The Finnish Forest Industry's

Sustainability Commitments for 2025

Third Progress Report

A SUSTAINABLE PATH TOWARDS 2025

The forest industry has invested in long-term sustainability efforts for years, with the first joint voluntary sustainability commitments being established in 2012. In 2018, these commitments were expanded to be more ambitious and comprehensive, aiming to better address social and economic aspects of sustainability in addition to environmental factors. Broad and consistent sustainability work, along with voluntary commitments, guide the entire industry in a positive direction. This work requires determined investment across every level of the long value chain.

In recent years, the world has been shaken by several major crises and challenges. The impacts of the COVID-19 pandemic remain visible, and the Russian invasion of Ukraine has deeply affected Europe's security and energy markets. Additionally, the energy crisis, accelerating inflation, and geopolitical instability have brought new and unprecedented challenges. Global issues such as climate change and biodiversity loss remain central concerns, demanding continuous attention and comprehensive action from every sector of society. All of these developments impact Finland's forest industry as well.

The forest industry has strived to adapt to the prevailing situation by acting responsibly and adhering to the principles of sustainable development. We offer solutions and products that positively contribute to addressing global challenges, while also building a sustainable and prosperous future for Finland.

The previous progress report on our sustainability commitments was published in 2022. The present third and final progress report again reflects positive developments over the past two years (2022–2023). Progress in the 17 commitments related to different areas of sustainability is described through a traffic light system, illustrative figures and graphs, as well as case examples. The information presented in the report has been compiled by the Finnish Forest Industries Federation and is primarily based on data from our member companies.

Forests are a vital source of well-being and provide an opportunity for sustainable and responsible choices that benefit both the environment and society. The forest industry continuously develops its operations, and the commitments extending to 2025 are an important tool in this work, laying the foundation for even more ambitious goals in the coming years.

Progress in meeting the sustainability commitments

- The objective has been met or is likely to be met by 2025.
- Progress has been made towards meeting the objective, but it is still uncertain whether the objective will be met by 2025.
- The objective has not been met, and it is unlikely that it will be met by 2025.

PROMOTING SUSTAINABLE ECONOMY AND WELFARE

- 1 We promote a sustainable economy and increase welfare by creating added value, paying taxes and employing people in different parts of Finland both directly and through our value chain.
- 2 We provide safe and ecologically sustainable products made of renewable raw materials. We continue to develop our current products and methods of operation, and we create new innovations to utilise wood in increasingly diverse ways to benefit people and society.
- 3 Our actions are equally responsible on the national and international level, and we require responsibility from our cooperation partners throughout the value chain.

RESPONSIBLE EMPLOYERS

- 4 We work constantly to develop occupational safety with the goal of ensuring accident-free workplaces.
- 5 We take care of the wellbeing of our employees, as well as the development of their competence.
- 6 We acknowledge changes that occur in society and offer different ways to find employment in the industry. We promote apprenticeship training and the employment of young people by offering diverse opportunities for summer jobs and internships.

PROMOTING BIODIVERSITY AND THE SUSTAINABLE USE OF FORESTS

- 7 We verify the lawful origins of the wood we consume and promote the use of forest certification systems. Our aim is to ensure that at least 90 per cent of the wood and fibre used by the forest industry is certified by 2025.
- 8 We promote the nature management of commercial forests and the voluntary protection of forests and peatlands with the aim of reversing the decline of endangered forest species.
- 9 We commit to reducing the impacts of our own forestry operations on water systems, and on a broader level we promote means to reduce the load to waterbodies resulting from forest management and use.

COMBATING CLIMATE CHANGE

- 10 We contribute to the transition to a carbon neutral society by offering climate-friendly products and supporting achieving the Paris climate agreement goals.
- 11 We increase the share of renewable energy production as a part of the emerging forest industry. Our aim is to increase the share of renewable energy in the forest industry energy production to 90 per cent by 2025.
- 12 We are committed to the continuous improvement of energy efficiency.

IMPLEMENTING SUSTAINABLE PRODUCTION AND CIRCULAR ECONOMY

- 13 We continue to improve the efficiency of our water use and systematically reduce our water pollution load. Our aim is to reduce the nutrient emissions of our production facilities by 15 per cent per tonne of output by 2025 (year of comparison 2016).
- 14 We are committed to improving material efficiency and promoting nutrient recycling. We develop solutions for improving the added value of side streams through, for example, industrial symbioses.

INCREASED RESPONSIBILITY THROUGH COOPERATION

- 15 We communicate openly on environmental and responsibility issues and conduct an active dialogue with key stakeholder groups.
- 16 We promote sustainable development in society by carrying out responsibility projects with our partners and collaborating with local communities.
- 17 We contribute to achieving the UN sustainable development goals.

PROMOTING SUSTAINABLE ECONOMY AND PROSPERITY

COMMITMENT 1

We promote a sustainable economy and growth in well-being by creating value, paying taxes and employing people across Finland directly and through our value chain.

Finnish forest industry companies play a key role in our country's economic growth and prosperity. The forest industry is an important export sector, accounting for 16 per cent of Finland's total goods exports in 2023. Finland's exports of forest industry products in euros are the third highest in Europe after Germany and Sweden, but its relative importance nationally is by far the most significant compared to other European countries.

The sector has an extensive domestic value chain, from growing forests and procuring raw materials to producing and selling finished bio-based products. Forest industry products have an exceptionally high share of domestic value added, accounting for more than 70 per cent of the gross value of forest industry product exports (Statistics Finland). This indicates that the sector needs relatively small amounts of raw materials, intermediate goods and services for its own production. In other words, the production value chains are largely created in Finland.

The industry has substantial regional economic impacts. A vibrant forest industry in Finland generates demand for goods and services in other industries and supports business activity across many regions. It is estimated that the forest sector directly or indirectly employs nearly 100,000 people in Finland.

Furthermore, the forest industry enables critical future investments in Finland's competitiveness, sustainable development, and renewal. In recent years, the industry has made significant investments in new production facilities, product development, as well as in fossil-free mills.

The forest industry has a substantial impact on the Finnish national economy in terms of tax revenues, employment and value creation.

