Seeing the forest through the trees:

How sustainable timber buildings can help fight the climate crisis

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ecos

About ECOS

ECOS - Environmental Coalition on Standards is an international NGO with a network of members and experts advocating for environmentally friendly technical standards, policies and laws. We ensure the environmental voice is heard when they are developed and drive change by providing expertise to policymakers and industry players, leading to the implementation of strong environmental principles.

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Problems

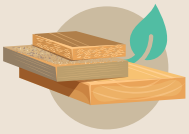
The building sector is a massive contributor to climate change and resource depletion. The most effective solutions to these problems include renovating and repurposing buildings or reusing building components instead of newbuild.

Forest harvest rates are too high globally, which results in a diminishing forest carbon sink capacity and biodiversity loss. Wood used in sectors where fast consumption leads to deforestation and high carbon emissions (particularly bioenergy) is simply a waste of resources. Prioritising timber use in the construction sector makes much more sense environmentally, although further research is needed on the available quantity of sustainable timber for buildings.

Solutions

To be sustainable, timber for buildings should be procured from secondary sources whenever possible, and, when this is not an option, from ecological forestry. Policy and standards should control the demand for timber, implement sufficiency and circularity measures, and set requirements for sourcing timber sustainably.

To restore forests to healthy levels, **biodiversity-friendly ecological forestry must be implemented**, supporting the multiple ecosystem functions of forests, in line with target 10 of the 15th Conference of the Parties to the Convention on Biological Diversity[1].



Sustainably sourced timber is also a viable solution as it can substitute energy intensive concrete and steel, as well as store carbon as long as buildings and their components remain intact.

Global wood consumption is overshooting what forests can sustainably provide by up to 67% - and this overconsumption is likely to continue growing[2]. In the EU alone, member state climate plans forecast 40-100% more demand for forest and agricultural products for energy and materials than will be sustainably available[3]. **This situation is untenable: global strategies must be developed setting out the role sustainable wood consumption can play as part of our built environment**.

A cascading use of wood resources should take place across sectors that use wood (construction, energy, packaging, paper, furniture, textiles, chemicals…) to conserve forests and address the twin climate and biodiversity crises that are linked to forest harvests.

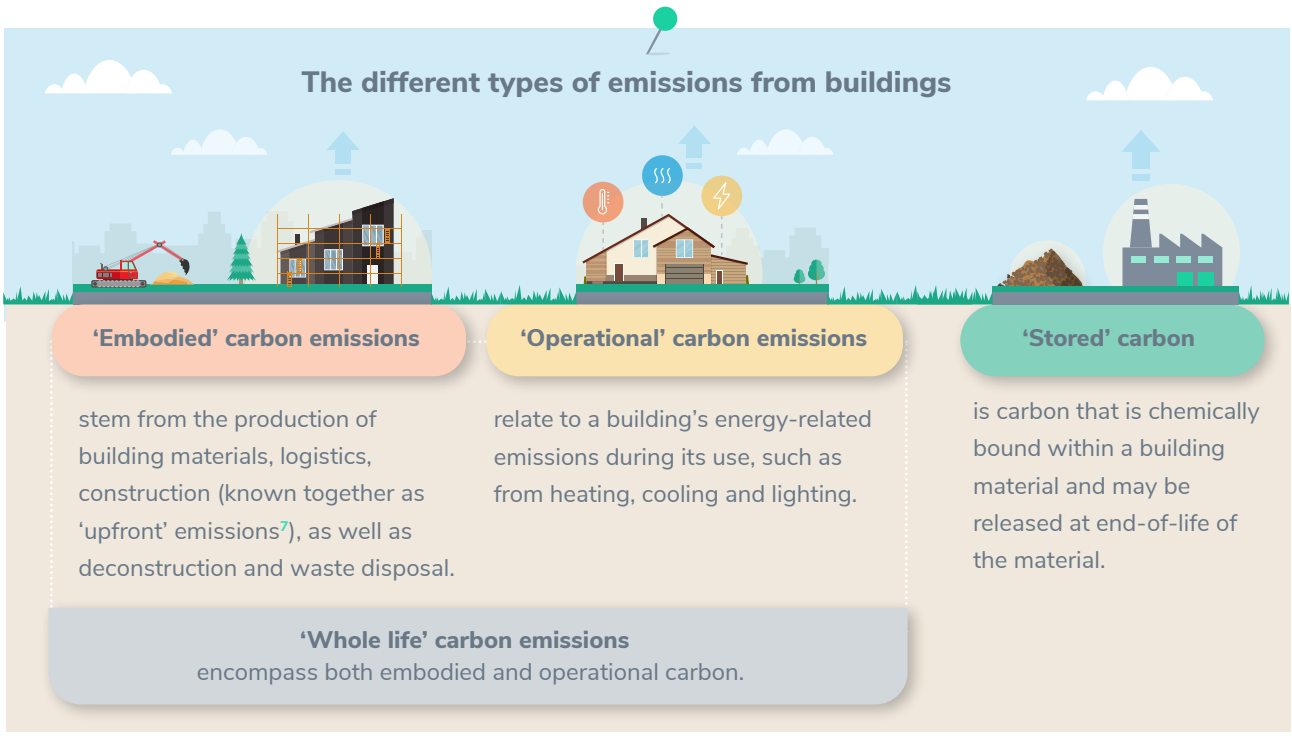
Forest resources are slow-growing and cannot match the rapid consumption from sectors such as large-scale bioenergy and single-use packaging, which are better met with zero-carbon feedstocks and reusable solutions. The strategy should therefore be to ensure that the use of finite wood resources is prioritised between sectors, with use in construction valued over other uses where alternatives exist, while moving away from burning wood for energy and protecting and restoring particularly primary and old growth forests.

