets for the Kuura™ textile fibre and Muoto™ 3D- fibre products, which are new products under development, are the textile and packaging markets respectively. They are both large global markets. If the development projects lead to commercial-scale production, this will have a major impact on Metsä Group's sales. The capture of wood-based carbon dioxide from the flue gases of pulping process is a major opportunity, and related development work is underway at Metsä Group. The captured bio-based carbon dioxide can be used as raw material in many hydrogen economy's products such as chemicals, fuels and materials.

Climate work is integrated into the business

Metsä Group has defined that the purpose of its business is to promote the bioeconomy and circular economy by sustainably and efficiently upgrading northern wood into first-class products. In 2024, the ability of Metsä Group's strategy to respond to climate change was analysed with a climate resilience analysis. The analysis was used in preparing the Climate transition plan, coordinated by Metsä Group's Stakeholder Engagement unit. The steering group was Metsä Group's sustainability process management team composed of the directors in charge of sustainability matters in the business areas and in Group Services. Metsä Group's Executive Management Team participated in the climate resilience analysis, which covered both Metsä Group's ownership and business strategies and the business areas' strategies. The results obtained in the analysis in 2024 are valid for 2025.

The analysis of climate-related physical and transition risks and opportunities is a key pillar of the strategic approach, and it served as the basis for the resilience analysis. The analysis covered the Group's own operations and value chains. Metsäliitto Cooperative's owner-members value long-term climate work and continuous development. Indeed, the ownership structure is an important part of the Group's climate resilience. At Metsä Group, climate change mitigation and adaptation and the development of regenerative forestry have been integrated into business operations and strategic targets.

Adaptive change capacity and transformative capacity

Adaptive change capacity means the gradual adaptation and mitigation actions taken mainly in the company's own operations whereas transformative capacity means broader measures to promote systemic change in the value chain and communities. According to the analysis, Metsä Group invests in building both of these capacities.

The key uncertainty factor associated with the resilience analysis is the weak predictability of EU legislation. Uncertainty is exacerbated by the fact that many important details are laid down in acts which are not part of the main texts of the directives and regulations. Another significant uncertainty factor concerns the assessment of the climate change adaptability of complex natural ecosystems such as forests.

Our purpose

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

Our vision

To be the preferred partner in developing sustainable business.

Our values

- Reliability
- Cooperation
- Renewal
- Responsible profitability

Summary of the climate resilience analysis of Metsä Group's strategy

	Strengthening the capacity for adaptive change	Strengthening the capacity for transformation
Metsä	• Forest services that enable climate change mitigation and adaptation • Adaptation to climate change conditions in harvesting operations • Reducing use of fossil fuels, as well as backup fuels in harvesting and wood transports	• Target program for regenerative forestry strengthening the state of forest nature • Targets and actions for increasing carbon sequestration in forests
Production	• The high share of fossil-free and self-sufficient energy used in production creates stability • Electrifying part of the energy use in production • Improving raw-material, energy and water efficiency • Product and technology development projects to optimise the use of raw materials and energy and to achieve the strategic 2030 sustainability targets	• Increasing the utilisation of side streams for material use • Further development of the bioproduct mill concept • Development of low-carbon processes in operations with machine and equipment suppliers • Capture of wood-based carbon dioxide and enabling its use as raw material to replace fossil-based raw materials • Development of regenerative land use: biodiversity plan of the Kemi mill area
Products	• Focusing on the fresh fibre strategy: using fresh fibre in tissue paper and paperboard production enables reduced use of water and chemicals compared to recycled fibre • Development of new fibre products: Muoto™ packaging products, Kuura™ textile fibre and the Light Fibre Material for insulating and protective applications and interior design • Other new products, for example lignin products to replace fossil-based chemicals, such as dispersant plasticisers in concrete	• Wood-based products reduce dependency on fossil-oil based raw materials via substitution • Life cycle GHG emissions of many products are low in global comparison, which offers customers the opportunity to reduce their emissions: lightweight, recyclable and resource-efficient wood-based products • Increasing the production capacity of wood-based products that store carbon for a long time

Cross-cutting themes

- Further development of the operational culture based on cooperation and partnerships
- Strategic R&D&I programmes for barriers and coatings, side streams, fibre-based products, and optimal use of northern wood, for example
- Reduction of GHG emissions with customers and suppliers
- Strategic HR programmes to improve the resilience of personnel, teams and organisation

02
Climate related targets and metrics

In addition to Scope 1, 2 and 3 emissions reduction targets Metsä Group has in place other climate-related targets for forest management, resource-efficient production, and products.

2030 emissions reduction targets

Metsä Group's strong focus on reducing Scopes 1 and 2 emissions is reflected in good results: we have already reached the IPCC 2030 reduction target for these. Regarding Scope 3 emissions, our focus is on reducing emissions from the logistics purchased by us and on building collaboration across value chains.

Targeting to zero tonnes of fossil Scope 1 and Scope 2 carbon dioxide emissions by 2030

Metsä Group set its strategic 2030 sustainability targets for the first time in 2018. Many of them are related to climate change mitigation. For example, one of the targets is to phase out the use of fossil energy in production by the end of 2030 which means that no fossil carbon dioxide emissions would be generated. Nearly all (99%) of the raw materials and product packaging materials used by Metsä Group are fossil-free (wood-based raw materials included).

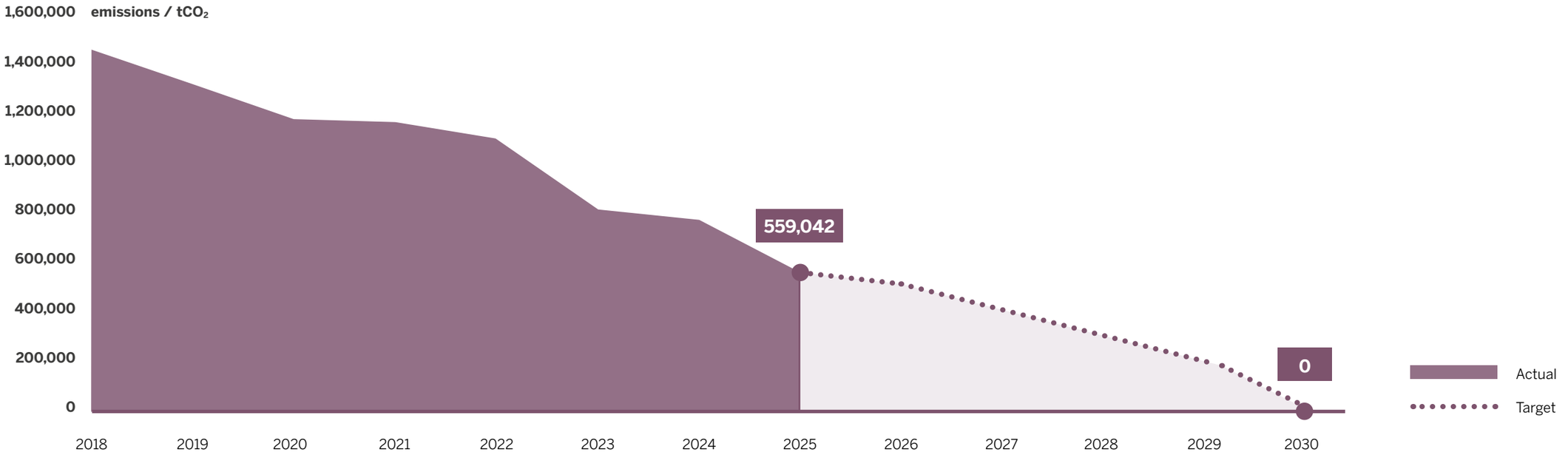
The Scopes 1 and 2 emission reduction target only includes fossil carbon dioxide emissions, not other greenhouse gases. The emissions calculation has been carried out in accordance with the GHG protocol. Wood-based energy generates small amounts of biogenic methane and nitrous oxide, which are included in Scopes 1 and 2 emissions. According to Metsä Group's estimate for 2030, the sum of Scope 1 and Scope 2 emissions of biogenic methane and nitrous oxide gases will be approximately 110,000 tCO_2e.

Fossil CO2 accounts for approximately 90% of Metsä Group's Scope 1 and Scope 2 emissions. The zero target for Scope 1 and Scope 2 emissions of fossil CO_2 therefore corresponds to a reduction of approximately 90 % in Scope 1 and 2 greenhouse gas emissions, indicating that the Scope 1 and 2 target is in line with the Paris Agreement's objective of limiting global warming to no more than 1.5 °C above pre-industrial levels (IPCC pathway)*. In 2025, Metsä Group's own operations (Scopes 1 and 2) accounted for 12% of the total greenhouse gas emissions while 88% arised from other parts of the value chain (Scope 3). A roadmap and diagram containing the key measures and related emissions reductions are depicted on the following pages.

The sum of Metsä Group's fossil Scope 1 and Scope 2 carbon dioxide emissions has decreased by 61% from the 2018 level. Regarding Scopes 1 and 2 we have already achieved the 1.5°C Paris-aligned 2030 reduction target.

* The 1.5 °C climate pathway (IPCC) sets a reduction target for fossil Scope 1 and Scope 2 CO_2 emissions, which is 52.4 % when the reference year is 2018.

Roadmap including Metsä Group's key measures to reduce fossil Scope 1 and 2 CO_2 emissions



Conducted / initiated 2018–2025*

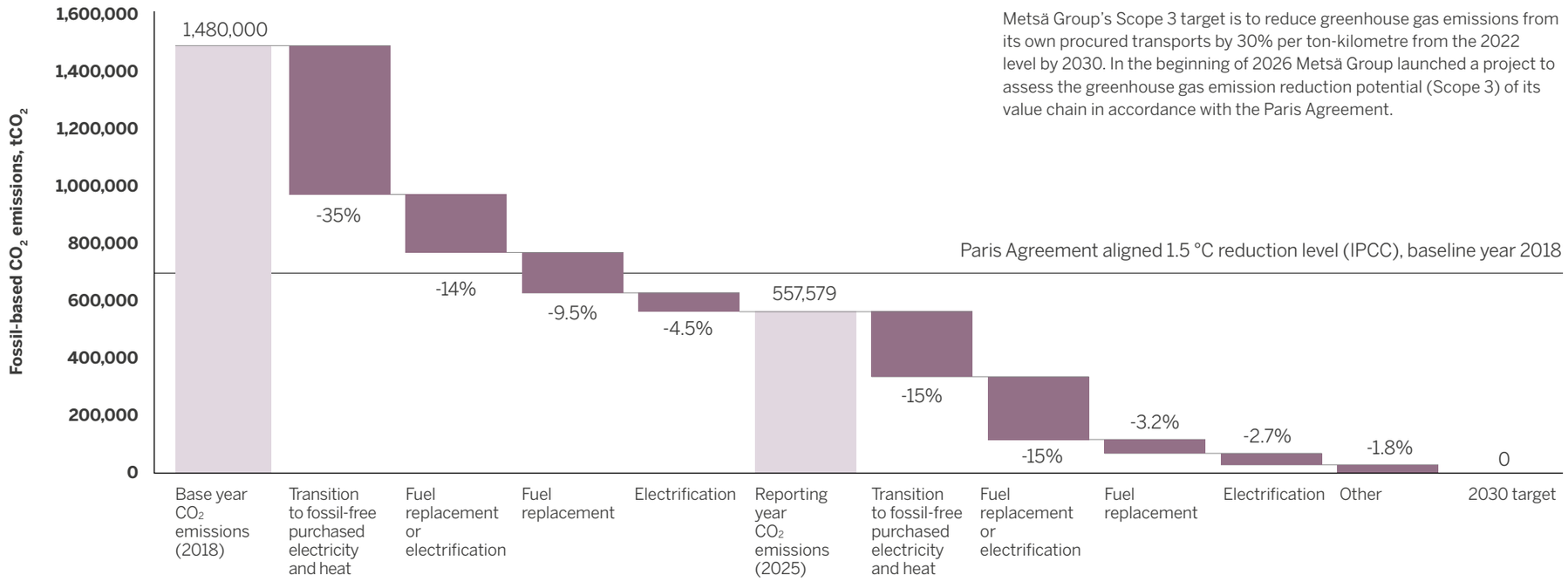
- Äänekoski new bioproduct mill
- Rauma new sawmill
- Husum new recovery boiler
- Kemi new bioproduct mill
- Reducing the use of peat in energy production
- Transition towards fresh fiber and Future Mill -strategy in tissue manufacturing start
- Replacing the use of fossil-based lignite by wood pellets in heat production at Kreuzau tissue paper mill
- Optimising usage of spare fuels for energy production at mills