16 %

16% of the forest industry's share of all Finnish exports of goods in 2023

~11 bn €

Direct and indirect value added of the entire procurement chain of the forest industry per year (EY 2023)

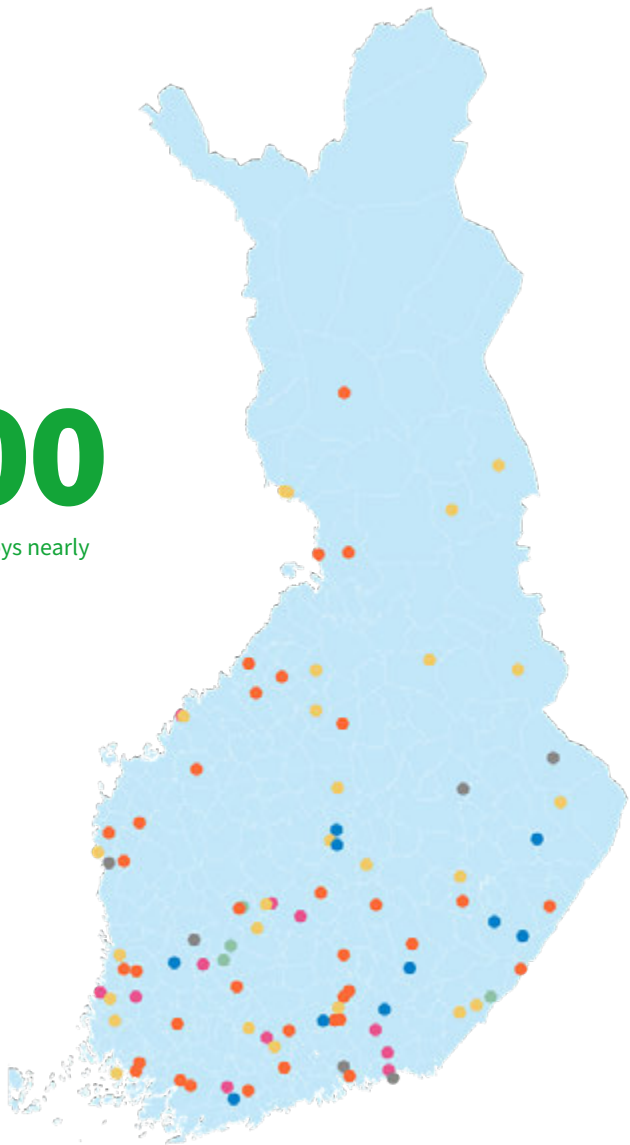
~3,8 bn €

Annual tax revenues of the forest industry value chain (EY 2023)

~100 000

The forest sector directly or indirectly employs nearly 100,000 people in Finland. (EY 2023)

Municipalities with forest industry production facilities (member companies of the Finnish Forest Industries Federation)



COMMITMENT 2

We provide safe and ecologically sustainable products made of renewable raw materials. We continue to develop our current products and mode of operation, and we create new innovations to utilise wood in increasingly diverse ways to benefit people and society.

Research, development, and innovation (RDI) activities are at the core of continuous renewal for forest industry companies, enabling them to address global challenges. Innovations can also help mitigate climate change and enhance biodiversity. According to the EU-wide Community Innovation Survey (CIS), 64 per cent of Finnish forest industry companies engage in innovation activities, slightly above the average for all Finnish companies.

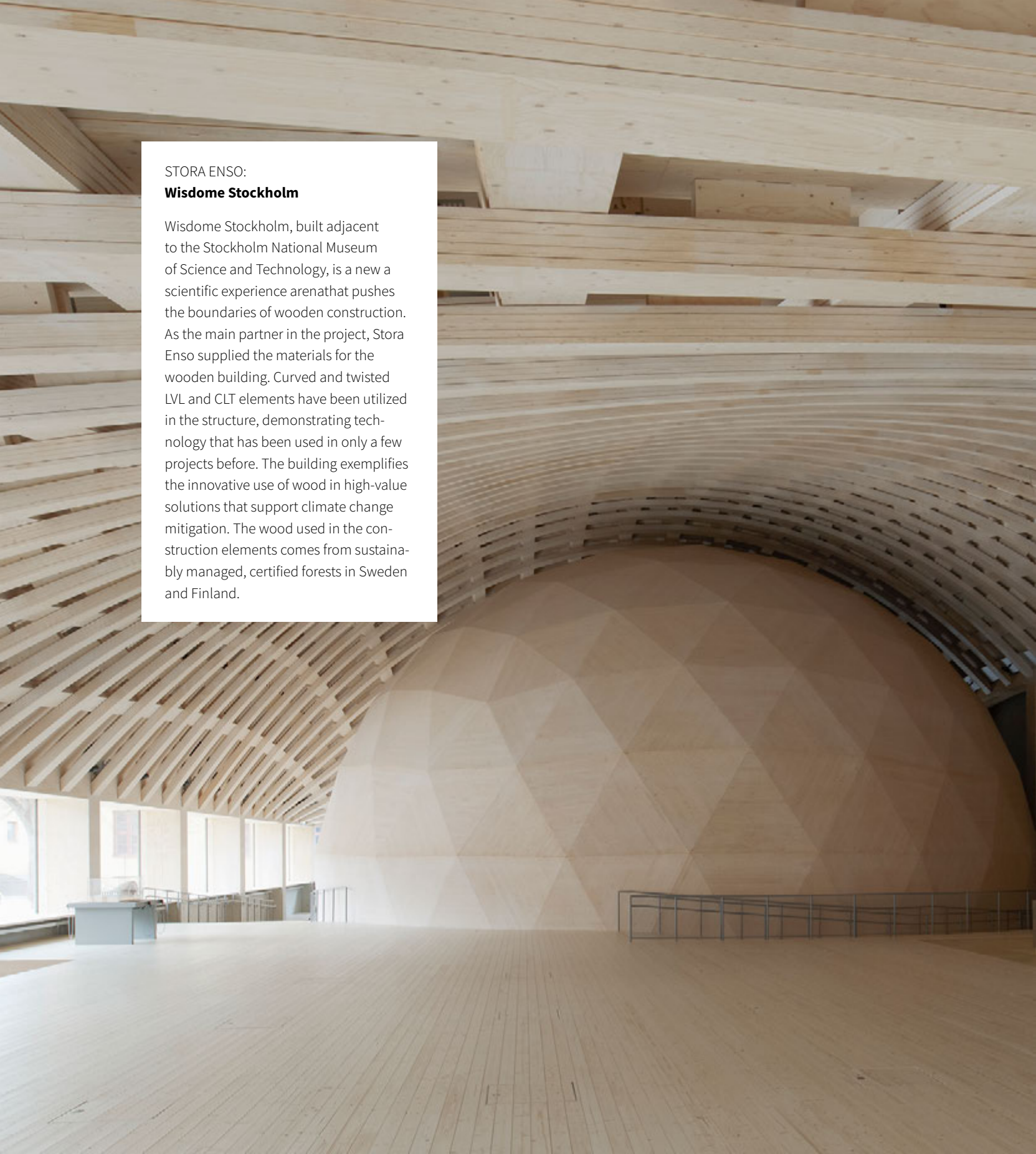
Designing wood-based products according to eco-design and circular economy principles promotes the consideration of environmental impacts throughout a product's lifecycle. This approach allows environmental impacts to be examined from renewable raw materials through production processes to recyclable and reusable products and materials.

Innovation efforts extend beyond the creation of new products to improving the characteristics and manufacturing processes of existing products. The industry's commitment to advancing sustainable development is evident in international patent databases, where Finnish forest industry technology patents are among the global leaders. Examples of these patents include those related to micro- and nanofibrillated cellulose, wastewater and sludge treatment, and lignin recovery from black liquor. Additionally, Finland ranks among the world's top three countries for patents related to folding boxboard and molded fibre, as well as in stickers and labels.