Even within the construction sector, the demand for timber should be controlled by implementing a sufficiency approach to only use the necessary amount of wood products, at the same time implementing circularity principles to ensure the demand is met with reused and recycled wood whenever possible. Lastly, harvested wood used should come from ecologically managed forests.

While forests and wood products can certainly contribute to carbon neutrality objectives thanks to their carbon storage properties, they are not always carbon neutral or carbon negative. In fact, the increasing demand for forest wood products is a driver in the decrease in forests' carbon sink capacity, for example in Europe, even if the forest cover is growing[4]. This means that human pressure on forests is harming their ability to naturally sequester carbon when climate targets require this carbon sink to largely increase. As forest management can either impair or improve biodiversity and ecosystem functions, a shift towards ecological forestry is urgently needed[5].

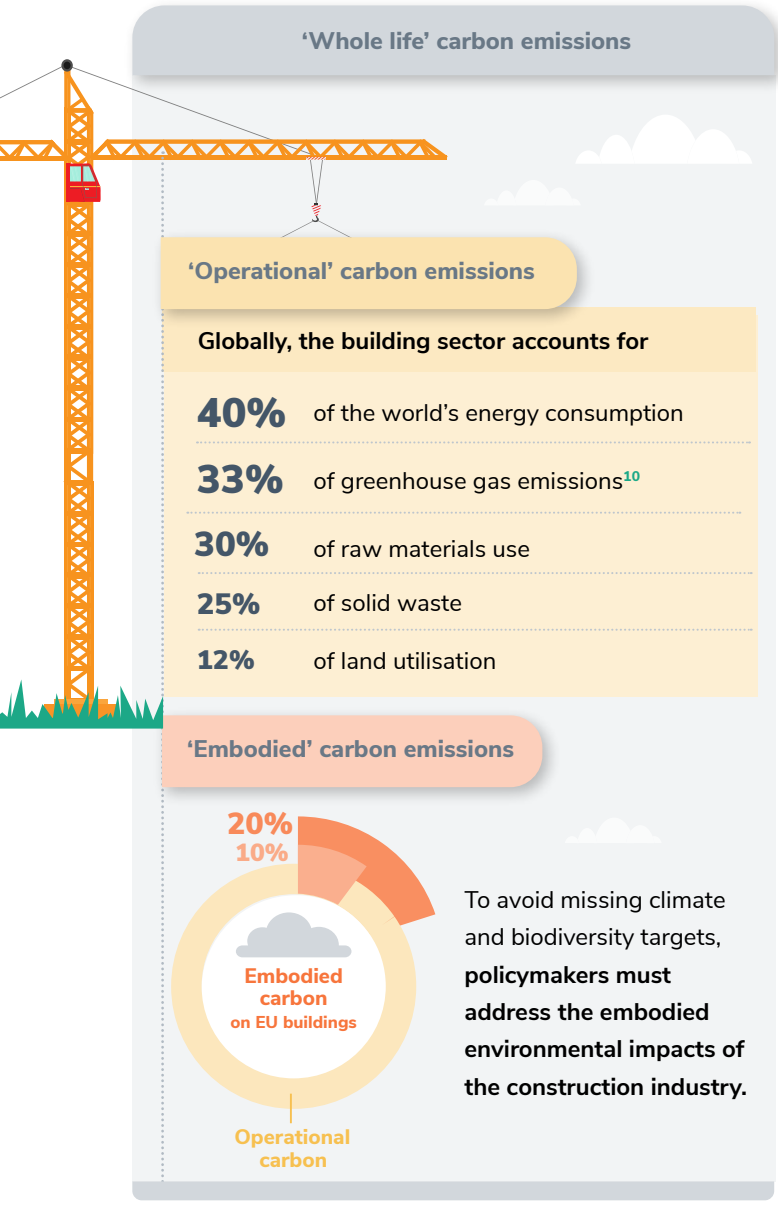
Within the building sector, where climate impacts are huge and growing, a circular and long-lasting use of wood can be beneficial to replace conventional materials such as steel and concrete. Timber buildings offer a typically lower embodied carbon and long-lasting carbon storage (see box below)[6]. If combined with high energy efficiency, timber buildings can present better whole life carbon performance than typical concrete and steel-structured buildings.

The environmental impacts of the building sector are huge, and carbon comes in different forms



Embodied carbon is estimated to be responsible for 10-20% of EU buildings' whole life carbon footprint, alongside operational carbon emissions, and up to 50% in countries with low-carbon energy[8]. Greenhouse gases emitted from material extraction, manufacturing of construction products, as well as construction and renovation of buildings in the EU are on average estimated at 5-12% of total national GHG emissions[9].

While a timber-based transformation of the building sector is desirable, timber demand for construction must remain within planetary boundaries. Sustainable use of timber in buildings and a transition to ecological forestry must be linked and addressed jointly in policies and standards. At a time when climate and environmental policy is being shaped, policymakers face a unique and pressing opportunity to create a coherent framework for timber used in construction, and forestry.