Required actions 2026–2030

- Stop using peat in energy production
- Renewal of drying parts of production lines
- Electrification of steam generation
- Improving water use efficiency and thereby reducing the use of heating and pumping energy
- More efficient utilization of waste heat and heat pump solutions
- Continuous improvement in energy efficiency
- Increasing the share of fossil-free heat and electricity
- Replacing fossil fuels with non-fossil solutions
- Future Mill -strategy in tissue manufacturing proceeds

* The lower-than-average production rate of mills in 2023–2025 also contributed to emission reductions

Plan to phase out the use of fossil energy in Metsä Group's production by 2030 (Scope 1 & 2, market-based)



Metsä Group's Scope 3 target is to reduce greenhouse gas emissions from its own procured transports by 30% per ton-kilometre from the 2022 level by 2030. In the beginning of 2026 Metsä Group launched a project to assess the greenhouse gas emission reduction potential (Scope 3) of its value chain in accordance with the Paris Agreement.

Metsä Group's 2030 target covers fossil carbon dioxide emissions, which accounted for approximately 90% of the company's total Scope 1 and Scope 2 greenhouse gas emissions in the base year 2018. The calculation of the reduction level under the Paris Agreement is based on the reduction level estimated by the IPCC (global fossil carbon dioxide emissions will decrease by 48% between 2019 and 2030) and by extending the linear reduction to the years 2018–2030, the emission reduction is about 52%. The diagram's emission values do not take the counting caused by the Group's internal energy trade into account, unlike the other reported emissions. The emission reductions described are indicative.

Targeting to 30%/tkm reduction by 2030 in greenhouse gas emissions from logistics purchased by Metsä Group (Scope 3, category 4)

Metsä Group's current priority area concerning Scope 3 are emissions from logistics purchased by the Group, and the target is a 30 % reduction in emissions calculated per tonne-kilometre by 2030. The target has been in force since 2025 and the baseline year is 2022.

The Scope 3 target is not yet in line with the 1.5 °C pathway of the Paris Climate Agreement. Metsä Group continues to improve the greenhouse gas emission assessment by using more accurate data and develops ways to reduce Scope 3 emissions in cooperation with partners. Metsä Group initiated a project in the beginning of 2026 to assess the value chain's greenhouse gas emission reduction potential in accordance with the Paris Agreement. The project will take into account the international guidelines for climate targets and reporting practices which are expected to be somewhat updated during 2026.

Business area specific targets related to Scope 3 emissions

Some of Metsä Group's business areas have their own specific Scope 3 related emissions reduction targets. In 2024, Metsä Tissue and Metsä Forest, which provides wood supply and forest services, set overall emissions reduction targets in accordance with the Paris Climate Agreement. Both business areas aim to reduce their total greenhouse gas emissions by 50 % from the 2022 baseline by 2030. In 2025 an independent 3rd party reviewed Metsä Tissue's reduction target which includes both the company's own emissions and the value chain's emissions. As wood supply and forest services do not generate Scope 1 and Scope 2 emissions, at Metsä Forest the reduction will target the value chain emissions. The targets have been in force since 2025.

Metsä Board set in 2019 Scopes 1,2 and 3 climate targets approved by the Science Based Targets initiative (SBTi) which meet the Paris Climate Agreement requirements aiming to limit global warming to 1.5 degrees. The target year of the Scope 3 target was met in 2024 and currently Metsä Board is evaluating and updating the target.

Assessing and reducing Scope 3 greenhouse gas emissions includes challenges

Primary data is not comprehensively available, and thus in some parts of the Scope 3 assessment average emission factors have to be utilized. The modernization of mills and investments in new resource- and environmentally efficient production units increase the Scope 3 emissions, even though these investments enable the provision of products with a lower carbon footprint for the customers.

Emissions Trading System and voluntary carbon credits

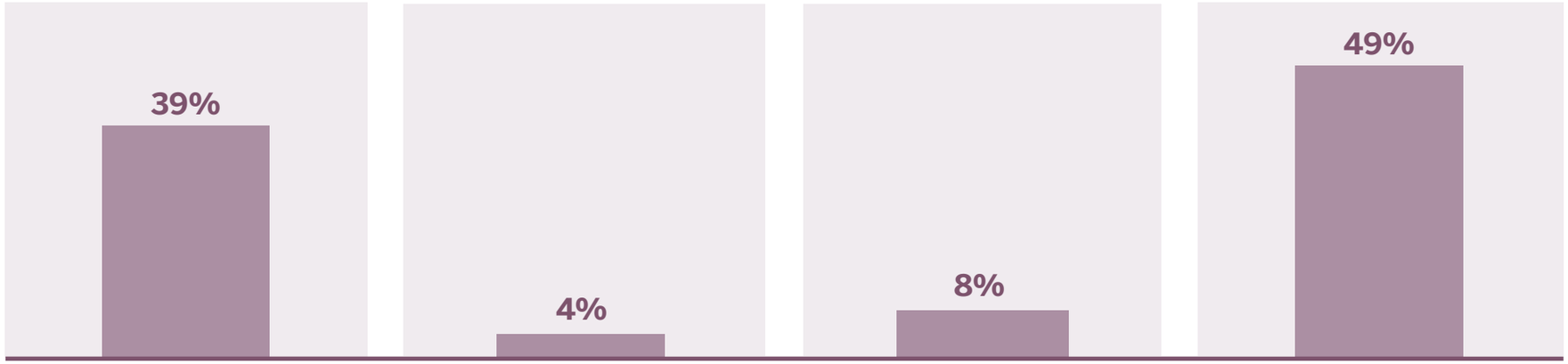
Metsä Group's production units are part of the EU Emissions Trading System (ETS). Metsä Group does not have an internal carbon pricing system that would generate actual financial flows.

Metsä Board uses an internal carbon pricing system in the income and expense records of production units. Metsä Group's investment calculations for all production units apply shadow prices to carbon dioxide based on the prices of the EU ETS.

Read more in Metsä Group's Annual review

Metsä Group does not use carbon credits purchased outside of its value chain to offset its emissions. Developments in the voluntary carbon market and related regulation are followed, as carbon credits will play a role in future in balancing residual emissions. For example, the EU Regulation on Carbon Removals and Carbon Farming (CRCF) and related delegated acts are of key importance.

In 2025 Metsä Group's total greenhouse gas emissions were 5,609,310 tonnes CO_2e (Scopes 1, 2 and 3)



Scope 3 Upstream

	tCO_2e
Purchased goods and services	**1,097,522**
Capital goods	**152,372**
Fuel and energy-related activities	**128,118**
Upstream transportation and distribution*	**806,237**
Waste generated in operations	**4,152**
Business travel	**3,105**
Employee commuting	**7,553**
	2,199,060

Scope 2

	tCO_2e
Market-based indirect GHG emissions from purchased energy	**230,578**
	230,578

Scope 1

	tCO_2e
Direct GHG emissions from own operations	**433,785**
	433,785

Scope 3 Downstream

	tCO_2e
Downstream transportation	**39,331**
Processing of sold products	**1,622,096**
Use of sold products	**21,083**
End-of-life treatment of sold products	**1,058,454**
Investments	**4,924**
	2,745,888

* Part of the emissions in category Upstream transportation and distribution occur in downstream

Other key climate related targets

Metsä Group set its strategic 2030 sustainability targets for the first time in 2018. All the targets and related updates are approved by the Group's Executive Management Team and Board of Directors. The targets were updated in 2022 and 2024 based on a double materiality assessment. Based on the results of the materiality assessment, Metsä Group's key sustainability topics are climate change, biodiversity, the environmental impacts of products, and the occupational safety of its own workforce and employees in the value chain. In addition to the environment, the strategic 2030 sustainability targets include aspects of social responsibility, and good governance and corporate culture.

Versatile climate targets

Many of the 2030 targets under the theme environment are related to climate change mitigation or adaptation. Targets related to resource efficiency can also offer climate benefits. The targets and progress in them are summarised in the adjacent table. For each target, a roadmap of the measures needed to achieve the target has been created. Highlights of these measures are described in the chapter Measures to reach the targets. A more detailed description of all Metsä Group's strategic sustainability ESG 2030 targets and progress in them can be found in Metsä Group's annual review.

Read more in Metsä Group's Annual review

Metsä Group's climate-related metrics and strategic 2030 targets and progress in them

TARGET	2030 TARGET	2025 ACTUAL	2025 PROGRESS
E – ENVIRONMENT			
Mitigating climate change and adapting to it in own operation and value chains			
Energy efficiency index, base year 2018	90	102	🔴
Fossil-based carbon dioxide emissions (Scope 1 + Scope 2 market-based), t	0	559,042	🟢
Greenhouse gas emissions from logistics purchased by Metsä Group from the 2022 level (Scope 3, category 4), %/tkm	-30	-18	🟡
Amount of forest regeneration and young stand management from the 2018 level, %	+30	+14	🟢
Amount of forest fertilization from the 2018 level, %	+50	+126	🟢
Share of continuous cover forestry in peatland forest regeneration, %	30	18	🟡
Volume of mechanical wood products from the 2018 level, %	+30	-12	🔴
Continuous improvement in resource-efficiency in production			
Reduction in process water use per produced tonne from the 2018 level, %	-35	-14	🟡
Process waste delivered to landfills, t	0	8405	🟡
Enhancing the state of forest nature			
Retention trees on regeneration felling sites, %	100	96	🟡
High biodiversity stumps on harvesting sites, %	100	100	🟢
Spruce as the only tree species after young stand management, %	0	25	🔴
Measures promoting biodiversity, number	10 000	10,616	🟢
G – GOVERNANCE			
Promoting sustainable and ethical practices in our supply chain			
Share of certified wood, %	100	92	🔴
Suppliers' commitment to the Supplier Code of Conduct, share of total purchases, %	100	99.5	🟡
Supplier assessments and audits of core suppliers, %	100	71	🟢
Joint sustainability target with partner suppliers, %	100	100	🟢

The target which was related to fossil-free raw materials and product packaging materials will not be monitored from 2025 onwards. Almost all (99%) of Metsä Group's raw materials and product packaging materials are fossil-free (including wood-based raw materials).

