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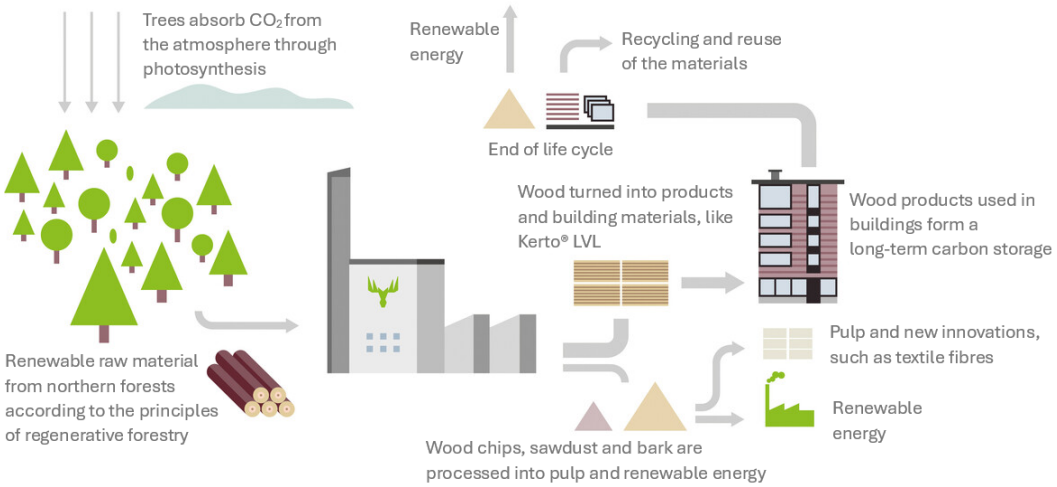
Wood products and long-term storage of renewable carbon provide solutions to strengthen EU's climate resilience, security of supply and circular economy

Wood-based value chains and products offer a great potential for the climate smart EU circular economy and the European Affordable Housing Plan. When sourced sustainably, renewable raw materials, e.g. wood, can be supplied to loops according to principles of circular economy, in a regenerative way. Renewable carbon – notably present in wood products – can support the transition from a fossil economy to a circular bio-based economy. In long-lived wood products, renewable carbon can be stored for several decades, even centuries.

To unlock the full potential of wood products and renewable carbon, we urge the EU to pay attention to the following points:

1. The European Affordable Housing Plan should promote best practices of climate-smart construction and develop standardization to remove barriers in utilizing wood in construction applications
2. The New European Bauhaus should be taken to a more concrete level and the use of wood in construction should be expanded and developed
3. The potential of renewable raw materials should be fully exploited in developing a more circular economy
4. As wood-based value chains provide multiple opportunities for innovations, they should be a prominent feature in the EU R&D&I funding

Metsä Group's example of wood-based value chain on wood construction, where wood raw material is primarily used for products providing a long-term carbon storage. According to the principles of circular economy, the industrial side streams are utilized as a raw material in making pulp, other bioproducts and bioenergy.



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Metsä Group welcomes the forthcoming Circular Economy Act, Bioeconomy Strategy and European Affordable Housing Plan. The aim of this position paper is to highlight specific policy asks related to mechanical wood products.

Sawn timber and engineered wood products are at the core of Metsä Group's product portfolio. Our wood-based products are produced with high resource efficiency and high share of renewable energy. As a part of our 2030 sustainability targets, we aim to increase the long-term storage of bio-based carbon in products by increasing the produced volume of mechanical wood products by 30% by 2030 from the 2018 level.

Metsä Group's new Kerto® LVL mill is under construction in Äänekoski, Central Finland. The mill's annual production capacity is approximately 160,000 cubic meters of LVL, 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.

We need thriving forests that supply a wide range of ecosystem services in addition to wood production (e.g. nutrient cycling, pollination, water purification, climate regulation, recreation). This is why Metsä Group is committed to the principles of regenerative forestry[1], with the aim to verifiably improve the state of Finnish forest nature by 2030.