A concerted switch towards mass-timber construction, if conducted without creating significant additional pressure on forest ecosystems and with systematic cascading of wood resources, can increase carbon storage in buildings globally by at least an order of magnitude. Research shows that if such construction were to become the norm by 2050, annual carbon storage could be as high as 700 million tonnes of carbon (MtC) instead of just 10 MtC in a business-as-usual scenario[11]. However, this requires optimised use of wood to prevent forest degradation and loss.

Our understanding of forests, wood uses and the climate, and biodiversity impacts of buildings are still in development, while industry standards lack precision. This is particularly the case for data and methods for assessing forest management impacts; the duration of carbon storage in products and buildings; and the overall balance of lifecycle impacts from forest to buildings. Policy should therefore support their improvement, but it should not rely on them to allocate incentives to industry until methodology and data robustness are ensured systematically.

Even in the absence of quantitative methodologies, policy frameworks can already boost timber buildings' lifetime and circularity (for example, with renovations). Policy can ensure that the cascading use principle applies to timber as a construction material and in other sectors to enhance the duration of its carbon storage effect and to moderate demand for primary wood resources.

Forest policies and standards must preserve forest carbon stocks (including organic carbon found above and below the soil) and the various ecological functions of forests. It is important that policy makes use of certification requirements for ecological forest management (e.g. close-to-nature forestry[12]) and sustainable timber sourcing. Policies and standards should also create more transparency regarding forestry and construction impacts and support the reporting of environmental information until it becomes mandatory. Finally, it is crucial that climate mitigation goals — including ambitions to increase carbon removals — do not eclipse other environmental policy priorities, such as circularity, biodiversity, and climate adaptation.

Summary of our recommendations

We strongly urge policymakers to:

1

Introduce a framework to reduce and monitor the whole life carbon (WLC) impact of buildings.

2

Implement circularity and sufficiency (ecodesign) principles and a cascading use of wood, thus prolonging carbon storage of construction materials and optimising timber use.

3

Ensure a just transition of the forestry sector towards robust ecological forestry approaches, and support wood-based sectors in creating more added value from timber for the construction sector.

4

Implement and enforce a robust sustainable sourcing framework for timber and other risk-prone materials.

5

Improve data quality from monitoring of the state of forests and the impacts of forestry in order to enable support schemes for climate mitigation and biodiversity in forests and from construction.

6

Require the development of environmental assessment methodologies (such as lifecycle assessment, LCA) that encompass forest carbon dynamics and ecosystem multifunctionality following harvest.

7

Based on a robust environmental framework, make reasonable use of sustainably sourced timber in construction where decision tools (such as LCA) support it.

Jump to the policy recommendations section

→

Timber buildings:
challenges and opportunities

A climate mitigation solution as long as we build wisely

Many lifecycle assessments (LCAs) have demonstrated that timber building structures from sustainable forestry can have significantly lower embodied carbon footprint than similar buildings made from concrete and steel, with improvement factors usually within a 10 to 67% range, as identified in several meta-analysis studies[13].

An additional benefit of structural timber is its ability to store carbon for decades or even centuries[14], potentially matching the time needed for new trees to grow in the forest. This effect can be significant, as structural timber is nearly 50% carbon by mass.

As trees are harvested and processed, the sequestered carbon is moved from the forest into temporary storage in a wide range of products with different lifetimes, including building structures, wooden furniture and other elements such as window frames. At the same time, however, short-lived products, including bioenergy, paper and single-use wood items such as cutlery, are also made, depleting wood resources at a much higher rate.

To be of relevance in addressing the climate emergency, storage should last as long as possible. First to delay carbon losses to the atmosphere at the end of life of wooden parts, and, secondly, to control demand for harvested wood products. Thus, materials should be maintained through multiple reuse/recycling loops in line with circularity and the cascading principle (see Figure 1).

Today's timber buildings are not commonly designed for circularity, a shift in practice is therefore required to enhance their longevity, modularity and ease of deconstruction[15].