Progress in 2025 compared with the previous year.
🟢 Exceeds target (significant progress)
🟡 On target (progress as planned)
🔴 Short of target (no progress or weaker progress)

Towards 2050

Metsä Group has not yet set any official post-2030 emissions reduction targets. The target for fossil-based Scope 1 and Scope 2 carbon dioxide emissions is zero by the end of 2030. Metsä Group initiated a project in the beginning of 2026 to assess the value chain's greenhouse gas emission reduction potential in accordance with the Paris Agreement. The work is based on the general guidance of the Intergovernmental Panel on Climate Change (IPCC), as no internationally recognised sector-specific development path towards net zero is currently available for Metsä Group's sector, the forest industry. The project will take into account the international guidelines for climate targets and reporting practices which are expected to be somewhat updated during 2026.

For the time being Metsä Group's production will continue to generate fossil-based carbon dioxide emissions, but the company aims to phase out the use of fossil energy in its production by 2030. This means that from 2030 onwards, production will no longer contain locked fossil carbon dioxide emissions. However, a small amount of biogenic greenhouse gases that are included in Scope 1 and Scope 2 emissions will still be generated. Metsä Group is not excluded from the EU's Paris Agreement aligned benchmarks.

03

Measures to reach the targets

Metsä Group's plan to mitigate and adapt to climate change includes action programmes related to the climate impacts of production, supply chain and products, as well as forest management.

Towards regenerative forestry

Metsä Group's wood supply has certified quality and environmental management systems and our methods are based on up-to-date research. In the spring of 2023 we committed to developing regenerative forestry which aims to strengthen the state of forest nature in member-owners forests verifiably by 2030.

Metsä Group's wood supply does not cause deforestation. All the countries from which Metsä Group procures wood have issued legislation requiring forests to be renewed after harvesting. Metsä Group procures most of its wood from Finland and some from Sweden and the Baltic countries. Of the wood used by Metsä Group, 85% is procured from Finnish forests, mostly from the forests of Metsäliitto Cooperative's more than 90,000 owner- members whose total forest assets account for approximately half of all the private forests in Finland and 32% of all Finnish forest land.

All the wood procured by Metsä Group comes from either certified forests or forests that meet the requirements of controlled origin (PEFC controlled sources, FSC® controlled wood: Metsäliitto Cooperative's respective logo licences are FSC-C014476 and PEFC/02-31-03). In 2025, we procured a total of 30 million cubic meters of wood, of which certified wood accounted for 92%. Metsä Group does not procure wood from old-growth forests or from forests defined as natural forests.

Forests and forest management are subject to different societal expectations and climate-related hopes and pressures. In commercial forests, it is essential to find a balance between the profitable commercial use of forests and targets related to climate change adaptation and mitigation, and measures promoting biodiversity. The management of the Cooperative and Group and the owner- members participate actively in public discussion about forestry and its development.

According to estimates, Finnish forests will have to deal with a substantial temperature increase during their life-cycle due to climate change. As a result, the risks of damage caused by storms, floods, forest fires, droughts, and pest insects increase. Emissions from peatland forests increase as the temperature rises. In addition, changes will be seen in the prevalence of tree species and in forest species, and non-native species may cause problems in forests. If the state of forest nature deteriorates, forests will be more vulnerable to the consequences of climate change, such as extreme weather phenomena and the spread of pests.

Strengthening biodiversity has many positive impacts on forest health and growth potential, including an increased capacity to adapt to climate change. Metsä Groups aims to carry out the wood production in a way that the functioning of the forest ecosystem is safeguarded and the diverse production of ecosystem services is preserved.

Semi-natural forestry as the basis

Metsä Group does not own any forest significant for its wood procurement. Metsä Group's Wood Supply and Forest Services handles wood raw material procurement and provides forest management services to forest owners and especially to owner-members. Forest use is guided by Metsä Group's principles for forest use and forest management. The aim is to increase the amount of carbon sequestered by forests and promote forest biodiversity, among other things. Metsä Group's Wood Supply has certified quality and environmental management systems. The forest and nature management and harvesting methods are based on up-to-date research, and the Group engages in active long-term collaboration with a diverse research community.

The 2030 sustainability targets for wood supply are defined so that Metsä Group can essentially influence them with its own actions. The targets only apply to Finland, but international wood supply is considered in the calculation of the forest certification percentage. The targets are related to impacts, risks and opportunities identified in the upstream value chain in particular. The targets are not based on a scientific framework, but they are aligned with the goals for curbing biodiversity loss stated by the UN, the EU and Finland. The targets do not include external ecological compensation, and in the absence of suitable values, no ecological threshold values have been used in target setting to date. Metsä Group follows research on ecological threshold values and evaluates the values' usability in its operations.

After regeneration felling, the forest is renewed quickly. The faster and better a new forest is established, the sooner the forest will begin to sequester carbon from the atmosphere. Whenever available, seed and seedling material of domestic tree species from seed orchards is used in regeneration. The use of material from seed orchards helps trees grow better than naturally generated trees. Young stand management and thinning ensure that the forest remains vibrant, and that forest growth focuses on trees that are most valuable both economically and in terms of climate change mitigation.

Mixed forests increase forest biodiversity and resilience to storms and insect damage, for example. Finnish commercial forests are semi-natural, which means that wood production is based on native tree species and integrated into the natural ecosystem, which also produces numerous other ecosystem services such as natural biodiversity maintenance, nutrient cycling, water purification, pollination, climate regulation and recreation.

Metsä Group has a comprehensive and constantly maintained set of geospatial data on nature, which is utilised in wood trade offers and sales, as well as the planning and implementation of felling. The geospatial data system allows risk areas to be identified and geospatial analyses to be conducted. Additionally, the geospatial data system allows environmental data such as endangered species registers and data on properties, groundwater areas and waterbodies to be updated in real time as part of work supervision.

Metsä Group has developed carbon accounting metrics related to forests to verify the impact of wood supply and forest management on the forest carbon balance. From 2025, the carbon calculator is available to forest owners as part of the digital Metsäverkko service. Metsäverkko is an online service offered by Metsä Group to help forest owners manage their forest assets and adopt climate-smart forest management solutions. Some of the Metsäverkko services such as the carbon calculator are available only to Metsä Group's owner-members.

Examples of Metsä Group's forest services and wood supply actions and policies that promote climate-smart forestry

Metsä Group's action / policy	Impact on climate change mitigation and / or adaptation
For industrial use only spruce, pine and birches and aspen with a diameter of less than 40 centimetres are purchased. Other broadleaved trees such as rowan and alder are left in the forest.	Increasing the number of rare broadleaved trees, which account for about 3 % of the volume of wood in Finnish forests, increases species richness.
To its owner- members, Metsä Group recommends nature management to herb-rich forests and sunlit slopes and voluntary conservation for sites of high protection value.	Improving the living conditions of endangered forest species and increasing forest biodiversity. Although herb-rich forests and sunlit slopes account for only a small share of Finland's forest area, they are home to more than half of Finland's endangered forest species.
Continuous cover forestry is recommended in areas where it is suitable. In peatland forests, the target share is 30 %.	Continuous cover forestry is one way to safeguard forest biodiversity and minimize greenhouse gas emissions on peatlands.
Mixed forests are promoted by offering forest owners a forest regeneration service in which both spruce and pine are cultivated in the same area. In young stand management, it is ensured that enough good-quality broadleaved trees are left in the forests to grow.	Strengthening forest biodiversity.
During thinning and regeneration felling retention trees are left and high biodiversity stumps are made to faster generate more decaying wood on harvesting sites.	Decaying wood provides a habitat for many species that depend on it, and they, in turn, diversify the range of tree species, maintaining resilience in changing conditions.
Buffer zones where forestry is carried out more lightly or not at all are left along waterbodies.	Safeguarding the state of waterbodies and the biodiversity of the area.
Metsä Group's goal is to increase the amount of forest fertilisation in owner-members' forests by 50 % from the 2018 level by 2030.	Improving the growth of trees and enhancing the carbon sequestration of forests.
In collaboration with CollectiveCrunch Metsä Group has developed an application for our owner-members that is based on artificial intelligence, machine learning and open data, and helps identify and visualise storm and insect damage.	Thanks to the application, felling can be carried out before insect damage has time to spread. Forest owners can be offered a deeper insight on the wellbeing of forests and information on the changes taking place in forests more rapidly.

What is regenerative forestry?

In the spring of 2023, Metsä Group committed to developing regenerative forestry. The Group strives to implement measures for wood procurement and forest services that will verifiably strengthen the state of forest nature in Finland. The aim is that the impacts of the measures will be demonstrated in a measured and verified way by 2030 at the latest.

Both R&D&I cooperation and the development of forest management services play an important role in achieving results. Development of the measuring and monitoring the quality and impacts of forest management is an integral part of regenerative forestry.

In Finland, forests are multi-use forests. Everyone's rights apply, meaning that you can freely go on excursion in the forest, even if you don't own it. This applies in wood procurement areas too. The forests are a source of berries, mushrooms and herb crops, that can be collected freely. The goal of regenerative forestry is to develop forestry so that the various ecosystem services – benefits provided by nature, from carbon sinks to pollinators – can be measured, and that wood is produced as part of a developing multi-purpose production model based on ecosystem services.

Regenerative forestry provides a means to strengthen the state of forest nature and holistically manage ecosystem services, which improves forests' climate resilience. Regenerative forestry also supports the role of forests as carbon sinks and promotes their long-term health. It promotes the long-term availability of wood raw material, making more wood available for substituting non-renewable raw materials.

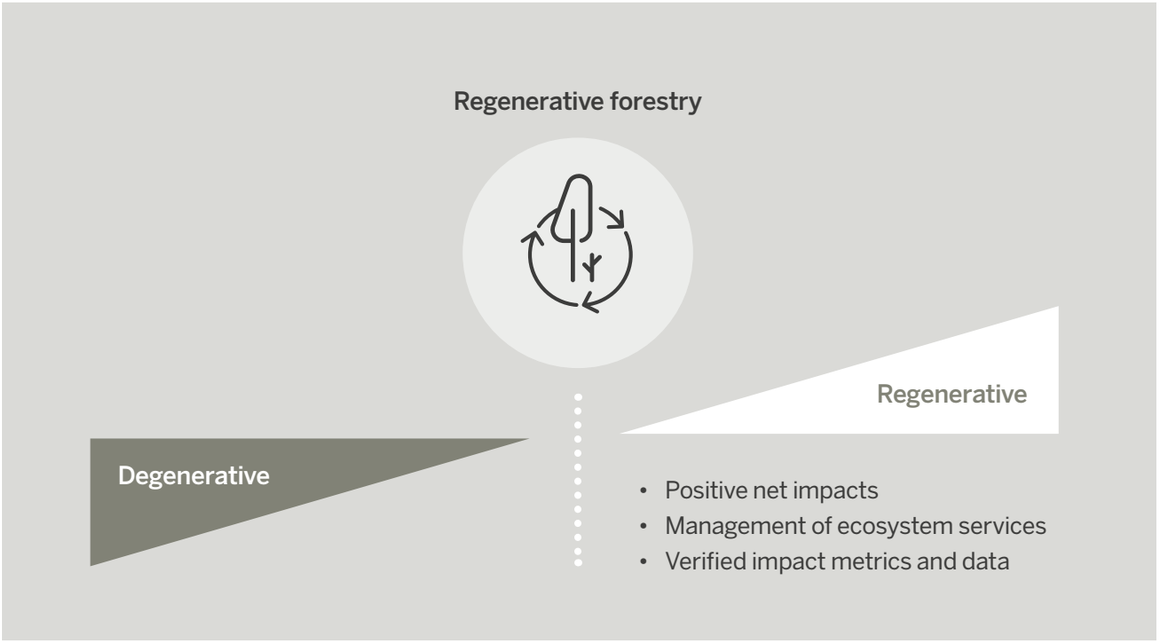
Forest biodiversity is enhanced through various practical measures. The Metsä Group Plus forest management model is a tangible example of promoting regenerative forestry. In connection with a timber sale or a young stand management order, measures are agreed upon to safeguard and improve the state of forest nature, which go beyond current standard practices. For example, more retention trees and high biodiversity stumps are left per hectare during felling. The requirements for actions in valuable habitats and littoral forests are high. Continuous-cover harvesting on nutrient-rich peatlands was added to Metsä Group Plus service at the end of 2024.