New material and product solutions can replace fossil-based or otherwise environmentally burdensome products. The range of wood-based products has expanded further in recent years, and the increasingly efficient utilisation of by-products has enabled the development of new products for consumers. In the future, we can expect to see an even greater variety of high-value wood-based applications in textiles, biochemicals, battery materials, and packaging solutions.

>16 mt CO_2 ekv

The climate benefit of wood-based products amounts to over 16 million tons of CO_2 equivalent annually (VTT, 2020), as they replace products with higher fossil-based emissions. This is equivalent to one-third of Finland's annual carbon dioxide emissions.



STORA ENSO:
Wisdome Stockholm

Wisdome Stockholm, built adjacent to the Stockholm National Museum of Science and Technology, is a new a scientific experience arenathat pushes the boundaries of wooden construction. As the main partner in the project, Stora Enso supplied the materials for the wooden building. Curved and twisted LVL and CLT elements have been utilized in the structure, demonstrating technology that has been used in only a few projects before. The building exemplifies the innovative use of wood in high-value solutions that support climate change mitigation. The wood used in the construction elements comes from sustainably managed, certified forests in Sweden and Finland.

METSÄ WOOD:

Future hybrid elements

The Swedish concrete manufacturer Heidelberg Materials Precast Contiga and Metsä Wood have begun a collaboration aimed at combining the best properties of concrete and wood in future building solutions. The hybrid element is made using concrete and laminated wood. The goal is to develop a new type of building element that achieves high strength and durability while also featuring a lower weight and carbon footprint.

VERSOWOOD:

Verso Construction Panel

The sustainably produced Verso Construction Panel is a solution that accelerates both construction and installation. The Verso Construction Panel is made from domestic planed spruce. The finely sawn surface improves the adhesion of surface treatment products and increases friction in sloped installation locations. The most common application is on roofs under bitumen coverings, but due to its panel-like structure, the Verso Construction Panel can also be used in packaging, concrete moulds, and various temporary structures, such as construction site fences, as a shelf board, or as wall structures in small garden buildings.

MM KOTKAMILLS:

Absorbex® - A Pioneer in the development of eco-friendly laminates

MM Kotkamills has developed the Absorbex® saturating kraft paper grade to meet the need for even more eco-friendly laminates for construction and the furniture industry. Fossil-based phenolic resins used in laminates can now be replaced with renewable lignin-based resin products to reduce the product's carbon footprint. Absorbex® saturating kraft paper is an innovation over 50 years old that has been developed over the years. It is made from pulp derived from sawdust, a by-product of sawing boards and planks. This innovation promotes the laminate industry's transition to bio-based raw materials, reducing dependence on oil while maintaining the high product properties of laminates.

UPM:

Renewable packaging innovations for cosmetics

One of the best ways to reduce the use of fossil materials is to work together in the value chain. Finnish cosmetics company LUMENE has launched a moisturiser product with both the jar and the product label made from renewable* materials. The plastic jar is made from crude tall oil based UPM BioVerno™ naphtha, a residue from pulp production which is further processed by the chemical company SABIC. The labels are printed on UPM Raflatac Forest Film™ which also originates from UPM BioVerno naphtha.

* Mass balance approach

STORA ENSO:
EcoFlowerBox

Stora Enso's EcoFlowerBox is a packaging solution made from corrugated cardboard, developed in collaboration with tulip grower Partaharju Puutarha. The goal was to create a leak-tight and cost-effective flower package that would replace plastic buckets while being both sustainable and easy to use in the logistics chain. The EcoFlowerBox is a square and stackable box made from 97 per cent renewable materials. The box can be recycled as cardboard waste. For instance, the grocery wholesale company Kesko saves 27 tons of plastic per year by replacing the plastic buckets used for transporting and displaying tulips with EcoFlowerBox packaging.

PÖLKKY:
Innovative and environmentally friendly Pölkky Lumi bedding solution for animals

Pölkky Lumi is a high-quality bedding product for animals made from the shavings of the Taivalkoski planing mill. By productising the shavings as bedding, effective utilisation of by-products from the production facility is ensured. Thanks to new efficient screening methods, the product's dust content is below 0.7 per cent by weight, minimising animals' exposure to dust. The artificial drying process makes the bedding highly absorbent, capable of absorbing up to 370 per cent of its weight in liquid.

METSÄ GROUP:

Wood-based Kuura textile fibre

Metsä Group's Kuura® textile fibre offers a new alternative for the textile industry. Kuura is made from softwood chemical pulp sourced from the forests of Metsä Group's Finnish owner-members, and without using fossil fuels. The fibre is still in the development phase, and a pre-study is currently underway for the first commercial factory producing Kuura. The vision is to develop a more environmentally friendly raw material for the clothing and fibre fabric industry while enhancing the degree of pulp processing in Finland.

COMMITMENT 3

Our actions are equally responsible on the national and international level, and we require responsibility from our cooperation partners throughout the value chain.

The Finnish forest industry is a globally significant player, emphasising transparency and responsibility throughout its procurement and supply chains. Companies in the industry adhere to local laws and regulations, and additionally enforce their own ethical guidelines and standards for their partners. The global procurement and supply chains involve tens of thousands of diverse stakeholders, ranging from private forest owners to large international corporations, all of whom are required to commit to the industry's principles of responsibility. These principles — particularly the respect for human rights and environmental protection — are followed regardless of location.

The industry's commitment to sustainability is also evident in the voluntary targets and commitments that many companies have established. These goals aim for ambitious, measurable changes across various aspects of sustainable development. Numerous companies are actively participating in international initiatives such as the UN Global Compact and the Science-Based Targets Network (SBTN), committing to standards in human rights, labour, environmental protection, and anti-corruption measures.

In addition to voluntary actions, the companies and their value chains are subject to extensive and growing legislation, especially from the EU. While some legislative initiatives have already been finalised, many remain under development. Examples of regulations impacting the forest industry include the Deforestation Regulation, the Corporate Sustainability Reporting Directive (CSRD), the Corporate Sustainability Due Diligence Directive (CSDDD), regulations on sustainable finance (Taxonomy), the Green Claims Directive, as well as various other legislations related to climate policy, biodiversity, products, and packaging.

Efforts to promote responsible sourcing and enhance transparency are ongoing. Extensive supply networks require risk assessments and close monitoring in collaboration with suppliers, which is essential for achieving corporate responsibility objectives. Maintaining a sustainable value chain benefits all parties involved and advances the climate and environmental goals of all participants in the value chain.

STORA ENSO:

Evaluation process for migrant workers' working conditions

In 2022, Stora Enso launched three pilot projects in partnership with an external organisation aimed at improving risk identification and management within high-risk supply chains and strengthening due diligence processes within its own operations. One of these projects focused on the company's forestry operations in Sweden, where logging and planting work is primarily outsourced to forestry contractors employing migrant labour. As a result of the study, a new monitoring and inspection system was implemented to prevent and mitigate risks affecting migrant workers.