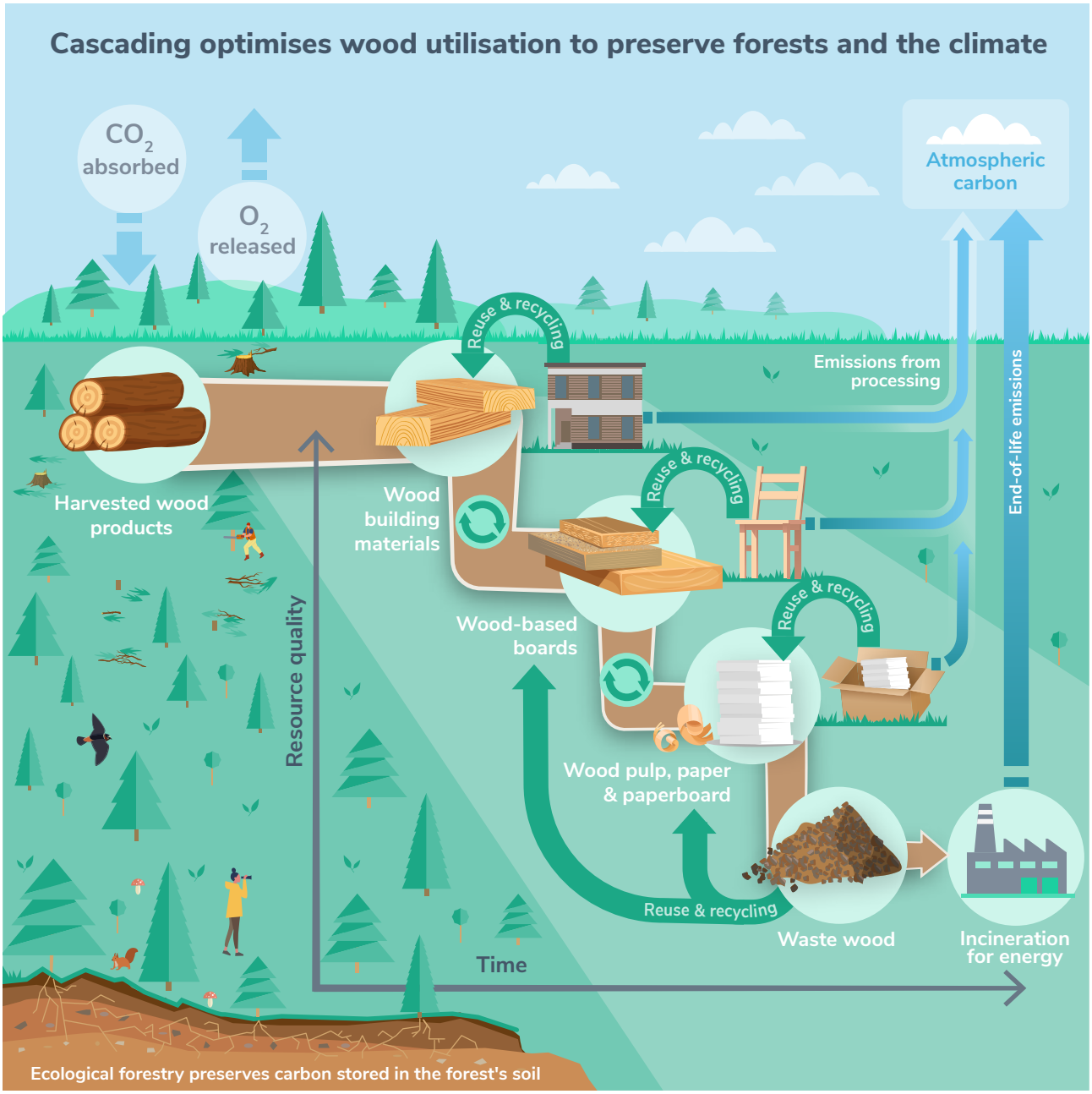


Figure 1 Cascading optimises wood utilisation to preserve forests and the climate

Based on: Höglemeier et al. (2015)[16] and MaterialDistrict (2020)[17].

It is important to note that, **in spite of the benefits from using timber, the sector cannot afford to massively build out of wood**. Sufficiency, circularity and sustainable sourcing within the planetary boundaries are key to mitigate trade-offs from harvesting, and help conserve forests and the carbon they store.

Forests face intense pressures for more harvest

Paris Agreement decarbonisation pathways suggest the need for a large shift to biomass to achieve climate targets. However, the overall demand for forest wood products cannot grow equally in all economic sectors, as there simply will not be enough biomass to meet the demand.

As a 2021 report from Material Economics underlines[18], EU Member States' climate plans altogether forecast 40-100% more demand for forest and agricultural products for energy and materials than will be sustainably available due, in large part, to a planned increase in bioenergy demand. At present, global wood consumption is already overshooting by up to 67% the lowest risk boundary of what global forests can sustainably provide, and overconsumption is likely to continue growing[19].

Globally, deforestation and forest degradation are driven by economic activities such as agriculture, timber harvesting, and mining, as well as by climate-related hazards[20]. The increasing demand for forest products is indeed an important contributor to the decrease in the carbon sink capacity of forests, even in regions where the forest cover is growing, such as Europe[21]. **This means that human pressure on forests to supply wood products is harming their ability to naturally sequester carbon.**

These trends are environmentally and economically untenable for several reasons:

1. 

increased demand for short-lived products and for bioenergy means rapid re-emission of the carbon sequestrated, which the slow pace of forest (re)growth cannot recover within the same time frame (one year or less, as opposed to several decades or centuries),

2. 

such applications promote material- and energy-intensive consumption patterns,

3. 

while afforestation is necessary, creating new forestlands can also encroach on space needed for people to live and produce food, while other necessary land ecosystems (such as grasslands and wetlands) provide vital functions to people and to other species, and they therefore should not be converted as it can also lead to higher greenhouse gas emissions[22].

4. 

locally sourced timber mitigates transport emissions, yet the demand for construction timber cannot be solely met with (increased) local production and risks increasing imported deforestation.

These issues call for a mix of solutions to enhance the climate benefits of existing forests and to sustainably increase the pool of carbon stored in buildings.

Ecological forestry can lead the way

Debates around forestry and carbon often pit the conservation of existing forests against harvesting and replanting. From a climate perspective, ecological forest management, such as close-to-nature forestry enables a reasoned level of harvest to reap multiple benefits:

- By extracting some timber and, at the same time, considering what vegetation is left to grow, foresters can enhance certain forest traits and functions, such as their adaptive capacity;
- When directed towards the building sector, carbon is kept out of the atmosphere;
- It can substitute more carbon-intensive construction products.