The Metsä Group Plus service is available for Metsäliitto Cooperative's owner-members. Metsä Group pays an additional bonus per hectare for Metsä Group Plus wood to compensate any loss of income caused by the additional measures. The service was introduced in 2023, and in 2025 about 19% of the wood volume obtained from private forest stumpage sale was harvested from Metsä Group Plus sites.

Opting for regenerative forestry is always the forest owner's decision and choice from the services available. In promoting regenerative forestry, the focus is on understanding the impacts of the choice, as well as collaboration and dialogue with a diverse stakeholder network, especially researchers.

To maintain the high biodiversity capacity of forests, regenerative forestry respects the following key principles:

- Wood production is integrated into existing ecosystems and does not cause land use change.
- Tree species are grown in the conditions to which they have adapted during their evolution.
- Native tree species, naturally occurring in the harvested areas, are used commercially. Each tree species has a significant number of other species that either directly or indirectly depend on it in their various ecological roles. Wood production based on native tree species creates a high baseline for the proportion of native species in the area.



Regenerative forestry

Strengthens forests' climate resilience

Supports the health of forests and their role as carbon sinks and storage

Promotes the long-term availability of wood raw material, ensuring that more wood is available for substituting non-renewable raw materials

Principles of regenerative forestry

Diversification of structural features

Utilising native tree species

Species-specific measures

Improving the management of peatlands and water protection

Increasing the number of old trees

Diversification of tree species

Protection of valuable habitats

Improving the biodiversity network

Special measures for herb-rich forests, ridge areas and burned forest areas

Increasing varied decayed wood

Promoting biodiversity outside commercial forests

Metsä Group has several initiatives aimed at strengthening biodiversity outside commercial forests. A pilot project for regenerative land use is underway in the Kemi mill site, and a ten-year funding programme for nature projects is also on-going. In 2025, the Metsä Conservation Foundation was established to protect forests with high biodiversity value.

Metsä Group wants to develop an international operating model, the aim of which is to create a change in the land use of the built environment. The model is based on the following principles of regenerative land use:

- Implementing solutions that maintain and enhance the native character of the local nature
- Supporting the occurrence of threatened species in the built environment
- Safeguarding the local and cultural-historically relevant species in the area
- Identification and conservation of species reflecting local industrial history
- Preventing invasive alien species in line with national targets
- Identifying and safeguard ecosystem services in the area as municipal services
- Creating a sense of community and working together locally
- Supporting and developing nature solutions that serve environmental education
- Combining art and culture with science-based solutions to support the natural environment
- Innovating new approaches to the development of regenerative land use

Regenerative land-use aims to improve the state of nature in built and industrial environments. The initiatives are planned and carried out in collaboration with experts and local stakeholders such as associations, towns and municipalities.

Metsä Group has been piloting the developed model in the Kemi mill site since 2023. The activities focus on areas that are not in direct industrial use, such as noise barriers and lawns. In Kemi, for example, harmful alien predators have been removed, bird and insect species have been mapped, endangered traditional biotopes have been strengthened, and approximately 15 hectares of different habitats, such as meadows and heathlands, have been established with wild plant seeds collected from the nearby area. One aspect under investigation is how to combine work that supports biodiversity with industrial production. For example, unused side streams from the mill, such as lime, are being tested in a meadow as a growth medium for lime plants.

Metsä Group's **funding programme for nature projects** was launched in 2021. This ten-year programme focuses on funding development projects that are carried out outside commercial forests and enhance biodiversity or improve the state of waterbodies in Finland. The funding programme is a gratuitous programme detached from the Group's own impacts and value chains. Selection of projects for the funding takes place once a year. To date (Q4/2025), Funding programme for nature projects has funded 88 projects across Finland with 2.4 million euros.

In 2025 Metsä Group established the **Metsä Conservation Foundation**. The aim is to complement the conservation network and offer the forest owner compensation for forest sites with high biodiversity values. The foundation's operations will start in 2026.

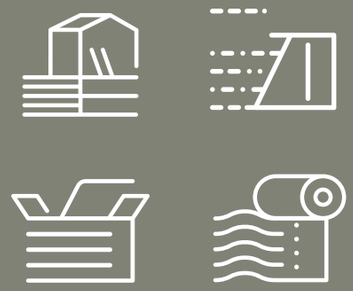
Aiming for production without fossil energy

Metsä Group's bioproduct mills in Äänekoski and Kemi operate completely without fossil energy, and other production is also carried out using mainly fossil-free energy. A roadmap has been created for each production unit to guide the transition away from fossil energy.

Concerning its own production, Metsä Group's plan for climate change mitigation comprises investments and measures for replacing fossil fuels with renewable fuels and fossil free electricity at all the Group's production units and power plants. A roadmap for achieving operations without fossil energy has been drawn up for each production unit. The measures apply to the fuels and backup fuels used at power plants and to the process fuels used at production units. The company will also transition to fossil-free alternatives in its purchased energy. In addition, Metsä Group improves the efficiency of its energy and water use through continuous development and investment. Reducing water use is a way of mitigating climate change, as process water utilization and wastewater treatment consume energy, causing greenhouse gas emissions.

Metsä Group is also committed to the continuous improvement of environmental and energy efficiency. Environmental management and continued environmental performance are guided by the requirements of the production units' certified quality, environmental and energy management systems, and the Principles of Environmental Management. Internal and external audits in accordance with ISO 14001 and ISO 50001 standards are systematically carried out at production units.

At all Metsä Group production units, energy efficiency work is managed by an energy efficiency coordinator, supported by the ISO 50001-compliant energy management system. Energy efficiency measures are documented, and their calculated savings are reported as part of annual reporting.



In 2025, 94% of the energy utilized in Metsä Group's own production was fossil-free.

Examples of the actions taken in production to mitigate climate change

Metsä Wood

- The new Kerto® LVL mill under construction in Äänekoski. The mill's annual production capacity is approximately 160,000 cubic metres, which represents a 50 % increase in the company's total Kerto® LVL capacity. The value of the investment is 300 million euros, and the mill is expected to begin production in late 2026.
- Kerto® LVL, made from wood veneers, is a construction material with high added value. The strong Kerto® LVL products are a material-efficient solution for increasing the use of wood in construction, and they store biogenic carbon throughout their life-cycle.
- In 2024, Metsä Wood switched to using emission-free electricity at all its mills, which reduced Metsä Wood's Scope 2 market-based emissions by approximately 99% from 2023.
- The Kerto LVL mill in Lohja switched to using electric forklifts in early 2025.

Metsä Fibre

- All pulp producing mills (Kemi, Äänekoski, Rauma, Joutseno) are BAT-aligned, i.e., based on best available techniques, and offer an industrial platform for collaboration enabling synergy befits.
- Bioproduct mills in Äänekoski and Kemi operate completely without fossil energy. The Kemi bioproduct mill which started its operations in 2023 produces 1.5 million tonnes of softwood and hardwood pulp annually, as well as many other bioproducts. The value of the investment is around 2 billion euros. Thanks to the resource-efficient new mill the fossil-based CO_2 emissions decrease by some 68,000 tonnes (25 % of Metsä Fibre's Scope 1 and Scope 2 emissions) compared to the former mill*, even though the new mill has a higher production capacity. The mill produces 2.0 TWh of renewable electricity annually and has an electricity self-sufficiency rate of 250 %. The surplus renewable electricity is supplied to the national grid.
- The surplus heat from Kemi bioproduct mill is utilized for district heating, which reduces the fossil energy need in the area. In 2025 Metsä Fibre and Rauma Energy signed an agreement for the utilization of the surplus heat from Rauma pulp mill in district heating network.
- In 2025 Metsä Group piloted the capturing of biobased carbon dioxide at the Rauma pulp mill. Investigation is on-going on the overall concept how to utilize the captured CO_2 as raw material in future.

Metsä Board

- Renewal of the Husum pulp mill's turbine and recovery boiler completed in 2022 increased the mill's bioenergy production, and its electricity self-sufficiency from 50 % to about 80 %. The value of the investment is approximately 380 million euros.
- The 110 million euros development project of the Kemi board mill completed in 2023 expanded the mill's capacity and improved its water and energy efficiency.
- The renewal of the turbine and generator of the Kyro board mill's biopower plant in 2024 improved the power plant's efficiency and increased electricity self-sufficiency from 30 % to 50 %. The investment also increased the share of fossil-free electricity at the mill.
- The renewal of the Simpele mills' folding boxboard machine was completed in 2025. This 60 million euros investment improved the product's performance and increased the share of fossil-free energy in production to 98%.
- Closing of the Tako board mill in summer 2025 decreased Metsä Board's Scope 1 emissions as fossil natural gas was the main fuel utilized in the mill.
- All the electricity purchased by Metsä Board in 2025 was fossil-free which considerably decreased Scope 2 emissions.

Metsä Tissue

- In 2023, the Kreuzau mill in Germany switched from coal to wood pellets, thanks to which the mill's Scope 1 emissions decreased by about 66 %, and Metsä Tissue's Scope 1 emissions by more than 30%.
- In 2025, over 30 energy efficiency investment projects in total underway at the mills, amounting to total annual energy savings of nearly 35,000 MWh.
- The Future Mill strategy programme, one of the objectives of which is to reduce fossil- based Scope 1 and Scope 2 CO_2 emissions to zero.
- In 2025 the full scale production was started in the expanded and modernized Mariestad tissue paper mill in Sweden The new paper machine technology that was taken into use as a part of the investment improves energy efficiency and decreases water consumption considerably and enables lower CO_2 emissions per tonne produced.
- In 2025–2030, an investment programme of approximately 100 million euros will be carried out at the Mänttä tissue paper mill to modernise the mill and improve energy and water efficiency.

* Benchmark: 2022 emissions from the old Kemi pulp mill with a production capacity of 0.60 million tonnes per year

Circular economy integrated to climate work

Metsä Group focuses on resource efficiency, refining of industrial side streams and circularity of products together with partners. We joined the voluntary national initiative Circular Economy Green Deal in 2024, the year it was launched.