METSÄ GROUP:

Promoting more responsible collaboration in supply chains through competition

In 2023, Metsä Group organised a sustainability competition for its service and goods suppliers. The goal was to find concrete ways to enhance responsibility throughout the supply chain and to recognise a partner that exemplarily supports Metsä Group's 2030 sustainability goals. The competition yielded 92 proposals in total, and Metsä Group's collaboration with the winning company focuses on circular economy initiatives. Partner contributions are essential, as Metsä Group's 2030 sustainability objectives cannot be achieved without cooperation from its partners.

UPM:

Responsible procurement practices in the supply chain

UPM's sustainable supply chain programme drives supply chain compliance and risk mitigation, and helps us achieve our environmental, social and governance-related ambitions in our supply chain. Each element entails clear instructions regarding the relevant sourcing and supply chain management practices and implications within UPM, as well as tangible guidance and expectations for UPM's suppliers. Effective implementation is managed and tracked through our 2030 responsibility targets and performance indicators.

METSÄ GROUP:

Shared sustainability goals with key suppliers

Metsä Group establishes joint sustainability goals with its key suppliers, fostering a more responsible supply chain and achieving a greater impact compared to acting alone. These goals include reducing emissions, developing new fossil-free raw materials or products, and verifying supply chain responsibility. Working groups and action plans are set up to achieve these goals, and progress is tracked collaboratively.

PÖLKKY:

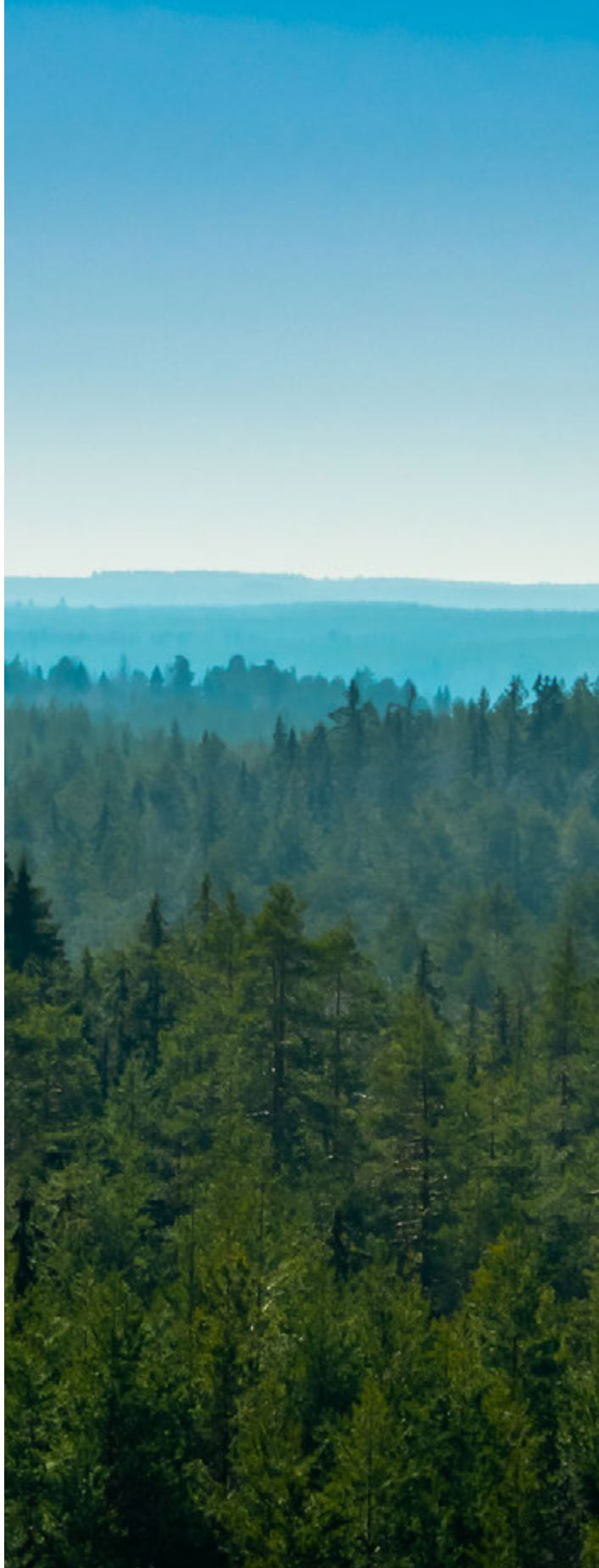
Sustainable forestry as the foundation of responsible wood procurement

The cornerstone of Pölkky's wood procurement is based on the principles of responsible forestry. Logging sites adhere to the PEFC forest management standards, ensuring that operations do not degrade high conservation value areas, endangered species habitats, or the rights of indigenous peoples. Pölkky can trace the chain of custody of its own wood procurement back to the stump, a capability that has impressed international clients. Additionally, Pölkky has joined the Reliable Partner service by Vastuu Group Oy, which allows verification of compliance with Finnish contractor obligations. Suppliers in the supply chain are also required to join the service before contract signing, a measure aimed at preventing the shadow economy.

MM KOTKAMILLS:

Certification as the core of wood origin verification

MM Kotkamills does not conduct its own logging; instead, all wood raw material is purchased delivered to the mill from FSC®- or PEFC-certified suppliers. All wood raw material used is legally sourced and compliant with the EU Timber Regulation. The purchased wood is either certified (FSC® or PEFC) or meets the requirements of the FSC Controlled Wood standard or the PEFC Chain of Custody DDS system. MM Kotkamills is preparing for the new EU Deforestation Regulation and has already taken steps to ensure compliance once the regulation comes into effect.



RESPONSIBLE EMPLOYERS

COMMITMENT 4

We work constantly to develop occupational safety with the goal of ensuring accident-free workplaces.

Advancing workplace safety and wellbeing is viewed as an ongoing process in the forest industry. The sustained efforts aimed at achieving accident-free environments are reflected in the continuous decline in accident-related absences. Since 2010, the number of accidents has decreased by approximately 70 per cent. Compared to 2020, the frequency of workplace accidents leading to absences in the paper, sawmill, and board industries, measured by the LTAF (Lost Time Accident Frequency) metric, has decreased by 1.7 per cent.

With this positive trend beginning to stabilise, the achieved safety level is now being maintained and further enhanced. Continuous improvement of safety culture is a key component of companies' social responsibility. Identifying and preventing safety risks form the foundation of all activities, and a thorough investigation of every accident and removal of hazards are essential tools in accident prevention.

One indicator of positive development in companies' safety culture is the significant increase in proactive hazard and safety observations. At its best, the change in safety culture is visible in every employee's attitude and mindset — workplace safety is created together, every day. Shared commitment is crucial in the ongoing effort to improve workplace safety.

6

accidents per one million working hours (LTAF*)

*Lost Time Accident Frequency (LTAF) in the Finnish pulp, paper, sawmill and board industry

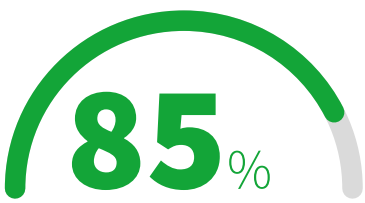
At its best, the change in safety culture is visible in every employee's attitude and mindset.

COMMITMENT 5

We take care of the wellbeing of our employees, as well as the development of their competence.