Under ecological forestry conditions, after harvesting, the remaining forest is allowed to continue growing, encouraging natural regeneration. This means that carbon sequestration continues, compensating for (and often exceeding) the carbon removed with the harvest.

The largest stock of carbon dioxide in forest ecosystems (forest carbon) is found below ground, in the soil, and in the organic matter contained in it. These large carbon pools can be affected by aggressive harvesting methods such as destructive clear-cutting or harvests with the full removal of stumps, brash, and residues. When soil is exposed to the elements in the long term (precipitation, varying temperatures), this leads to organic matter decomposition and the release of greenhouse gases[23]. In the context of global warming, one study suggests that higher temperatures will increase the risk of soil carbon losses, particularly in higher latitudes, thus creating a feedback effect[24].

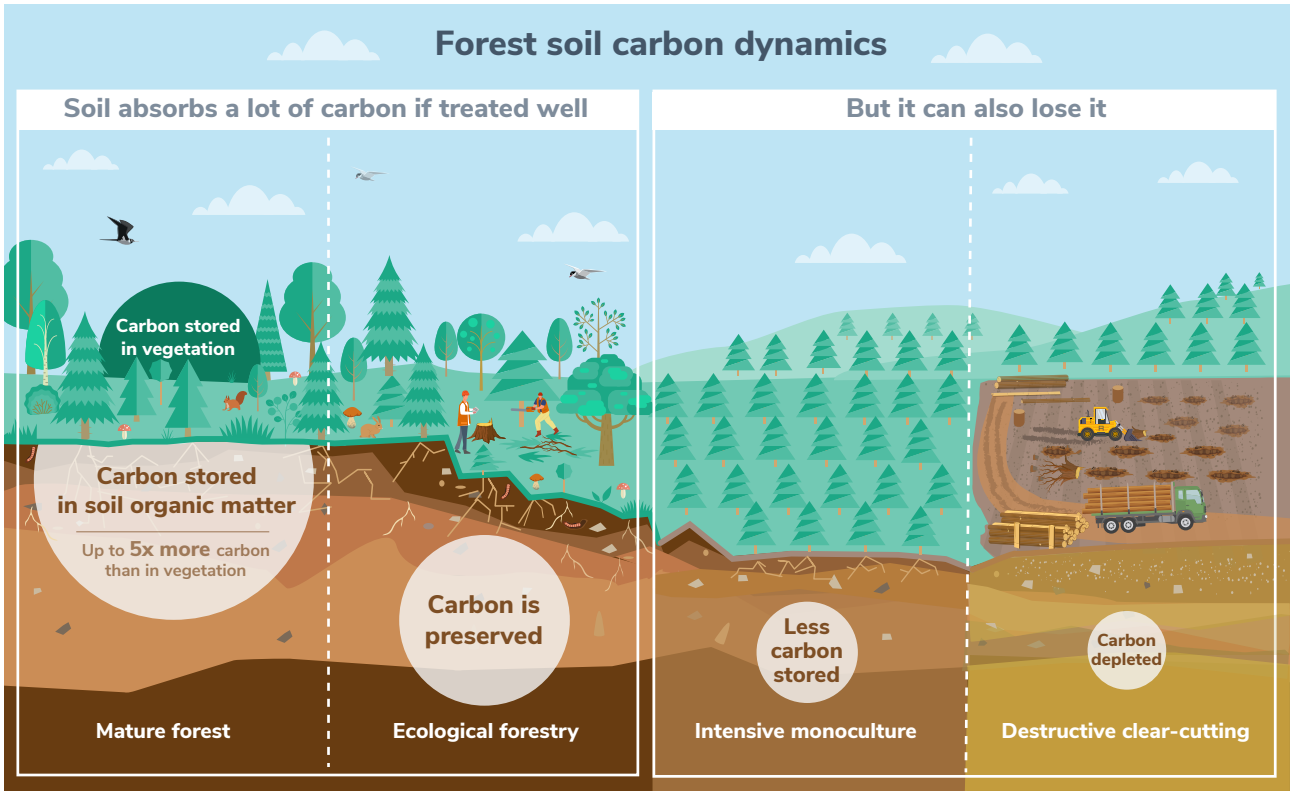


Figure 2 Forest soil carbon dynamics

Based on: IPCC (2007)[25].

Forests, particularly old-growth and primary forests, must be preserved from destructive harvesting practices as they represent huge carbon pools, which, if released into the atmosphere, create large carbon debts which will not be compensated for with new growth until decades or centuries later. In managed forests, harvesting practices must remain low-impact, via selection harvesting, in order to reap the benefits mentioned above.

Besides harvesting, there are other indirect risks of forest carbon losses related to forest management practices. These include the choice and diversity of tree species, and whether they are adapted to resist increasing climate-related threats such as pests, invasive species, heat, drought, and fires. Without forest adaptation and resilience to climate change, forest carbon cannot be preserved.

EU policy landscape for timber construction

The energy consumption of buildings during their use and the related operational carbon emissions have been regulated in EU policies for over ten years. By contrast, the embodied carbon emissions of buildings have, to date, not been addressed sufficiently. Steps taken in the Commission's legal proposals for a revised Energy Performance of Buildings Directive (EPBD) on the one hand, and a revised Construction Products Regulation (CPR) on the other, have been shy in supporting an ambitious embodied carbon emission measurements and performance framework.