In its environmental policy, Metsä Group is committed to using raw materials, water and energy efficiently, and to continuously developing its operations. The side streams generated in production processes are primarily used as raw material or energy. Metsä Group takes advantage of synergies between its production units and develops industrial cycles and the recyclability of products.

Developing the circular economy is in the core of Metsä Group's strategy and operations. The Group's structure, which brings together a large part of the value chain of wood-based products, offers unique opportunities. The key is to optimise the material, energy, data and value flows from the entire system's perspective.

Metsä Group focuses on integrated production units

For example, the Äänekoski bioproduct mill completed in 2017 and the Kemi bioproduct mill completed in 2023 are based on the ecosystem concept, exemplifying industrial symbiosis, in which an entity formed by several companies offers synergies in resource use. The bioproduct mills have an advanced chemical cycle in which water and chemicals are recycled and returned to the process to be utilized again. Even some of the emissions are used as raw material: odorous gases are used in making sulphuric acid, which the mill needs for example in producing tall oil.

Most of Metsä Group's production side streams are utilized and only a relatively small share of them is delivered to landfills. Wood-based waste and by-products, sludge, ash, and lime are used in soil improvement and landscaping, fertilisers, chemical industry's applications, and in energy production. One of Metsä Group's 2030 targets is that zero process waste ends up in landfill.

The Circular Economy Green Deal

Metsä Group joined the voluntary national initiative Circular Economy Green Deal in 2024, the year it was launched. The initiative is coordinated by the Finnish Ministry of the Environment and the Ministry of Economic Affairs and Employment.

The participants set targets for 2035 and commit to actions that promote a low- carbon circular economy. The initiative is based on science-based prework, in which the Finnish Environment Institute, VTT Technical Research Centre of Finland, Natural Resources Institute Finland and the Geological Survey of Finland identified the most important areas of actions in terms of the circular economy transition. Prior to their adoption the commitments are assessed by a group including representatives of research institutes.

Cooperation with customers and partners is key and the aim is that the whole is more than the sum of its parts, in terms of both value creation and environmental benefits.

Metsä Group is committed to investing in research and development related to the further processing of its industrial side streams and set itself the goal of commercialising three significant new products or solutions based on Metsä Group's side streams by 2035. The product or solution can be commercialized either by Metsä Group or by its partner, however, in such a way that Metsä Group has played a significant role in the development work. Commercialization in this context means annual sales of at least hundreds of tonnes or equivalent commercial agreements.

Another target is to reduce Metsä Group's annual bioenergy production based on the combustion of production side streams so that it is 1,000 GWh lower in 2035 than in 2025. Improving energy efficiency and developing energy production towards non-combustion-based solutions, for example through electrification, saves valuable wood raw material for material use with higher added value. The flows of materials and energy are interconnected, and the development progresses gradually, taking the whole into account.

Current and planned investments

Metsä Group's completed and ongoing investments since 2015 total around six billion euros. Enhancing fossil-free solutions and resource-efficiency are the corner stones of many investments.

Metsä Group invests in fossil-free energy and the efficient use of energy, water and materials. In financing plans for industrial activities, the aim is to make use of green financing sources. As a rule, investments are financed with equity, but the largest future investments may require external financing, and possible future financing needs have been taken into account in the Green Finance Framework.

The starting point for planning new investments is a high level of automation and the best available technology. It is impossible to calculate the exact capital expenditure for climate measures because some of the costs are indirect and are incurred as part of other investments.

Major investments in Finland and Sweden

Metsä Group's completed and ongoing investments since 2015 total around six billion euros. In recent years, the key investments have been the Kemi bioproduct mill, the renewal of the recovery boiler and turbine at the Husum pulp mill, the renewal of the turbine at the Kyro board mill, and the renewal and expansion of the Mariestad tissue paper mill. Future investments include for example the electrification of boilers and processes that still use fossil fuels.

Metsä Group's core business is not yet included in the Taxonomy's tehcnical screening criteria. For this reason, the share of Taxonomy-eligible economic activities is low. Based on the materiality principle introduced by the new delegated act, activities related to Metsä Group's turnover as well as capital and operating expenditures have been excluded from the assessment. Metsä Group has no significant capital investments in coal, oil or gas.

Green financing

Since 2019, Metsä Group has had a Green Finance Framework in place that enables the issuance of green debt instruments in line with market practices and integrates Metsä Group's strategic sustainability 2030 targets into financing. The framework was updated in July 2024, and Sustainalytics has given a second-party opinion on it.

The framework especially supports the financing or refinancing of environmentally sustainable investments that contribute to Metsä Group's key environmental targets.

Metsäliitto Cooperative has a multicurrency revolving credit facility (RCF) of EUR 200 million (expiring 2030). The margin of the RCF is linked to sustainability criteria that are based on the following Metsä Group 2030 sustainability targets:

- Zero tonnes of fossil Scope 1 and Scope 2 carbon dioxide emissions
- Increasing the share of certified wood in wood supply

In 2025, Metsä Board issued a new unsecured green bond of EUR 200 million, maturing in 2031. The net funds from the loan were allocated to the refinancing of the investment for the Husum pulp mill renewal. The investment is in line with Metsä Group's Green Finance Framework and supports the UN's sustainable development goals (SDGs) in the following areas: renewable or fossil-free energy; waste and side stream management; and emissions reduction. Additionally, Metsä Board agreed on a revolving credit facility of EUR 250 million, with a margin tied to the long-term climate and energy efficiency targets. The facility replaced the unused EUR 200 million revolving credit facility due to expire in January 2027. The new credit facility will expire in 2030 and includes two one-year extension options requiring the consent of the creditors. The facility is intended for the company's general financing needs.

Metsä Group invests in resource efficiency, transitioning away from fossil energy in own production and development of industrial ecosystems

2016–2019

- Plywood and Kerto LVL investments
- New paperboard machine at Husum
- 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 producing mill in Husum

2023–2024

- Bioproduct mill and renewal of linerboard mill in Kemi
- Expansion of the Husum paperboard mill
- Expansion of the Mariestad tissue paper mill
- New Kerto LVL mill in Äänekoski
- Investment programme at Mänttä tissue paper mill
- Demo plant for a lignin product
- Modernisation of the Simpele board mill

Examples of planned potential investments

- Further increasing the share of fossil-free energy in production
- Mill for the Muoto 3D fibre product
- Kuura textile fibre mill
- Facility to capture wood-based carbon dioxide

Solutions for customers' climate work

In many applications Metsä Group's products substitute fossil alternatives. The biogenic carbon in construction wood products is stored for a long time which provides climate benefits. Our objective is to produce and develop climate-smart solutions in collaboration with our customers.

Metsä Group manufactures wood products that are used by millions of people in their daily lives all around the world. The main products are pulp, paperboards, tissue and greaseproof papers, and wood products. Wood is the main raw material for all Metsä Group's products.

Resource-efficient use of renewable wood raw material is at the core of Metsä Group's operations. Every part of the tree is used efficiently and for the most suitable purpose. The strongest part of wood – that is, log wood – is used for mechanical wood products such as sawn timber and construction elements. Pulp is made from pulpwood obtained from trees with a smaller diameter than log wood or the top of the tree. Branches and harvesting residues are utilized in producing renewable energy.

Small- diameter wood is obtained for example from thinning carried out as a forest management measure. Thinning helps the trees remaining in the forest grow sturdy faster, making them more suitable raw material for long-lasting wood products, while maintaining strong forest growth and carbon sequestration.

Climate benefit as a part of the value proposition of many products

Metsä Group's products offer key features for climate change mitigation, including the possibility to replace fossil-based raw materials and store biogenic carbon in construction wood products for a long time.

Metsä Group's work and investments to promote renewable energy and resource efficiency can be seen in the good results of carbon footprint calculations based on the product life-cycle analysis. Climate benefit is a key part of the value proposition of many Metsä Group's products. Most of these products are exported, to all continents.

Collaboration with customers is an important part of the climate work

The built environment accounts for about one third of global greenhouse gas emissions. Increasing the share of wood in construction applications often offers climate benefits. Wood construction is mentioned increasingly in the EU climate initiatives. Pulp production, in its turn, is often the base process in the production of innovative products, enabling the various properties of wood to be used for diverse needs.

Collaboration with customers is a crucial part of Metsä Group's climate group. A wide range of development and cooperation projects with customers is carried out, in which climate benefits are an important part of the results. Metsä Group also offers customers training on climate themes and support for life-cycle analysis to determine the climate impacts of Metsä Group's products in customers' applications.

Development work related to several new products to replace products made from non-renewable raw materials is on-going in collaboration with partners.

Of Metsä Group's own development projects, Kuura™ textile fibre and Muoto™ 3D fibre products have progressed furthest. Utilising production side streams in new products in collaboration with partners is at the core of Metsä Group's circular economy work.

Metsä Group's products offer key features for climate change mitigation, including the possibility to replace fossil-based raw materials and store biogenic carbon in construction wood products for a long time. The climate impacts of products are also verified with carbon footprint calculations based on the product life-cycle analysis.

Examples of key features of products and services for climate change mitigation

Metsä Wood

Main products

Kerto® LVL, birch and spruce plywood and processed sawn timber

Examples

- Wood products used in construction typically have a long service life, enabling the long-term storage of bio-based carbon.
- The Kerto Ripa® wood element construction concept improves material efficiency promoting the efficient use of wood. For example, using Kerto® LVL in floor construction can reduce emissions by as much as 70 % compared with reinforced concrete.*
- Metsä Wood has launched a hybrid element in cooperation with a concrete manufacturer partner that combines the best features of concrete and Kerto® LVL and provides opportunities to expand the use of wood material in construction.
- Sustainability services for customers, including the use of LCA information and other background information in material choices, as well as technical services for improving material efficiency.

Metsä Fibre

Main products

Pulp and side streams from chemical pulping (for example crude biomethanol, tall oil, turpentine) and bioenergy and sawn timber

Examples

- Pulp produced at the Äänekoski bioproduct mill has about 30 % smaller carbon footprint compared to the European average in pulp production**.
- Pulp producing mills and sawmills provide an industrial platform for cooperation. Industrial symbiosis is developed continously, which increases resource efficiency and enables the utilisation of side streams in new products. For example, a demo plant for lignin refining in connection with Äänekoski bioproduct mill was completed in 2025. Development of the lignin product for end-use applications to substitute current fossil-based alternatives in the construction sector is being carried out in cooperation with a potential customer.
- As a part of the 360 Services concept the pulp customers are supported in themes related to supply chain, sustainable development and technical issues. Examples include optimizing the use of Metsä pulp and improving the energy efficiency of production.
- In construction applications, sawn timber products store bio-based carbon for a long time.
- Environmental product declarations (EPD) for sawn timber products were published in 2025 to increase transparency and carbon footprint management.

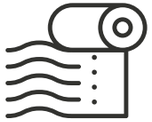
Metsä Board

Main products

Fresh fibre paperboards for packaging (folding boxboards, food service boards and white kraftliners)

Examples

- Key factors influencing the carbon footprint of paperboard packaging include renewable raw material, energy used in production and light weight and recyclability of the paperboard
- Case studies show that in applications under study lower carbon footprint can be obtained by utilizing Metsä Board's paperboards compared to corresponding paperboards or plastics (PET, r-PET, PP)***
- As a part of the 360 Services concept, packaging design services and related packaging life-cycle calculations help customers improve recyclability and material efficiency and lower the carbon footprint of their packaging.
- Collaboration with customers also focuses on supply chain optimisation and resource efficiency in paperboard conversion.
- Excellence Centre in Äänekoski offers an active collaboration hub for the research, innovations and testing of packaging materials and solutions. In the packaging design phase the recyclability of the packaging solution can be optimised, and its carbon footprint minimised.
- Paperboard is recyclable (EU recycling rate is 87%, 2024, Eurostat), and it can help reduce the use of fossil-based plastics.