1. **The European Affordable Housing Plan** plays an important role in increasing the share of green building in Europe. The buildings constructed today can still be in use in the next century.
    - Member States and cities are already developing low-carbon construction solutions, which also take land-use planning into account. **The EU should analyze and share best practices on how to promote climate-smart construction**. Public sector should lead by example and encourage private sector and consumers in using wood in climate-smart construction.
    - **The EU should recognize the benefits of hybrid construction**[2], where wood is used in combination with other building materials, such as concrete and steel. Hybrid construction can offer low-carbon, energy and cost-efficient solutions for greener and socially affordable public and private buildings. It can also extend the utilization of wood in construction and offer climate benefits by storing renewable carbon.
    - **Standardization for construction products should be further harmonized at EU level and permitting processes should be streamlined. Country specific standards related to e.g. fire, acoustics and sustainability should be harmonized.** Good work with existing standards, such as Eurocodes and harmonized standards, should be continued. The role of the Construction Products Regulation (CPR) and it's secondary legislation is essential. National and regional obstacles are also existing and they limit, for example, the use of wood construction. E.g. construction zoning regulation does not necessarily allow the use of wooden elements due to fire safety regulations. Standardization should also be developed to lower the barrier to reuse and recycle wood products as well as to support the use of hybrid construction methods.
    - **Utilizing hybrid construction methods can promote the optimal use of different materials with different properties.** For example, wooden elements offer means for

carbon storage and possibilities for reuse after demolition. Metsä Group has developed a hybrid element in cooperation with a concrete manufacturer partner that combines the good features of concrete and Kerto® LVL[3].

2. **The EU should take the New European Bauhaus (NEB) to a more concrete level.** The NEB is an excellent framework to showcase the remarkable possibilities of wood construction. Future work on the NEB should focus on how to boost wood use in construction via upcoming EU legislation, such as the Circular Economy Act and the European Affordable Housing Plan. Utilizing wood in construction is also an essential element for the EU's resilience, strategic autonomy and security of supply. Forest industry plays an important role in keeping rural areas vibrant and directly responds to the objectives of the EU rural vision.
    - **The EU should develop a holistic action plan to promote the utilization of wood in construction.**
    - Metsä Group welcomes the Carbon Removals and Carbon Farming Regulation (CRCF) which recognizes wooden construction products as carbon removals when storing carbon over 35 years. **The calculation methodologies that will be published as delegate acts should be transparent, science-based and applicable in practice.** The certification system should create added value in just and transparent way for the whole wood-based value chain.

3. **Renewable raw materials, such as wood, play a crucial role in developing a more circular economy.** As losses and degradation always take place, no material can be reused or recycled forever: new virgin material is always needed in the loops. Virgin renewable raw materials can be supplied to loops according to principles of circular economy, in a regenerative way.
    - **In the EU Circular Economy Act, the EU should recognize sustainably sourced renewable content as circular input in the same way than recycled content.** Thus, circular input should also cover renewable materials[4]. Circular input is already recognized by the World Business Council for Sustainable Development and its circular transition indicators[5], and it should be formally integrated in the EU product policy framework and the CMUR (circular material use rate) indicator.
    - Wood raw material from forests is largely utilized to produce valuable renewable products in line with **the principle of the cascading use of biomass which should be promoted in all EU policies.** For example, large diameter log wood is used in mechanical wood industry to produce long-term carbon storage products like construction materials. Pulpwood, obtained from thinner trees and the tops of log wood, and the production side streams of the mechanical wood industry are utilized as raw material for the production of pulp, other bioproducts and bioenergy.
    - Wood can be used in a resource efficient way, and most wood-based products can be reused or recycled. **The EU should guide the development of the collection and recycling infrastructure to close the loops for wood products. Additionally, reusability and recyclability of wood construction products should be supported.**

4. **Wood-based value chains provide multiple opportunities for innovations.** The production side streams are to a large extent utilized at our bioproduct mills[6] or by our partners. Additionally, they provide possibilities to develop totally new products, such as textile fibres[7]. Metsä Group operates biorefineries (bioproduct mills) which are based on an ecosystem concept. We are investigating the capturing of bio-based CO_2 from the bioproduct mill[8]. Bio-based CO_2 can replace fossil-based carbon sources in the production of various chemicals, liquid fuels and plastics. Metsä Group is also constructing a demo plant for lignin refining in connection with one of our bioproduct mills[9]. Lignin is currently utilized as bioenergy but could be used in chemical and material applications, for example in the construction sector where it could replace fossil-based materials in concrete production.
    - **Further development of wood-based value chains including recycling and reuse of wood construction products should be a prominent feature in the EU R&D&I funding**.

Metsä Group's parent company is a cooperative owned by over 90,000 forest owners. We use wood to make recyclable products for the day-to-day lives of millions of people globally. We focus on wood supply and forest services, wood products, paperboards, tissue and greaseproof papers and pulp. We are committed to the principles of regenerative forestry to measurably strengthen the state of forest nature. In 2024 our sales totaled EUR 5.7 billion, and we have around 9,600 employees.

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