Measures have relied on a fragmented range of policies on Whole Life Carbon (WLC) at the national level that has been slow to materialise. Policies should start with the **systematic measurement and public disclosure of the carbon footprint** of construction products and of WLC emissions of buildings. Policymakers have recognised this and are now in the process of revising both the EPBD and the CPR to establish mandatory requirements for all buildings and construction products. However, the process of introducing these requirements needs to be accelerated, years before the proposed date of 2030 in the case of buildings and under the Commission's initial EPBD proposal. 2030 is simply too late to provide any short-term incentive for reducing embodied carbon and contributing to the EU climate goals, to be achieved by the same deadline.

Then comes the **enforcement of building performance requirements**, pushing the sector to consider ways of reducing WLC of buildings, which, in turn, will help phase out the construction of new high embodied carbon buildings. This measure would spur the development of instruments promoting low whole life carbon and circular designs, with any potential trade-offs on operational performance avoided through a holistic approach. Only then will the EU stand a chance to enable the best-performing materials and solutions to become the norm. The World Green Building Council EU Policy Whole Life Carbon Roadmap has already provided embodied carbon benchmarks for different types of buildings, based on which, limits should be set to aim at reducing overall building emissions by 40% by 2030[26].

On the sustainable finance side, the EU Taxonomy Delegated Act has only put forward that the embodied carbon impacts of newbuilds over 5,000 m^2 should be disclosed upon investor and client request. This is not enough, and the path towards achieving carbon neutrality EU-wide by 2050 should be made clearer to help the market prepare and recognise the many functions of forests.

The path for incentivising the use of timber from sustainably managed forests as a possible carbon storage solution is still unclear[27] due to significant data and methodological issues which impede a realistic modelling of carbon storage benefits. This is unlikely to be solved in the coming years and by the time the current set of policies for buildings, forestry, and climate is defined and comes into force. As part of the European Commission's Carbon Removal Certification

Framework, and Expert Group on Carbon Removals has been created to discuss these issues and propose methodologies. Although theoretical approaches which can support this goal exist in science, such as the dynamic LCA methodology, it is arguably too early to prescribe their use in the absence of precise data and transparency on the impacts of forest management practices (see the box below).

It remains key to improving climate impacts of buildings, prolonging their lifetimes and boosting circularity - and we do not require complex calculations to do this. Similarly, despite the lack of precise forest carbon assessments, ecological forest management approaches can already support forest carbon storage and provide truly environmentally friendly wood products.

Quantifying the carbon storage benefits of the use of timber in construction?

The aim of using dynamic LCA for bio-based products is to reward the delayed carbon emission associated with the storage period of carbon contained in the product, i.e. the longer the storage, the better the 'score'.

This approach, however, has never been standardised. In fact, obtaining a fair result requires making a realistic assessment of the building or timber product's footprint (including its lifespan), as well as linking to the product the impacts related to the (un)sustainability of the forest management practice. The result should represent the net carbon assessment of the building/product lifecycle on the one hand, and the forest on the other.

There are practical difficulties to achieving these results. Firstly, although forest carbon flows are already monitored on an aggregate (national) level, the allocation of impacts of specific forest plots to given wood products is rarely conducted due to a lack of data at that level[28]. Secondly, it cannot be granted that the construction sector should take credit for the carbon sequestered in the trees harvested or the trees replanted, nor for the indirect effects associated with harvests, such as indirect land use change, and the sequestration foregone by harvesting trees that are still growing.

Consequently, an alternative approach is needed to support quantitative methods. Multicriteria assessments should be conducted in assessing the net environmental impacts of the use of wood products. This can, for instance, include robust multicriteria forest management certification, chain of custody and due diligence requirements; but also measures to ensure long timber product and building lifespans (including circularity measures). The final approach must provide assurances that forest management contributes to a forest carbon sink, but not at the expense of other forest functions, and that timber products last long and have multiple lives.

These principles should be explored and maintained in methodologies linking carbon removals with nature restoration, such as in the work of the European Union's Expert Group on Carbon Removals. Quantitative methodologies such as dynamic LCA should continue to be explored until they can be employed more fully and robustly to attribute incentives.

Policy recommendations:
Towards truly sustainable timber buildings

This report explains how policy and standards can support the mutual improvement of the ecological functions of forests (such as carbon storage) via ecological forest management and decarbonise the building sector through a reasonable use of circular and sustainably-sourced timber.

We strongly recommend linking climate change mitigation with the biodiversity and climate adaptation agendas, by adopting a holistic approach to recognising environmental performance of wood products. This means making policy incentives for the use of bio-based materials contingent on the fulfilment of other criteria, in a similar fashion as a product must fulfil a variety of EU Ecolabel criteria to receive the Ecolabel.

We cannot afford to continue considering environmental issues in isolation when climate change is causing devastating forest fires and droughts and annulling forest carbon offsets[29]: forest management must be ecological and adaptive to climate change for carbon removals to reach their full potential.

Our policy recommendations for the use of sustainable timber in buildings are detailed below.