Metsä Tissue

Main products

Tissue and greaseproof papers produced from fresh fibre. Metsä Tissue's brands are Lambi, Serla, Mola, Tento, Katrin and Saga.

Examples

- The strategic choice is to produce tissue papers primarily from wood-based fresh fibre: using fresh fibre instead of recycled fibre offers benefits in Metsä Tissue's production in terms of both water and energy use. Moreover, less waste is generated. For example, the carbon footprint of a Lambi toilet paper roll produced from Äänekoski pulp at the Mänttä mill is about 45 % lower than that of an average corresponding roll produced in Europe and made from recycled fibre.*
- In 2025 a pilot was organized in Germany for a tissue paper product made from pulp from the Äänekoski bioproduct mill in order that the customers could benefit from the environmental advantages of the Äänekoski pulp indicated by the life-cycle assessment.**
- The aim is to manufacture all products as close to the market as possible and to minimise the unnecessary transport of typically lightweight, airy and space-consuming tissue paper products. More than 90 % of deliveries are transported within a radius of 500 km from the mills.
- In 2024, Finnish and Swedish operations switched to biofuels instead of fossil fuels in most transports organised by the company itself

*Life-cycle analysis carried out by AFRY (GWP-fossil) , critical third-party assessment by RISE (Research Institutes of Sweden) and Ramboll. LCA report available on request.
**LCA analysis carried out by Fraunhofer Institute for Microstructure of Materials and Systems (IMWS), critical third-party assessment by Merseburg University of Applied Sciences and Helmholz-centre for Environmental Research
***LCA analysis carried out by Metsä Board and critical third-party assessment by IVL, Swedish Environmental Research Institut or RISE and SimaPro UK.

Climate benefits from R&D&I activities

Metsä Group conducts long-term research, development and innovation activities in all its business areas. In 2025, Metsä Group's research and development expenses totalled 64 million euros.

R&D&I activities are carried out in partner networks

R&D&I work is carried out in close collaboration with research and technology organisations, universities, external R&D service providers, technology suppliers, customers, suppliers, growth companies, and other partners. For example, the partnership agreements with University of Oulu, University of Helsinki and University of Jyväskylä aim at long-term research collaboration, which is carried out in separate coordinated project entities. Metsä Group participates also actively in EU research and development networks.

In R&D&I activities, reducing greenhouse gas emissions in the company's own production and value chain is at the core of all major themes, which are:

- Sustainable procurement of northern wood and the circular economy: the goal is to reduce emissions in the wood supply chain and develop ways to improve forests' climate resilience
- Value-added products and services from northern wood: the goal is to accelerate our own and our customers' climate work by developing collaboration and new wood-based products that can replace fossil-based alternatives.
- Sustainable industrial efficiency: the goal is to reduce Scope 1 and Scope 2 emissions for example by increasing the resource efficiency of production to minimise greenhouse gas emissions per product tonne.

Innovation company Metsä Spring

Metsä Group's innovation company Metsä Spring maps and develops potential new businesses for Metsä Group. This role also involves active collaboration with start-up companies. In 2021, Metsä Spring's role was expanded by establishing a Group-level R&D&I function in Metsä Spring. Its aim is to support and promote research, development and innovation in Metsä Group's current business areas. In 2025 the Group R&D function (team) was transferred from Metsä Spring to be a part of the Metsä Group's strategy unit.

Metsä Spring invests in start-up companies and projects to develop new uses for northern wood. The target companies develop products that substitute alternatives made from non-renewable raw materials, thus helping the chemical and materials sector reduce the use of fossil-based raw materials. Many of the companies use Metsä Group's side streams.

Metsä Spring has two demo plants in Äänekoski, where it produces Kuura™ textile fibre and Muoto™ packaging. The development of both products is based on resource-efficient production utilizing fossil-free energy. This is reflected in the products' carbon footprint results.

The Kuura fibre has achieved the highest "Green shirt" rating in the annual Hot Button Ranking of Canopy, a nonprofit environmental organisation, every year since 2021.

In 2025, the pre-engineering was started for a first commercial Kuura textile fibre production mill. If the Group decides to build the mill, it is expected to produce 100,000 tonnes of textile fibre per year. The mill would be started up no earlier than in 2029. In addition to mill design, the project will continue to develop and test the Kuura fiber production process, create business plans and go-to-market plans, investigate project financing, and apply for an environmental permit.

The aim is to integrate the textile fibre mill into Metsä Group's bioproduct mill, as this would enable the utilization of renewable energy and material cycles of the bioproduct mill in the textile fibre production. Japanese Itochu Company, who acts as Metsä Group's partner, has explored the international markets' interest in the Kuura fibre.

Muoto products are moulded fibre-based packaging suitable for takeaway trays, berry boxes or packaging trays, for example. In the autumn of 2024, Metsä Spring initiated pre-commercial sales of Muoto packaging. Alongside this work, the production line's development and testing are continuing in Äänekoski, as is the pre-engineering project of the first commercial mill.

Examples of Metsä Group's own R&D&I activities aimed at developing a new product

Product to be developed	Product description	Estimated climate impact	Development phase
MuotoTM 3D fibre products for packaging applications	A moulded fibre-based packaging solution produced from Metsä Group's wood-fibre raw materials using novel technology. Recyclable with paper and paperboard packaging waste.	Life-cycle analysis shows* that resource-efficient production utilizing fossil-free energy leads to good carbon footprint results. A versatile alternative based on renewable raw material to plastic packaging.	A demo plant in Äänekoski in operation since 2022. Pre-commercial sales of products started in 2024. During 2024-2025 Metsä Group has also planned the next production stage with two options: construction of a new production unit in Äänekoski or in Rauma.
KuuraTM textile fibre	Kuura fibre is produced from Metsä Group's paper grade pulp using a direct dissolution process (i.e., regenerated cellulose fibre). Production is integrated in a bioproduct mill that produces both pulp and renewable energy.	Life-cycle analysis shows** that resource-efficient production utilizing fossil-free energy leads to good carbon footprint results. Kuura fibre can replace synthetic fibres such as polyester and materials such as cotton, the production of which consumes a lot of water.	Demo plant in operation in Äänekoski. Pre-engineering phase on-going for the construction of a Kuura mill in Kemi, as well as market, freedom of operation and other studies, based on which the company will have the prerequisites to make an investment decision.
Light Fibre Material	The Light Fibre Material can be used as protective or padding material or in interior design. Due to its technical properties, the material can be shaped and used in combination with other materials.	The material can replace alternatives such plastic made from non-renewable raw materials. The goal is to develop the material to be fully bio-based and recyclable.	The product is in the development phase. The product's properties are being further developed for the selected applications.
Oxidised lignin	A new bio-based chemical produced from pulp production side streams in a process that is integrated into a bioproduct mill.	The product can substitute chemicals made from fossil-based raw materials such as concrete plasticisers and other dispersants.	A demo plant constructed in connection with the Äänekoski bioproduct mill in 2025. The demo plant has a daily capacity of 2 tonnes of the lignin product.
Captured bio-based carbon dioxide	Captured and purified wood-based carbon dioxide produced from the flue gases of pulping process recovery boiler.	Wood-based carbon dioxide is an important raw material in the hydrogen economy's products, and it can replace fossil-based carbon sources in the production of liquid fuels and various chemicals and plastics, for example. The long-term storage of bio-based CO_2 in products or geological formations serves as a technical carbon sink.	The capturing of CO_2 was piloted in Rauma pulp mill in 2025. Metsä Group proceeds in stages: currently focus is on investigating of possibilities to construct a capturing plant with a capacity of 30,000–100,000 tonnes of CO_2 and on the development of the overall concept with partners.

* Life-cycle analysis of Muoto product carried out by AFRY (GWP-fossil),critical third-party assessment by RISE (Research Institutes of Sweden). LCA report available on request.
** Life-cycle analysis of Kuura textile fibre carried out by Etteplan, critical third-party assessment by RISE (Research Institutes of Sweden).

Summary of climate-related publicly funded R&D&I initiatives in which Metsä Group is involved

Name of the initiative	Goal	Funding provider	Overall budget and duration	Focus of Metsä Group's activity
ACE LIFE – Accelerating Climate efforts and Investments	The project supports Finland in its goals to halve the emissions of the effort sharing sector by 2030 and achieve climate neutrality by 2035. It especially focuses on the challenges related to emission reductions in agriculture, heavy-duty transport and industrial processes	EU, LIFE instrument	EUR 20 million 2024–2030	Development of fossil-free logistics in wood procurement, including the piloting of eTruck and biogas trucks, withpartners.
SteamDry	The aim is to significantly reduce the energy consumption and carbon dioxide emissions of paper and paperboard production. The focus is on a showcase that achieves 60% savings in thermal drying and 40% energy savings on the production line, with the potential for up to 100% carbon dioxide emission reduction.	EU, Horizon Europe	EUR 10 million 2024–2027	Large energy savings in paperboard, tissue paper and wood drying processes. Metsä Group evaluates the technical and economic potential of the drying processes developed jointly in the project.
ModelFabrik Papier	80 % reduction in energy consumption in paper production.	The German State	EUR 40 million 2023->	Finding new solutions especially for energy and water use management related to the production of tissue papers and greaseproof papers.
Superbark – Safe, sustainable and high-performance adhesives and coatings from industrial softwood bark	The project is developing safe, sustainable and high-performance adhesives and coatings from industrial softwood bark. The products will replace fossil-based alternatives.	EU, Circular Biobased Europe Joint Undertaking	EUR 4.7 million 2023–2027	Bark-based adhesives and coatings for engineered wood products, replacing fossil-based products. Metsä Wood tests newly developed products in the project.

In addition, a steering group role in the following projects aimed at reducing greenhouse gas emissions from production or developing new products with a low carbon footprint: EnergyFirst (EUR 20 million, ERDF), ForestCUMP (EUR 3 million, Business Finland), Susbinco (EUR 10 million, Business Finland), Cocobin (EUR 9 million, Business Finland), Cellight (EUR 2 million, Business Finland), Films for Future (EUR 15 million, European Regional Development Fund), FurBio (EUR 0.6 million. Business Finland), Emission free pulping (EUR 15 million, Business Finland), SmartRecovery (Business Finland), ABiCo (Business Finland).