Employee wellbeing and skill development are central to the operations of forest industry companies. In 2023, the rate of sick leave in the paper and mechanical forest industries was 5.1 per cent of regular working hours. Since 2013, sick leave rates have fluctuated between four and six per cent. The goal is to further reduce these rates by enhancing work capacity management and investing in job and skill development. Investments in employee wellbeing are reflected not only in reduced sick leave but also in improved workplace atmosphere, work efficiency, and productivity.

Maintaining and developing skills over the course of employee's careers is becoming increasingly important. Forest industry companies invest in the skills and training of their employees, often also supporting self-directed learning alongside work. In 2023, as many as 85 per cent of the sites of member companies within the Finnish Forest Industries Federation reported that their employees participated in job-related training. This training ranged from language courses and leadership training to vocational and university degrees.



85% of company sites report employee participation in job-related training.

COMMITMENT 6

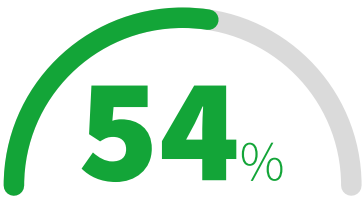
We acknowledge changes that occur in society and offer different ways to find employment in the industry. We promote apprenticeship training and the employment of young people by offering diverse opportunities for summer jobs and internships.

The forest industry requires professionals from various fields for roles at all levels. Currently, 60 per cent of employees have a background in technical education, and 54 per cent hold a secondary-level degree as their highest qualification.

The industry also emphasises creating diverse educational pathways. A total of 74 per cent of forest industry company sites utilise apprenticeship programmes, with around 200 individuals selected annually for apprenticeships within the sector. Apprenticeships are essential both for updating current employees' skills and for training new workers entering the field.

As birth rates decline in Finland, work-based immigration and international talent will become increasingly important in the workforce. The forest industry recognises the potential of international talent and has updated language requirements to enable many office-level roles to be conducted more frequently in English.

Each year, forest industry companies provide thousands of summer job and internship opportunities, as well as options for thesis work. Summer jobs also consider international students, allowing some roles to be performed in English. In addition to hiring students, companies also invest in providing workplace experience for middle and high school students. TET (short periods of work experience during grades 7-9) and TTT ("Learn about working life and earn") positions are available to young people across Finland. Educational institutions and companies engage in active dialogue and collaborate through vocational advisory boards and company visits.



Employee Education Levels – 54% have completed a secondary-level degree as their highest qualification.

PROMOTING BIODIVERSITY AND THE SUSTAINABLE USE OF FORESTS

COMMITMENT 7

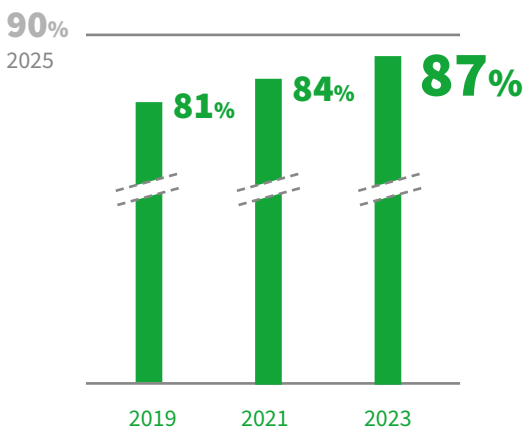
We verify the lawful origins of the wood we consume and promote the use of forest certification systems. Our aim is to ensure that at least 90 per cent of the wood and fibre used by the forest industry is certified by 2025.

Forest certification is a key tool for promoting the sustainable management and use of forests. Certification verifies that the wood used in products comes from legal and sustainable sources. Finland uses two global forest certification systems, FSC and PEFC, both of which the forest industry promotes equally.

In Finland, over 90 per cent of productive forest area is certified, meaning that practically all domestically sourced wood procured for the forest industry originates from certified forests. Wood or fibre used in products can be included in a company's certification level if the entire production chain has an independently verified Chain of Custody certification system to trace wood origin. In 2023, the certification level of wood and fibre used in Finland reached 87 per cent, showing significant growth compared to previous years.

National standard updates for both certification systems were completed in 2023. These updates introduced, among other things, stricter requirements for retention trees and protective buffer zones for waterways, enhancing forest biodiversity and water protection. The forest industry actively participated in the updates along with other stakeholders.

Internationally, forest certification levels are considerably lower than in Finland, which is why forest certification needs further development beyond Finland's borders as well. The forest industry has advocacy programmes for both certification systems that include both national and international development work.



Certification rate and target.

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COMMITMENT 8

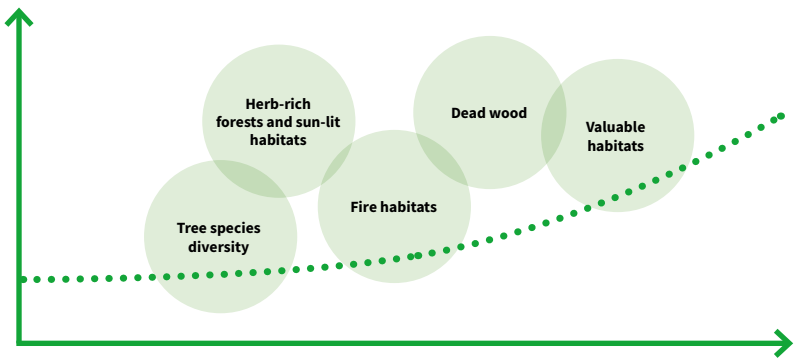
We promote the nature management of commercial forests and the voluntary protection of forests and peatlands with the aim of reversing the decline of endangered forest species.

Biodiversity is the basis of sustainable forestry. That is why the forest industry carries out active measures to promote forest biodiversity. Key biodiversity measures include safeguarding valuable habitats, preserving retention and dead-wood trees, maintaining mixed-species forests, and leaving protective buffer zones around water bodies.

The most recent assessment of threatened species in Finland, released in 2019, indicated that about 9 per cent of forest species are endangered — a figure that has remained stable compared to the assessment conducted ten years earlier. More than half of the threatened forest species inhabit groves and sunny slopes on sandy ridges, even though these areas account for only a small fraction of forested land. Focusing biodiversity efforts on these habitats can effectively improve conditions for a large number of species.

The latest biodiversity roadmap from the wood processing industry shows, based on scientific evidence, that sustained efforts toward biodiversity are yielding positive results. For instance, the amount of deadwood, large trees, and broad-leaved trees has increased, as has the ground cover of many shrub species. The forest industry also actively supports the voluntary METSO and Helmi programmes, which work to manage and protect forests and peatlands.

Forest industry companies have taken significant steps to protect biodiversity. Their own biodiversity programmes bring the roadmap's best practices into everyday forestry operations and are often more ambitious than the minimum requirements. Additionally, many companies have joined restoration efforts aimed at returning important biodiversity areas closer to their natural state.



Everyday choices in managed forests play a key role in promoting biodiversity.

