07

EFI

Taking a bird's eye view of EU wood-based policy

Untangling policy, institutional, and actor frameworks affecting the wood-based sectors

Authored by:
Filip Aggestam,
Gerhard Weiss,
Jerbelle Elomina,
Helga Pülzl

KNOWLEDGE TO ACTION

Photo by Viktorya on Adobe Stock

Helga Pülzl
Editor-In-Chief

Sarah Adams
Managing Editor

Inazio Martinez de Arano
Associate Editor

Gerard Fernandez
Design Coordinator

The editorial office can be contacted at k2a@efi.int

Layout: Lina Salamanca

This report is based on an earlier German version of the study: Holzpolitik in Europa: Holzrelevante Politik, institutioneller Rahmen und Akteurslandschaft auf EU-Ebene. Waldpolitik Blickwinkel No. 2/2021. Universität für Bodenkultur, Europäisches Forstinstitut, Wien. The English version of the study has been updated to reflect recent developments. The report furthermore builds on earlier reviews of EU policy carried out under the assessment of the cumulative cost impact of specified EU legislation and policies on EU forest-based industries (Rivera León et al., 2016) and the book European Forest Policy and Governance: An Integrative Analytical Framework, Routledge (Aggestam, 2025).

Acknowledgements
We would like to thank Harald Mauser for reviewing and providing comments to earlier version of the study. In addition we would like to thank Emmie Letourner for looking up some of the EU document references.
This publication has received support from Woodpop (https://woodpop.eu/) and some funding for publication from the Austrian Federal Ministry of Agriculture, Forestry, Regions and Water Management.

Required citation:
Aggestam, F., Weiss, G., Elomina, J., & Pülzl, H. (2025). Taking a bird's eye view of EU wood-based policy: Untangling policy, institutional, and actor frameworks affecting the wood-based sectors. Knowledge to Action 7. European Forest Institute.
https://doi.org/10.36333/k2a07

ISBN 978-952-7608-00-5 (printed)
ISBN 978-952-7608-01-2 (online)
ISSN 2670-2126 (printed)
ISSN 2670-2215 (online)

EFI

wood PoP
CONNECT—EXCHANGE—COLLABORATE

Federal Ministry
Agriculture and Forestry, Climate and Environmental Protection, Regions and Water Management
Republic of Austria

Cover photos by: romaset on Adobe Stock

Contents

Photo by: Adobe Stock

Abbreviations

CAP Common Agricultural Policy

CBD United Nations Convention on Biological Diversity

CEN European Committee for Standardization

CFP Carbon footprint of a product

CSD United Nations Commission on Sustainable Development

EAFRD European Agricultural Fund for Rural Development

EAGF European Agricultural Guarantee Fund

ECE United Nations Economic Commission for Europe

ECOSOC United Nations Economic and Social Council

EOTA European Organisation for Technical Assessment

EU European Union

EP European Parliament

MEPs Members of the European Parliament

MS Member State

EUTR EU Timber Regulation

FLEGT Forest Law Enforcement, Governance and Trade

FES Forest ecosystem services

FSC Forest Stewardship Council

GHG Greenhouse gas

Ha Hectare

HWP Harvested wood products

IAF International Arrangement on Forests

IFF Intergovernmental Forum on Forests

IPF Intergovernmental Panel on Forests

ISO International Organization for Standardization

ITTA International Tropical Timber Agreement

ITTC International Tropical Timber Council

ITTO International Tropical Timber Organization

IUCN International Union for the Conservation of Nature

LBA Legally binding agreement

LULUCF Land Use, Land Use Change, and Forestry

NGO Non-governmental organisations

NWFP Non-wood forest products

PEFC Programme for the Endorsement of Forest Certification

REDD+ Reducing emissions from deforestation and forest degradation

SDG Sustainable Development Goal

SFC Standing Forestry Committee

SFM Sustainable Forest Management

TFEU Treaty on the Functioning of the European Union

UNCED United Nations Conference on Environment and Development.