Start-ups in Metsä Spring's investment portfolio*

Startup	Main product	Estimated climate impact	Development phase	Timing of Metsä Group's investment	Connection to Metsä Group
Woodio	100 % waterproof wood composite material and products for bathroom and kitchen furniture.	According to the LCA** commissioned by Woodio, the carbon footprints of its products are 30-50 % lower and regarding newest products up to 80% lower than those of traditional ceramic or stone-based alternatives.	Commercial scale production facility started its operations in Lahti in 2025. Before that pilot scale production in Helsinki.	2019	Uses the small wood chips generated as a side stream in Metsä Group's production as its raw material. Otherwise, the chips are combusted and used as bioenergy.
Innomost	Bio-based ingredients refined from birch bark, which provide properties such as water repellency and white pigment to products and replace fossil- based microplastics.	Helps reduce the use of fossil-based raw materials in cosmetics, hygiene products, adhesives, coatings and paints.	Commercial demo plant operating in Kokkola.	2021	Uses birch bark generated as a side stream in Metsä Group's production as its main raw material.
Boreal Bioproducts	Bio-based ingredients refined from spruce sawdust and bark, which can be utilized in coatings, adhesives, cosmetics, feed and leather processing	Helps reduce the use of fossil-based raw materials in cosmetics and chemical industry products, for example.	Commercial pilot facility operating in Turku. Under planning an investment in a commercial production facility.	2021	Uses spruce sawdust and bark generated as side streams in Metsä Group's production as its main raw material.
Fiberwood	Bio-based insulation and padding materials for construction and packaging applications.	Can replace materials such as mineral and glass wool; helps reduce the use of non-renewable raw materials.	A new demo plant will start its operations in Järvenpää in the beginning of 2026. Before that pilot scale production in Järvenpää.	2023	Uses wood-based side streams from Metsä Group's production as raw material.
Finecell	Ingredients based on microcellulose and nanocellulose, which can be used as thickeners, emulsifiers or stabilisers, for example.	Helps reduce the use of non-renewable raw materials in paints and hygiene products, for example.	Laboratory-scale production in operation in Stockholm.	2023	Uses pulp produced by Metsä Group as its raw material.
Adsorbi	Pulp-based adsorbent material for air purification and odour removal.	Replaces activated carbon; according to LCA study, many activated carbon production processes have a significant environmental footprint***	New pilot production line started to operate in Gothenburg in 2025. Before that laboratory-scale production in Gothenburg.	2023	Uses pulp produced by Metsä Group as its raw material

* Situation in Q4/2025
** Woodio's latest EPD results
*** Environmental impact of activated carbon production from various raw materials

Developing the technical capture of wood-based carbon dioxide

In 2025 Metsä Group piloted the capturing of wood-based carbon dioxide at the Rauma pulp mill. Work is on-going to investigate the possibilities of constructing a permanent capturing facility and to develop the overall concept.

Metsä Group is exploring possibilities to construct a facility capturing wood-based CO_2 in connection with pulp production. Currently wood-based carbon dioxide is an untapped raw material. It could be captured and utilized as biobased raw material or stored permanently. In the latter case it would serve as a technical carbon sink. These befits can be achieved without increasing the use of wood raw material. Bio-based carbon dioxide, i.e., bio-CO_2 is an important raw material in the hydrogen economy's products. It can replace fossil-based carbon sources in the production of various chemicals, liquid fuels and plastics, for example.

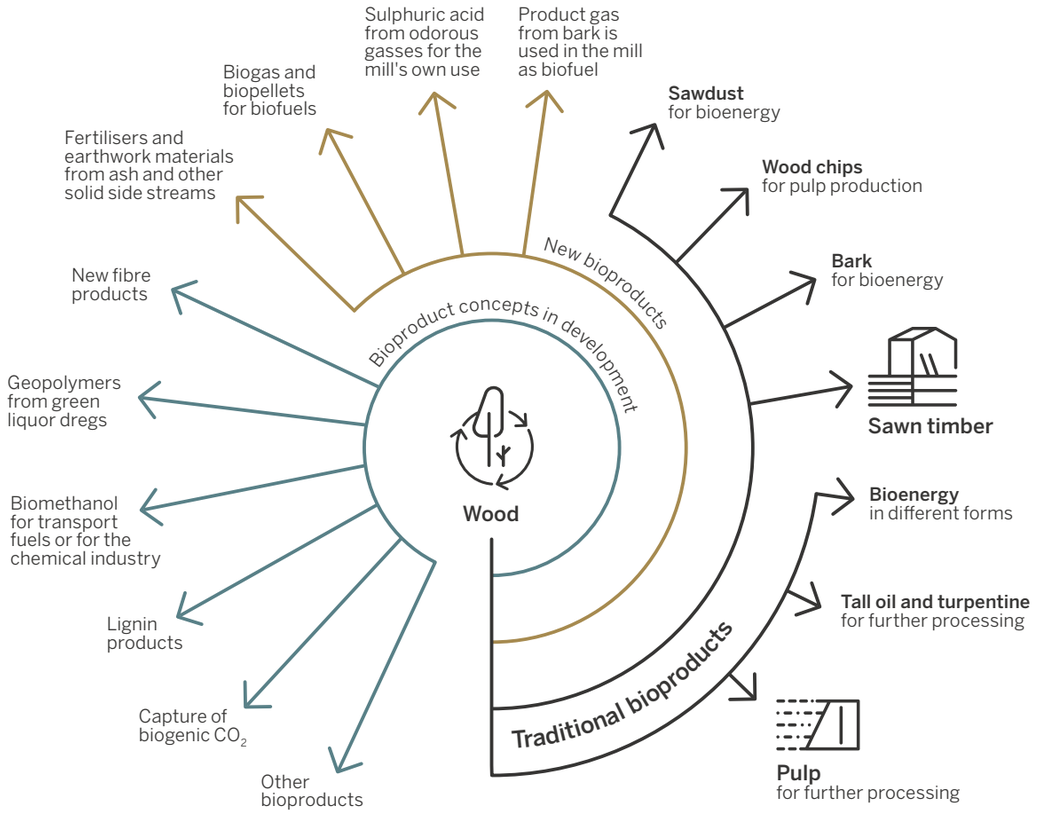
In the process examined by Metsä Group, carbon dioxide is captured from the recovery boiler's flue gases. The recovery boiler is an essential part of mills producing pulp and other bioproducts, in which wood raw material is used according to the cascading principle*. The carbon capture process will be piloted in Metsä Group's Rauma mill area in 2025.

Profitable business requires large investments and the development of capturing technology, value chains and the market. Metsä Group proceeds in stages: currently the focus is on investigating of possibilities to construct a capturing plant with a capacity of 30,000–100,000 tonnes of CO_2 and on the development of the overall concept with partners

Metsä Group's surveys indicate that upgraders are interested in facilities that produce sufficient volumes of carbon dioxide. In Finland Metsä Group has such mills in Rauma, Joutseno, Äänekoski and Kemi, and in Sweden in Husum.

If technical carbon capture proves viable, it will provide the forest industry with a new high-volume wood-based side stream product. Overall, approximately 12 million tonnes of wood- based carbon dioxide is generated annually at Metsä Group's production units.

■ Utilisation of main and side streams in Metsä Group's bioproduct mill concept



* The utilisation of wood biomass by maximising its economic and environmental added value

Reduction of Scope 3 emissions

Assessing and reducing Scope 3 greenhouse gas emissions includes challenges and requires continuous development and close collaboration with partners. Metsä Group has in place joint sustainability targets with several core suppliers and many of the targets are related to climate, specifically to reducing emissions in wood procurement and logistics.

Scope 3 emissions account for approximately 88% of Metsä Group's total greenhouse gas emissions. Currently, Metsä Group's focus concerning Scope 3 are emissions from logistics purchased by the Group, and the aim is a 30 % reduction in emissions calculated per tonne-kilometre by 2030. One key area of development is to increase the share of supplier-specific emission data in Scope 3 calculations.

Metsä Group encourages its suppliers to set emissions reductions targets to mitigate climate change. The recommendation is part of Metsä Group's Supplier Code of Conduct and progress is measured in supplier audits and for example via the Science Based Targets initiative's internet pages. Suppliers are required to adopt a certified environmental management system where applicable. The collaboration with suppliers is also regularly evaluated through an anonymous survey.

Greenhouse gas emissions in the value chain are reduced by emissions reduction targets made jointly by Metsä Group and the suppliers. Metsä Group has in place joint sustainability targets with several core suppliers and many of the targets are related to climate. These are presented in a table on the following page.

Reducing emissions from wood supply

In 2023, Metsä Group drew up a roadmap for reducing fossil-based emissions from wood supply and initiated related development action. The aim is to reduce fossil carbon dioxide emissions from wood supply in Finland by 30% from the 2022 level. In wood logistics, the company is developing solutions based on electricity and biogas. To reduce fossil carbon dioxide emissions, Metsä Group has launched a pilot project testing the use of electric lorries in wood transports between the Kemi bioproduct mill and wood terminals. In addition, charging infrastructure for electric lorries is being built at the Kemi bioproduct mill. Entrepreneurs are encouraged in various ways to switch to lorries running on fossil free-fuels.

Metsä Group and Risutec have jointly developed an accessory with which forwarders can prepare soil while harvesting logging residue. Having the same forwarder harvest logging residue and prepare the soil avoids one machinery transfer stage. This reduces emissions across the wood supply chain. As of spring 2024, Metsä Group's contract entrepreneurs have been using the Phlebiopsis gigantea fungus for stump treatment and bio-based or biodegradable oil to lubricate harvesters' saw chains. Switching to bio-oils and biological disinfection treatment reduces fossil carbon dioxide emissions from harvesting.

Reducing emissions from logistics

Metsä Group's products are transported to about 110 countries by road, rail and sea. Wood is the main transported raw material and in addition raw materials such as chemicals, binders and pigments are transported to mills. This requires an extensive logistics network. Some logistics suppliers have in place a common emission reduction target with Metsä Group. For example, together with a Dutch shipping company Royal Wagenborg Metsä Group has a common goal to reduce carbon dioxide emissions in sea transport by 30 percent (per ton/mile) by 2030 when compared to 2021.

Emissions from logistics are reduced for example by optimizing routes, minimizing transport distances and optimizing payloads. In the Kemi bioproduct mill and Rauma sawmill, which are new investments, the payload of transport units has been maximized, and fossil-free fuels are favored in product transports from mills to ports.

Metsä Group's joint climate related targets with core suppliers

Target area	Supplier	Common climate related target
Emissions from wood supply (sea transport in the Baltic Sea region)	Navalis Shipping	The common goal is to reduce Metsä Group's wood supply's carbon dioxide emissions related to sea transport in the Baltic Sea region by 30% (per tonne/mile) from the 2022 baseline by 2030.
Emissions from wood supply (sea transport in the Baltic Sea region)	AtoB@C Shipping	The common goal is to reduce Metsä Group's wood supply's carbon dioxide emissions related to sea transport in the Baltic Sea region by 30% (per tonne/mile) from the 2022 baseline by 2030.
Rail transport (wood raw material and products, including mechanical wood products, pulp and paperboard)	VR Group	The joint target is to halve emissions from transports included in the cooperation by 2030. For Metsä Group, the measures would represent a total annual emission reduction of around 14,000 tCO_2e. Metsä Group and VR have set up a joint working group to define tangible measures to achieve the target. The measures are related for example to the electrification of the rail network, more efficient train concepts and the use of diesel made from renewable raw materials.
Sea transport (raw materials such as chemicals and products including mechanical wood products, pulp and paperboard)	Royal Wagenborg	The common goal is to reduce the carbon dioxide emissions from the sea transport of Metsä Group's products by 30 % (per tonne/mile) from the 2021 level by 2030. Metsä Group and Royal Wagenborg have set up a joint working group to define tangible measures to achieve the target. The measures are related for example to the technical and operational activities of the Wagenborg fleet, including route optimisation, fleet development and use of new vessel types.
Raw materials	Kemira	The goal is to jointly develop a new fossil-free product or raw material related to the fore industry by 2027. Metsä Group and Kemira have set up a joint working group to promote the target.
Technology procurement	Andritz	The goal is to jointly reduce Scope 3 emissions. The aim of the multi-year cooperation is to increase the effectiveness of emissions reductions and to find completely new ways to reduce greenhouse gas emissions. The companies have established a project team to define the most significant development areas, indicators and targets for reducing the value chain's total emissions.