COMMITMENT 9

We commit to reducing the impacts of our own forestry operations on water systems, and on a broader level we promote means to reduce the load to water bodies resulting from forest management and use.

Minimising the impact on water bodies is important for the forest industry. The goal of water protection in forestry is to reduce the load on water bodies caused by the sector, thereby helping to maintain their good condition. Reducing water body load requires cooperation across the entire forestry sector at all stages of the chain, from planning to implementation. Training forest professionals and ensuring effective information flow are essential for successful practical measures.

Forestry's water protection measures are guided by comprehensive and effective legislation, in addition to which many voluntary actions are in place. For example, updated certification standards have tightened requirements for protective buffer zones along water bodies. These buffer zones promote biodiversity and prevent soil and nutrient runoff into waterways. Recommendations for forest management have also been updated with the latest research on water protection.

Forest industry companies have carried out regionally impactful projects to improve the condition of water bodies, such as restoring and rehabilitating streams. Wetlands, which help reduce the eutrophication of water bodies, are also important in aquatic habitat restoration projects. Continuous cover forestry, such as selective logging and small-scale clear-cutting, has been expanded in suitable areas, especially nutrient-rich peatlands. This method utilises evapotranspiration of tree cover, helping to maintain a water table level that benefits both water bodies and climate emission control.

COMBATING CLIMATE CHANGE

○ COMMITMENT 10

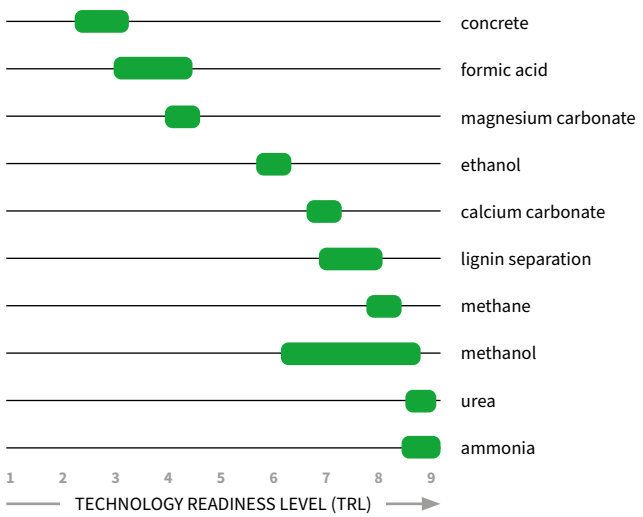
We contribute to the transition to a carbon neutral society by offering climate-friendly products and supporting achieving the Paris climate agreement goals.

According to the updated mill emissions scenario, the forest industry has successfully continued to reduce fossil emissions. The scenario suggests that the energy production of the forest industry could be nearly fossil-free by 2035.

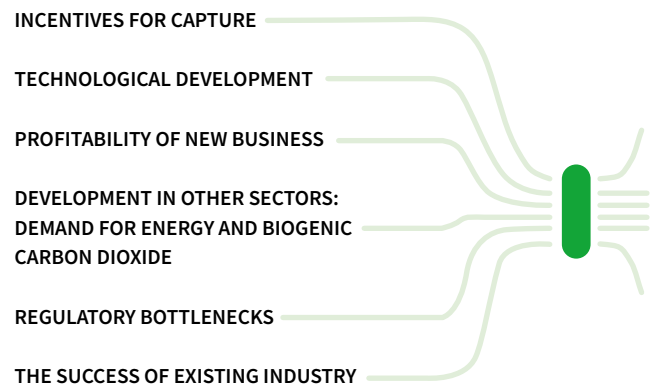
The capture and utilisation of biogenic carbon dioxide generated in the forest industry's bioenergy production could begin as early as the 2030s, provided that the operations become economically viable. Profitability requires that the necessary technology develops rapidly, affordable fossil-free electricity is sufficiently available, regulatory bottlenecks are addressed, and the markets for products made from captured carbon dioxide develop favourably. The success of existing mills in international competition is a prerequisite for creating new business opportunities.

Wood processing is, in many ways, a model example of a climate-friendly circular economy and a significant part of phasing out the fossil economy. As trees grow, they capture carbon from the atmosphere, and products made from wood provide climate benefits when used in place of emission-intensive products. Wood-based products also store carbon throughout their lifecycle.

As forest resources grow and carbon cycles between the atmosphere, wood, and products, the forest industry provides employment throughout Finland and strengthens the economy.



Captured biogenic carbon dioxide can be utilised in the production of various raw materials. The end products can include, for example, plastics, chemicals, synthetic aggregates, and fuels for road and maritime transport and aviation.



Several bottlenecks need to be removed before hydrogen economy and the utilisation of captured CO2 can proceed.

COMMITMENT 11

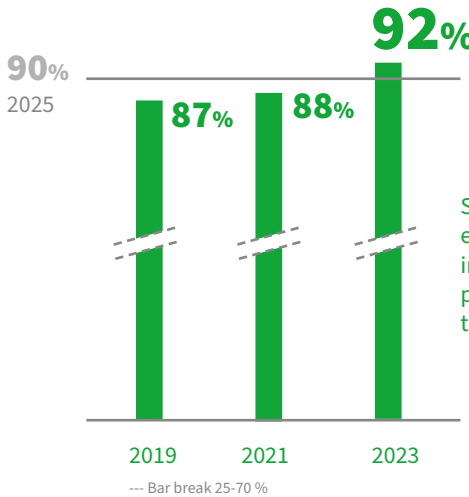
We increase the share of renewable energy production as a part of the r enewing forest industry. Our aim is to increase the share of renewable energy in the forest industry energy production to 90 per cent by 2025.

The non-refinable side streams produced in the forest industry processes is the foundation of Finland's renewable energy. For example, wood bark and black liquor are important sources of renewable energy. Utilising non-refinable side streams in energy production provides clean local energy, as their origin is known and predominantly sourced within Finland.

The forest industry has increased the share of renewable energy in its energy production for a long time. In 2023, as much as 92 per cent of the fuels used by our mills were renewable. This share has been increased by replacing fossil fuels in combustion plants and improving energy efficiency.

In addition to the positive climate impacts, this long-term effort has improved energy self-sufficiency, which has gained even greater significance due to the energy crisis triggered by Russia's war of aggression during the review period.

Reducing the consumption of imported fossil fuels has become an increasingly important goal at both the national and EU levels. To achieve this goal, it is essential to ensure that regulation supports the broad-based increase in renewable energy. This approach enables the forest industry's long-term work to continue in the coming decades.



Share of renewable energy in the forest industry's energy production and target for 2025

COMMITMENT 12

We are committed to the continuous improvement of energy efficiency.

The forest industry is continuously investing in improving energy efficiency at its mills. Production in the industry requires a great deal of energy, making energy efficiency a competitive asset for the companies. In 2023, energy savings of a total of 1,044 gigawatt-hours were achieved in the forest industry.

Energy efficiency in the forest industry is being improved in various ways. One of the key methods has been enhancing production processes, for example, by developing automation. The mills' own energy production has been improved by investing in energy production units and optimising steam usage. The amount of wasted steam has been reduced by means of heat recovery.