Recommendations	Types of measures and related policy tools
 **Introduce a framework to reduce and monitor the whole life carbon (WLC) impact of buildings:** Recognise and support the use of long-lasting timber products which are low-carbon and low-impact on biodiversity, supported by financial incentives based on fair, robust, biodiversity- and climate-oriented performance frameworks.	**Whole Life Carbon (WLC) impact performance requirements**
• Strengthen information requirements in the Construction Products Regulation and in related standards (Environmental Product Declaration (EPD); EN 15804 and ISO 14025) to ensure disclosure of environmental performance covering the whole life cycle of construction products, including the carbon footprint and sustainable sourcing information (certificates of due diligence, chain of custody and third-party certification). • Set mandatory embodied carbon benchmarks and performance classes per construction product category, as defined by their functional use. This should allow for the identification and gradual phase-out of worst performers, following the Ecodesign Directive process[30].	• Construction Products Regulation • Environmental Product Declaration standards

• Set EU-level requirements for harmonised measurement and reporting of whole life carbon on new buildings and existing buildings undergoing renovation by 2025 in the Energy Performance of Buildings Directive and related standards (sustainability of construction works; EN 15978 and ISO 21929). • Establish an EU framework for mandatory building WLC benchmarks, thresholds, and limits by 2030 to be reviewed every 5 years against the EU Whole Life Carbon Roadmap and IPCC trajectory, and towards climate neutral buildings before 2040.	• Energy Performance of Buildings Directive • EU Whole Life Carbon Roadmap • Corporate Sustainability Reporting Directive • Sustainability of construction standards
• Set ambitious WLC criteria based on EPBD benchmarks for access to finance under the EU Taxonomy for Sustainable Finance and national construction or renovation programmes to direct finance to 'green' buildings and to create a race to the top.	• Sustainable Finance Taxonomy
Recommendations	**Types of measures and related policy tools**
 **Implement circularity and sufficiency principles (ecodesign) and a cascading use of wood, thus prolonging carbon storage of construction materials and optimising timber use**	**Sufficiency, circularity and cascading measures**
• Support the reorientation of primary wood resources towards long-lasting applications, such as buildings, and away from short-lasting applications such as packaging and bioenergy, when more environmentally friendly solutions exist.	• Renewable Energy Directive • Packaging and Packaging Waste Directive
• Develop in-use timber products and building requirements in standards (such as in the EPD framework, sustainability of construction works standards, in the design of timber structure standards; Eurocode 5) ensuring high performance and long lifespans, with the minimum amount of material necessary. Requirements should include buildings modularity and adaptability, durability, maintenance, repairability and upgradability during the expected lifetime. • Preserve the existing building stock with deep renovations to improve the energy performance of buildings and make use of existing building space, rather than building anew. Where renovation happens, incentivise reusing and recycling existing materials to reduce the need for materials, and then the use of low-impact raw materials like timber. At the same time, prevent the demolition of timber buildings and related waste where renovations could otherwise preserve the building's carbon stock, such as by introducing mandatory pre-demolition audits and bans on certain demolition practices. • Introduce extended producer responsibility (EPR) schemes for all construction products (as was done in France[31]), including for timber. EPR schemes can finance the collection, treatment, and reuse of construction products reaching end-of-life, and thus foster ecodesign. • Set design requirements in standards (such as in the EPD framework, in timber product standards such as EN 14081 and EN 16351, and in standards on the design of timber structure; Eurocode 5) to maximise the circularity potential of timber, notably establishing a hierarchy of processes. This should address design	• Construction Products Regulation • Energy Performance of Buildings Directive • Waste Framework Directive • Ecodesign for Sustainable Products Regulation • Level(s) • EU Sustainable Finance Taxonomy circular economy criteria for buildings • Environmental Product Declaration standards, and standards on timber products and the design of timber structures.

for reuse and reusability of the product or its part; minimum recycled content obligations in wood panels and fibre products; design for recycling and recyclability obligations, including careful attention to the use of non-wood products that can impede wood recycling; design for disassembly and deconstruction, such as using reversible connections. • Require information in standards (particularly on timber products and in EPD) towards enhancing the performance of timber products, such as assembly/disassembly methods and tools, reparability/maintenance (including instruction on type and frequency of maintenance), reuse conditions and end-of-life handling.	
Recommendations	**Types of measures and related policy tools**
 **Ensure a just transition of the forestry sector towards robust ecological forestry approaches that support forest resilience and biodiversity as bases for enhancing the many functions of forests, and support wood-based sectors in creating more added value from timber for the construction sector.**	**Forestry and wood sector supply measures**
• Continue to enforce the adoption of EU environmental protection provisions for forestry in the Member States[32].	• EU environmental law enforcement mechanisms
• Support ecological forestry which protects, enhances or restores forests resilience and biodiversity for multiple functions, including carbon sequestration, by ensuring that only ecological forestry accesses green finance and supporting the just transition of the forest sector towards implementing ecological principles. • Support wood-based sectors in developing the competences and infrastructure necessary to create additional value from wood types still largely untapped in the construction sector, and which are only used for low-value applications, such as bioenergy and paper.	• EU financing programmes • Sustainable Finance Taxonomy
• Make carbon removal certification conditional upon proof of ecological forestry that puts forests on a clear path towards increased resilience, including biological and structural diversity, in order to maximise co-benefits and prevent forest destruction, which can rapidly release carbon, and impact timber supply.	• Verification by due diligence of supply chains • Certification Framework for Carbon Removals
• Maintain and strengthen the use of Voluntary Partnership Agreements under the FLEGT Regulation to work with partner countries on improving or maintaining sustainable forestry practice outside the EU, paying careful attention to deforestation risks abroad from measures taken within the EU.	• Deforestation and Forest Degradation Regulation • FLEGT Regulation