Other examples of measures and collaboration for reducing Scope 3 emissions

Metsä Group collaborates actively with suppliers and customers to reduce emissions in the value chain.

For example active collaboration is on-going to develop the recyclability and collection and recycling infrastructure of fibre-based packaging. Metsä Group is a member of the 4evergreen alliance, which has developed common guidelines for the value chain on packaging design and recyclability testing. The common aim is to increase the recycling rate of fibre-based packaging to 90% by 2030 (in the EU, the recycling rate was 87% in 2023, according to Eurostat).

Kerto® LVL products have been designed and manufactured to be very durable construction materials and when designed well the buildings made from Kerto LVL elements can be demolished in a way that enables the reuse of the elements. Together with customers Metsä Group is developing the reuse of construction wood products. For example, due to the renovation of Finlandia Hall in Helsinki, a temporary wooden facility known as Little Finlandia was constructed in 2022. Little Finlandia complies with the principles of circular economy, as it is made of modular and reusable wooden modules featuring Metsä Group's Kerto® LVL products. When the temporary facility is no longer needed, the building can be moved to a new place and made into a day care or school building, for example.

Societal dialogue and advocacy

Active interaction with stakeholders is an essential part of Metsä Group's operations. Stakeholders also participate in our sustainability materiality assessment. In 2024 we developed the Collaboration Day concept to strengthen the interaction. We also conduct advocacy work at the EU and national level, especially in Finland and Sweden.

In advancing the sustainability transition and related climate work collaboration and dialogue play a key role. Metsä Group engages in wide-ranging discussions with representatives of the public sector, policymakers, local communities and NGOs. The Group's active collaboration with academic operators and research institutions is described in the chapter on R&D&I activities.

Metsä Group has in place an operating model for stakeholder engagement and related management processes. Stakeholder feedback plays an important role, and stakeholders are also engaged in the sustainability materiality assessment. Of indigenous peoples, the Sámi are affected by Metsä Group's operations especially in the context of wood supply. The aim is to diversify the means of engagement and harmonise the scope and frequency of engagement with various stakeholders.

In 2024, Metsä Group launched the Collaboration Day concept to strengthen the interaction. In 2025 Collaboration day was organized in Finland for the second time. The theme of the second event was strengthening the forest biodiversity with regenerative forestry practices and conservation foundation activities. Metsä Group organizes the Collaboration Day on an annual basis. The concept of regenerative land use launched by Metsä Group at the Kemi mill site includes close interaction and collaboration with local communities.

Metsä Group participates in advocacy at the EU and national level, especially in Finland and Sweden. Metsä Group aims to introduce views that promote regenerative forestry and accelerate the circular bioeconomy, as well as the recognition and utilisation of the climate benefits of renewable carbon. Metsä Group supports Finland's national 2035 climate neutrality target and the EU's environmental goals and the target of climate neutrality by 2050. The Group also aims to increase the awareness about the role of fresh fibres in product safety and about the efficiency of recycling processes.

Metsä Group collaborates via membership of various organisations, including selected trade and industry associations, 4evergreen, the Biobased Industries Consortium (BIC), CO2 Value Europe and the Ellen MacArthur Foundation's circular economy network.

The Board of Directors of Metsäliitto Cooperative, Metsä Group's parent company, is responsible for ensuring that the Group has a Stakeholder engagement function that is appropriate for its business operations. Metsä Group's President and CEO, supported by the Group's Executive Management Team, determines the priorities of political influence for all business operations and monitors the progress made in them. Metsä Group's Stakeholder Engagement function is responsible for the advocacy work, coordination of collaboration with Group's business areas and other functions, and reporting the work's progress and effectiveness to Group management and the Board of Directors.

The aim is to conduct proactive and transparent, fact-based climate advocacy work. Metsä Group's parent company Metsäliitto Cooperative is registered in EU's and Finland's Transparency Registers and complies with their code of conducts. The register number in the EU Transparency Register is 962687110415-94 and in Finland's national Transparency Register MET-24-399-R.

Industry sector's common national climate roadmap and biodiversity roadmap

The industry sector's first joint national climate roadmap was published in 2020 under the leadership of the Finnish Forest Industries Federation. The roadmap was compiled on the initiative of the Finnish Ministry of Economic Affairs and Employment as part of the 2035 climate neutrality target set by the government. The roadmap outlines forest industry's role in achieving the target. Surveys concerning forestry and forest industry production and the climate impact of products were used as background material. Research institutes and other partners carried out the surveys. The update of the forest industry's national climate roadmap was completed in 2025.

With the climate roadmap scenarios, the industry sector wants to highlight the opportunities provided by the sector's development, as well as to present tangible measures for reducing fossil-based carbon dioxide emissions, improving forest growth and adaptation to climate change, and producing products that store bio-based carbon and replace emission-intensive products.

In 2023, the industry also prepared a joint biodiversity roadmap under the leadership of the Finnish Forest Industries Federation and the Finnish Sawmills Association.

The biodiversity roadmap is a report based on scientific research by the wood processing community on the state of forest nature, the impacts of long-term biodiversity work in the forest sector to date, and a modelling of the future development of forest nature. It is also a joint commitment to promote the highlighted developments.

Metsä Group is a member of the Finnish Forest Industries Federation and participates actively in the industry's joint roadmap work in the fields of both climate and biodiversity.

04

Good governance provides stability and a long-term perspective

Metsä Group's Executive Management Team approved the Climate transition plan in 2024 and its update in 2025. The plan was also communicated to Metsäliitto Cooperative's Board of Directors.

Committed management and clear processes

Sustainable development including climate action is a corner stone of Metsä Group's business strategy approved by the Board of Directors. There is a defined Group-level process concerning sustainability management. President and CEO of Metsä Group is responsible for the implementation of the sustainability targets and the progress made in targets is regularly reported to the Board of Directors.

Metsäliitto Cooperative's Board of Directors is the entire Group's highest body overseeing sustainability. Sustainability, including climate targets and actions, is incorporated into the Group's business strategy approved by the Board of Directors, as well as in long-term business and investment plans, risk assessments, and annual action plans. The Board of Directors also approves Metsä Group's strategic sustainability targets and their updates. Metsä Group's President and CEO is responsible for the implementation of the targets. The progress made in targets is reported to the Board of Directors regularly, at least once a year.

There is a defined Group-level process concerning sustainability management, which is overseen by the Sustainability Process Management Team. Its main task is to ensure that the sustainability objectives are reflected in the business areas' processes and action plans. The sustainability process management team monitors progress in the strategic 2030 sustainability targets and ensures the consistency of sustainability work across the Group. It consists of business area representatives and function heads who are responsible for ensuring that the sustainability objectives are implemented in their organization. The work of the sustainability process management team is supported by a network of sustainability experts from the entire Group, which meets regularly under the lead of Metsä Group's VP sustainability.

Metsäliitto Cooperative's Board of Directors decides on the remuneration and other financial benefits of the Group's President and CEO and the members of the Group's Executive Management Team employed by Metsäliitto Cooperative, as well as on the principles of the short and long-term remuneration systems based on the HR Committee's preparation. The remuneration of Metsäliitto Cooperative's Board of Directors is not tied to Metsä Group's performance. Further information on remuneration in 2025 is presented in Metsä Group's annual review.

Read more in Metsä Group's Annual review

Process for managing climate risks

The analysis of risks and opportunities related to climate change is conducted systematically and the results are utilized in business development. We also analyze the impacts of our own operations to society and the environment.

Metsä Group uses the company-level risk management process to identify sustainability- related impacts, risks and opportunities, and to assess their materiality. The risk management process complies with the COSO Enterprise Risk Management methodology. The key goal is to identify and assess the risks, threats and opportunities potentially significant to the implementation of the company's values and strategy and to the achievement of long-term targets. In addition the aim is to identify and assess the company's impacts on society and the environment.

In addition to the company's own operations, the identification and assessment of impacts, risks and opportunities encompasses the upstream and downstream value chain and any other parties that the company's operations affect. Ensuring undisturbed and uninterrupted operations in all conditions is key in the risk assessment of production units. The assessment process of production units' environmental risks is guided by the ISO 14001 and ISO 50001 management systems. ISO 14001 also guides the assessment and identification of risks in wood supply.

Double materiality assessment as a part of risk management

As part of its risk management process, Metsä Group regularly carries out a double materiality assessment of all its operations, in which the impacts, key risks and opportunities of operations are also assessed. The results of the materiality assessment and the general annual risk assessment process guide the management of sustainability risks in the Group.

Metsä Group's internal control unit monitors and reports on sustainability risks to business operations, the Executive Management Team and Audit Committee in accordance with the Group's general internal control governance model and the annual cycle. The control of sustainability risks is planned, described and implemented on a risk basis in business processes, and it is carried out in accordance with the company's general model for internal control.

Making use of the climate risk analysis

Key climate and other ESG risks are accounted for in the business operations' planning processes, and management measures are drawn up to prepare for the risks. Metsä Group's Executive Management Team reviews the most significant risks as part of its executive management work. The results of the Group's risk management analysis including climate risks are reported to the Board of Directors twice a year.

At their meetings, the Board of Directors and Board Committees regularly discuss reviews related to different areas of sustainability, presented by the Group's executive management and experts. The reviews offer Board members information about the material impacts, risks and opportunities related to the company's sustainability, and of the progress made in the company's sustainability targets. The reviews also ensure the Board's understanding and competence are up to date in climate and other sustainability matters.

The main results of the climate risk analysis and the risk management actions are presented on on pages 7–9. The results and the risk management process are discussed more comprehensively in Metsä Group's annual review.

Read more in Metsä Group's Annual review

Building employees' climate capabilities

The development of core competencies that are of key importance for the Group is an important part of the implementation of Metsä Group's strategy. Capabilities related to climate and other sustainability themes play a crucial role.

To engage the personnel in sustainability activities, at least one sustainability-related goal is included in every Metsä Group employee's annual personal targets, on which annual bonuses are based. All Metsä Group employees complete an online course on the basics of sustainability. Climate themes are a key element of the online course. Peer learning and the sharing of best practices are encouraged as part of the strategic development of a unified Metsä Group. The principle of continuous development and improvement guides all operations.

The development of core competencies that are of key importance for the Group is an important part of the implementation of Metsä Group's strategy. This is described more in detail in Metsä Group's annual review.

Opportunities for further training and collaboration are offered for example through Metsä Group's membership in the UN Global Compact, the FIBS corporate responsibility network and the Ellen MacArthur Foundation's circular economy network. Metsä Group also organises training and events including climate topics for customers, contract partners and Metsäliitto Cooperative's owner-members.

Read more in Metsä Group's Annual review

Building the climate capabilities of employees is an important part of Metsä Group's climate work.

Growth, with a future

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