The high level of commitment from forest industry companies to continuously improve energy efficiency is evidenced by their extensive participation in Motiva's energy efficiency agreements. These voluntary agreements are a method jointly chosen by the government and various industries to promote energy efficiency in Finland. During the current agreement period, 32 forest industry companies are aiming for energy efficiency at a total of 123 different locations.

Energy efficiency agreements are an important part of the national energy and climate strategy and a primary means of promoting efficient energy use. Responsible and efficient energy use is an important method of reducing carbon dioxide emissions that contribute to climate change.

1044 GWh

Forest industry mills saved a total of 1044 gigawatt-hours of energy in 2023 (Motiva). This means that, on average, energy savings of 2.86 gigawatt-hours have accumulated every day which corresponds to the yearly energy consumption of 154 single-family homes.

Responsible and efficient energy use is an important way to reduce carbon dioxide emissions that contribute to climate change.

IMPLEMENTING SUSTAINABLE PRODUCTION AND CIRCULAR ECONOMY

COMMITMENT 13

We continue to improve the efficiency of our water use and systematically reduce our water pollution load. Our aim is to reduce the nutrient emissions of our production facilities by 15 per cent per tonne of output by 2025 (year of comparison 2016).

Water protection is a key component of the forest industry's operations, and continuous development work is being done for cleaner water bodies. The latest technologies enable water to be recycled multiple times within facilities, reducing the need for raw water and lowering nutrient emissions.

Nutrient emissions are measured per tonne of production, so long-term interruptions and situations involving ramping up or down the production can be reflected in the statistics as increased nutrient emissions relative to production. Over the years, the management of disruptions has improved at forest industry production facilities, but it is not sufficient to reduce nutrient emissions if production is not otherwise stable. In 2023, nutrient emissions per tonne of production increased atypically due to shutdowns caused by strikes and an unstable economic situation. Nevertheless, phosphorus emissions have been steadily reduced, and relative to production, they have decreased by 14 per cent compared to 2019 figures.

In 2023, the forest industry invested a record amount in environmental protection efforts; investments rose to nearly 360 million euros, significantly influenced by Metsä Group's investments in the Kemi bioproduct mill. In Kemi, water protection efforts included upgrading the biological wastewater treatment plant and implementing a tertiary treatment stage. Overall, nearly 200 million euros were invested in water protection in the forest industry during 2023.

356,4 milj. €

Environmental protection investments: €356.4 million

196,1 milj. €

Investments in water protection: €196.1 million

COMMITMENT 14

We are committed to improving material efficiency and promoting nutrient recycling. We develop solutions for improving the added value of side streams through, for example, industrial symbioses.

The forest industry is circular bioeconomy at its best. The activities focus on material efficiency, comprehensive use of raw materials and diverse use of side streams.

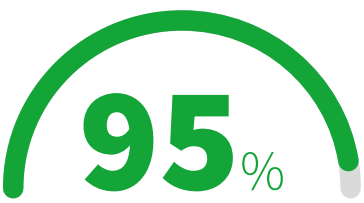
Wood has a cycle in the forest, after which the renewable raw material is utilised efficiently in terms of materials and resources. Production facilities also operate according to circular economy principles by systematically recycling water, chemicals, and increasingly nutrients at various stages of the process.

By-products generated from production are effectively utilised either within their own processes or in industrial symbioses formed with partners, which helps to minimise the amount of waste that ends up in landfills. Significant efforts have been made in recent years to promote the use of by-products as fertilisers and to recycle nutrients, leading to a continuous increase in the share of by-product fertiliser use.

Wood-based products are highly recyclable by nature. Products dispatched from factories to customers around the world can be recycled into new raw materials and products multiple times. Wood fibres can be utilised on average 5–6 times. Finally, at the end of their life cycle, products can still be used for renewable energy production.

In the forest industry, the development of material efficiency and the circular economy has been significant, as in 2023, 95 per cent of by-products generated in the production process were utilised either as materials or for renewable energy production. Consequently, the amount of waste ending up in landfills has been effectively minimised. In 2023, the amount of landfill waste relative to production further decreased, being about 9 per cent lower than the previous year. Compared to the reference year of 2016 for sustainability commitments, the amount of landfill waste relative to production has decreased by 5 per cent. Over the past thirty years, this amount has decreased by as much as 95 per cent.

Major companies in the forest industry have set goals to fully utilise by-products generated in the production process by 2030. Based on the figures from 2023, the development looks very promising.



95% of the production side streams are utilised.

INCREASED RESPONSIBILITY THROUGH COOPERATION

○ COMMITMENT 15

We communicate openly on environmental and responsibility issues and conduct an active dialogue with key stakeholder groups.

The forest industry is committed to open and active communication regarding environmental and sustainability issues, as well as continuous dialogue with key stakeholders. We engage in active cooperation and strive for impact both domestically and at the EU level. The Finnish Forest Industries Federation organises events and provides interaction opportunities both in the capital region of Finland and in the provinces, as well as increasingly often in Brussels. These events aim to include critical stakeholders and the scientific community.

During the recent review period of sustainability commitments, the forest industry has highlighted actions related to the biodiversity roadmap and influencing the European Commission's work programme. Additionally, preparations were made for the implementation of the transparency register legislation during the review period.

In anticipation of the 2023 parliamentary elections, the forest industry organised numerous events in provinces across Finland. A campaign tour organised jointly by the Finnish Forest Industries Federation and regional chambers of commerce covered eight electoral districts, while a joint export industry campaign tour stopped in each electoral district. These events provided insights into the future outlook of the forest industry and the entire export sector, as well as the industry's government programme objectives from both national and local perspectives. The tour brought together various stakeholders and facilitated a multi-voiced dialogue among participants.

In collaboration with the Sawmill Industries Federation, the Natural Resources Institute Finland (Luke), the University of Eastern Finland, Metsä Group, the Finnish Geospatial Research Institute, and Tapio Services Ltd., a biodiversity roadmap for the wood processing industry (published in autumn 2023) was developed, providing a strong platform for active dialogue. Various seminars and dissemination tours of the report fostered fruitful conversations with different stakeholders, including nature and environmental organisations. The roadmap is a call for dialogue with forest owners, different sectors, political decision-makers, and non-governmental organisations, as well as an initiative for closer cooperation with research organisations.

Due to the growing interest in Nordic forestry, the Finnish Forest Industries Federation opened an office and showroom in Brussels in October 2023 and has since hosted numerous visiting groups, including European Union decision-makers, media representatives, and NGO representatives. The Federation has also organised themed training days for the Brussels community. The office supports meetings and cooperation among various stakeholders at the international level and facilitates discussions on Finnish forests and the EU's role in their use.

Our interaction work also extends to young people, to whom we provide information about the forest sector and the educational and employment opportunities it offers. This information helps future generations make informed decisions about their own futures. The joint campaign "Forest of opportunities" has reached an average of 20,000 young people annually.

COMMITMENT 16

We promote sustainable development in society by carrying out responsibility projects with our partners and collaborating with local communities.