• Ensure that forest harvest and afforestation respect conservation objectives in Natura 2000 protected areas and nature restoration areas. Ecological principles should apply to all forestry practices[33], including harvesting (favouring selection cutting, eliminating destructive clear-cuts). • Implement the strict protection of primary and old-growth forests and large carbon reservoirs in wetlands and peatlands. • Support biodiversity and nature restoration in forests other than primary and old-growth forests. • Develop and promote ecologically sound principles for forestry, such as the close-to-nature principles[15]. Principles should aim at preserving forest carbon and enhance ecosystem multifunctionality and resistance to climate-related threats.	• Implementation of the EU Biodiversity Strategy • Strong implementation of the Natura2000 concept • Ambitious implementation of the EU Forest Strategy for 2030 • Forestry sustainability standards
• Develop mandatory criteria for certification schemes for ecological forestry to cover multiple environmental issues including climate mitigation, climate adaptation and biodiversity; and enforce the ISEAL codes of good practice for all certification schemes to meet.	• Follow-up legal requirements from the EU Forest Strategy for 2030
Recommendations	**Types of measures and related policy tools**
 **Implement and enforce a robust sustainable sourcing framework for timber and other risk-prone materials**	**Wood products demand-side measures**
• Monitor and set benchmarks on timber consumption based on scientific assessments of the ecological limitations of forests, considering sustainable supply, climate mitigation goals, forest ecosystem functions, and social welfare[34].	• EU consumption-based targets
• Require proof of sustainable sourcing from any EU country of sourcing as put forward in the Commission's proposal for a Deforestation and Forest Degradation Regulation. Requirements must include due diligence statements, and geolocated sites of harvest so as to identify the forest plot from which the timber product originates, verified by third parties and regularly checked by national competent authorities.	• Deforestation and Forest Degradation Regulation • Construction Products Regulation
• Promote and incentivise the use of certification schemes that comply with EU requirements for timber by the forestry and construction sectors; and do the same for other materials, such as minerals, in order to level the playing field (see #3).	• Ecodesign for Sustainable Products Regulation • Sector-specific sustainability standards
Recommendations	**Types of measures and related policy tools**
 **Improve data quality from monitoring of the state of forests and the impacts of forestry in order to enable support schemes for climate mitigation and biodiversity in forests and from construction.**	**Environmental measurements for forestry**
• Improve Member States' forest monitoring of climate mitigation and adaptation indicators, ecological conditions, and how forests are affected by forest wood product supply and demand, including for the building sector. Harness the potential of remote sensing and digital tracking for large-scale assessments but continue to demand on-site assessments for more precise data	• Improve the National Forest Inventories and the EU Framework for Forest Monitoring

• Introduce mandatory corporate sustainability reporting requirements and standards for wood-producing and wood-sourcing sectors, including construction in line with the provisions of the Deforestation and Forest Degradation Regulation. Information should cover deforestation impacts (area size, geolocations) at the highest resolution possible[35].	• Corporate Sustainability Reporting Directive and related European Sustainability Reporting Standards
Recommendations	**Types of measures and related policy tools**
 **Develop environmental assessment methodologies (such as lifecycle assessment, LCA) that encompass forest carbon dynamics and ecosystem multifunctionality following harvest, and fair biogenic carbon storage assessments and realistic product lifetimes. Once tried and tested, these methods should only be used to justify policy and financial incentives, not for offsetting purposes.**	**Embodied impacts performance measures**
• Assessments related to the use of timber products must be accompanied by proof that the product meets ecodesign requirements (see #2) and by robust third-party verified certification for ecological forestry (see #3).	• Certification Framework for Carbon Removals • Product Environmental Footprint methodology
Recommendations	**Types of measures and related policy tools**
 **Based on a robust environmental framework, make a reasonable use of sustainably sourced timber in construction where decision tools (such as LCA) support it.**	**Construction-sector demand-side measures**
• Establish green public procurement criteria for the use of timber (where regionally available) that complies with EU construction and environmental legislation, including on due diligence, and that is certified as originating from ecological forestry (see #3).	• Construction Products Regulation • Green Public Procurement criteria for buildings
• Provide incentives for carbon removals in buildings (such as access to green finance, public procurement) where requirements are fulfilled regarding ecological forest management for the timber sourced (see #3) and ecodesign of building components (see #2). If the incentives are based on a quantitative assessment, then ensure it is based on a robust methodology (see #6).	• Energy Performance of Buildings Directive • Construction Products Regulation • Sustainable Finance Taxonomy • Certification Framework for Carbon Removals

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ECOS Discussion paper - Building blocks for sustainable construction through a revised Construction Products Regulation (2022)

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Joint letter to Energy Ministers of EU Member States calling for a more ambitious Energy Performance of Buildings Directive (EPBD) (2022)

See more →

ECOS feedback on the proposal for a revised Construction Products Regulation (2022)

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Notes and references

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For an overview and discussion of close-to-nature principles, see Fern's 2021 paper on a Just transition for the forestry sector away from intensive forestry and towards close-to-nature practices. https://www.fern.org/fileadmin/uploads/fern/Documents/2021/Just_transition_in_forestry.pdf

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