METSÄ GROUP:

Renew the forest idea competition

In the fall of 2023, Metsä Group organised the Renew the Forest competition for the owner members of its parent company, Metsäliitto Cooperative, seeking ideas on how to further develop operations in commercial forests. The competition aimed to find concrete new thoughts on improving the diverse use and biodiversity of commercial forests, climate resilience, vitality, and water protection, while also considering economic aspects. Proposed ideas were evaluated based on five main criteria: innovativeness, feasibility, impact, measurability, and economic viability. Almost 250 ideas were submitted. The winning trio's proposals related to a regional presentation network for forestry as well as forest planning and its visualisation. The ideas generated from the competition will be utilised in Metsä Group's development work.

STORA ENSO:

Improving the biodiversity of forest streams through collaboration

In 2023, Stora Enso, Tornator, and WWF continued their three-year collaboration to enhance forest creeks in Finland. In communal work sessions held at four different locations, 30 spawning grounds for endangered trout were built, and hundreds of meters of freshwater habitats, which are crucial for species that thrive in flowing waters, were restored. The goal of the collaboration is to strengthen biodiversity in Finnish nature by restoring small waterbodies mainly in forests.

UPM:

Promoting rail safety in Uruguay

The operations at UPM's Paso de los Toros pulp mill in Uruguay started in June 2023. During the construction project, approximately 260 kilometres of state-owned railway were renewed to transport pulp from the mill to the port of Montevideo. Along the railway, 244 level crossings, 61 railway bridges, and 23 stations were renovated, and the new rail connection was opened in April 2024. UPM has promoted rail safety in cooperation with Uruguay's Ministry of Transport and Public Works and the Automobile Club of Uruguay. The railway safety awareness programme, which involved authorities, local organisations, and schools, reached thousands of members of local communities living along the railway. The programme will continue in 2024.

METSÄ GROUP:

Biodiversity plans for mill locations

In 2023, Metsä Group launched a multi-year action programme to create a biodiversity plan for each of its production facilities. The project started in Kemi, which serves as the pilot site for the entire initiative. The aim is to enhance biodiversity in the industrial environment of Metsä Group's Kemi area. The biodiversity plan also extends to lands owned by Metsä Group outside the mill area, which are used for recreation by residents. A key partner in the project is the association Villi Vyöhyke, which specialises in biodiversity in built environments. The project involves extensive collaboration with local communities, such as the city of Kemi.

SAPPI:

Collaboration with emergency services

Sappi's Kirkniemi mill engages in safety co-operation with the fire department and local volunteer fire brigades. Smoke divers from the six permanent stations of the Länsi-Uusimaa Rescue Department and about 25 volunteer fire brigades train and practice at the mill's internal fire simulator. The mill's fire department and the fire department's trainers conduct the exercises together. In these so-called warm exercises, temperatures range from 50 to 850 degrees Celsius. Wooden fibreboard is used as fuel in the indoor fire simulator.

VERSOWOOD:

Collaboration with Yrityskylä encourages youth

Since 2022, Versowood has supported the Youth Entrepreneurship and Economy initiative, which provides services and learning packages that promote work life, entrepreneurship, and economic skills for schools, educational institutions, and municipalities. This internationally awarded concept was established in 2010 and has been developed in collaboration with schools, municipalities, companies, foundations, and the Ministry of Education and Culture. Versowood has signed a new cooperation agreement with the Yrityskylä ("business village") concept for 2024–2027. The company aims to inspire young people to engage in social activities, work life, entrepreneurship, and personal finance management. The role-playing experience of Yrityskylä has been shown to positively influence students' work-life skills and attitudes toward them.

MM KOTKAMILLS:

Preserving archaeological cultural heritage

The MM Kotkamills factory area is partly located on an ancient monument area at Ruotsinsalmi on the island of Kotkansaari. In April 2024, archaeological excavations were conducted with the permission of the Finnish National Board of Antiquities during the planning of a new sheet cutting facility. Historical stone structures found during the excavations were carefully preserved and will be placed in the new sheet cutting facility to symbolise the area's rich history. This modern sheet cutting facility represents responsible and sustainable factory construction, where the region's cultural heritage is cherished and where the past meets the present.

PÖLKKY:

Partnership with local communities

Pölkky Oy has been the main partner of the Pölkky Kuusamo women's volleyball team for 10 years. During this journey, the team has won three Finnish championships, as well as one silver and one bronze. The games bring the people of Kuusamo together, and home games have become a familiar meeting place for locals. The average audience attendance at Pölkky Kuusamo's games is among the best in the league, attracting between 500 to 1,000 spectators to cheer for the home team. The atmosphere during the games often rises to such levels that earplugs are needed.

MM KOTKAMILLS:

Responsibility volunteers at the 2022 Ice Hockey World Championships

A team of volunteers from MM Kotkamills served as responsibility volunteers at the 2022 Ice Hockey World Championships. One of the values of the tournament was responsibility, and the goal was to promote sustainable development in sporting events. Responsibility volunteers guided tournament tourists in recycling used serving dishes — when used cardboard products are recycled correctly, their wood fibre can be reused up to 25 times in new cardboard and paper products.

COMMITMENT 17

We contribute to achieving the UN Sustainable Development Goals.

The forest industry brings global markets ecologically sustainable products made from renewable and recyclable raw materials, which can replace similar products made from raw fossil materials. This helps reduce dependence on depleting natural resources and diminishes fossil emissions that accelerate climate change.

The forest industry is also responsible for the sustainability of its value and supply chains, both domestically and internationally. The sector's activities are guided by Agenda 2030 of the UN Sustainable Development Goals (SDGs), which were adopted in 2015, and the forest industry plays a significant role in their implementation.

The SDGs were also taken into account in the forest industry's own sustainability commitments when they were updated in 2018. Like the interim reports published in 2020 and 2022, this latest report describes positive developments in most of the commitment goals.

In addition to the common commitments of the sector, the member companies of the Finnish Forest Industry Federation have renewed their own sustainability and responsibility goals based on Agenda 2030 and have defined the most significant impacts on their business and related targets. The forest industry's sustainability commitments are also linked to the national societal commitment to sustainable development.

To complement the SDGs, the Finnish Forest Industry Federation develops sustainability through the UN Global Compact initiative, in which it is committed to its ten principles related to human rights, labour standards, the environment, and the prevention of corruption. The UN Global Compact is the world's largest voluntary initiative promoting corporate responsibility for companies and other organisations. It provides its members with a framework for sustainability, with principles and goals recognised worldwide.

The Finnish Forest Industry Federation emphasises the industry's commitment to the principles of the Global Compact, and its member companies have played an active role in both the establishment of the Finnish Global Compact network and international Global Compact work. As an organisational member, the Finnish Forest Industry Federation participates in the network's activities by sharing information about the initiative as well as sustainability themes and legislation, and by organising sustainability themed events to support the responsible work of its member companies.

Our sustainability commitments contribute to achieving the UN's Agenda 2030 Sustainable Development Goals in many ways.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The cover photo shows how the leaves of deciduous trees change color in autumn, a natural phenomenon called 'ruska' in Finnish.
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