UNFCCC United Nations Framework Convention on Climate Change

UNFF United Nations Forum on Forests

VPA Voluntary Partnership Agreement

WPF Working Party on Forestry

Executive Summary

The wood-based sector – comprising industries that rely primarily on wood and wood-based products such as roundwood, sawnwood, pulpwood, plywood, veneers, wood chips and pulp – is receiving increasing attention from national, European and international policymakers.

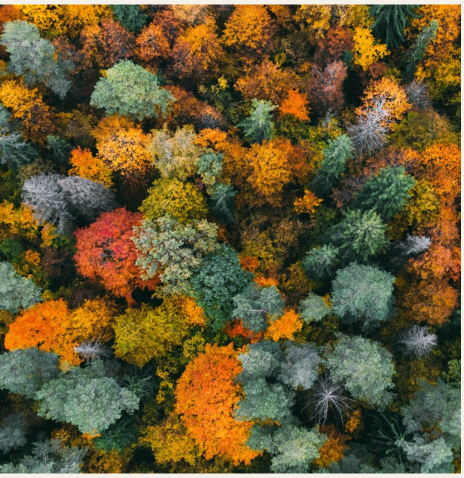
Wood offers numerous benefits: it is a renewable, organic material that sequesters carbon throughout its life cycle, substitutes for fossil-based materials such as steel, plastic and concrete, and supports the transition to a circular bioeconomy. However, balancing its industrial use with the protection of forests and their ecosystem services – such as biodiversity conservation and carbon sequestration – presents policy challenges and trade-offs.

The wood-based sector operates in a highly diverse policy landscape, spanning multiple industries, stakeholders, and interests. The fragmented and diverse EU policy environment compounds this complexity. Unlike other sectors governed by a single policy, there is no EU-wide policy for wood. Instead, wood-related policymaking follows the principle of subsidiarity, with EU Member States (MS) having the primary responsibility for policymaking. The only exceptions to this rule are certain non-timber forest products, such as cork and certain forest-based fruits. This lack of direct EU competence results in a complex web of regulatory, strategic and financial policy instruments that directly and indirectly influence the sector. Some policy instruments can incentivise or restrict forest-based wood production, while others shape the regulatory landscape for wood-dependent industries.

The picture is further complicated by the diversity of wood value chains, spanning sectors such as construction, furniture, energy, paper, plastics and textiles. Policy instruments can have different impacts depending on where companies operate within the supply and value chains. For example, a sawmill faces different regulatory challenges than a furniture manufacturer, while bioplastics producers are subject to various environmental and product safety regulations as compared to paper mills.

Clarifying the links between different EU policy instruments that affect the wood-based sector is essential to address this complexity. This requires a comprehensive understanding of how broader environmental, climate, socioeconomic, and industrial priorities intersect with the perspectives of institutions, policymakers, and stakeholders.






Objectives of this study

- Map the EU policy and institutional framework and identify the key actors and mechanisms shaping wood-based policy.
- Provide a detailed overview of the regulatory landscape affecting the EU construction sector.
- Explore ways to improve policymaking processes that support the sustainable use of wood while balancing competing policy objectives.

Key challenges

Fragmented policy instruments and overlapping regulations:

- The lack of a unified EU wood policy means that sector regulations come from several, often uncoordinated, policy areas.
- The EU Forestry Strategy does not fully consider the wide range of regulatory frameworks affecting the wood-based industries, leaving gaps in areas such as industrial emissions, product safety, energy policy and transport regulations.
- Different industries within the wood-based sector are affected in various ways. For example, wood construction companies must navigate energy efficiency regulations and circular economy initiatives, while wood-based textile manufacturers face evolving standards for bio-based materials and chemical restrictions.

Trade-offs between sustainability and industrial growth

- Biodiversity-friendly afforestation policies promote ecological conservation but can limit the availability of commercially viable timber, impacting supply chains.
- The role of wood as a carbon sink versus its use as a fossil fuel substitute remains an unresolved policy debate. While storing carbon in forests is consistent with climate goals, harvested wood products (HWPs) can store carbon for decades in buildings, furniture, and bio-based materials, yet they are often overlooked in climate accounting.
- Bioeconomy innovations such as wood-based textiles and bioplastics require stable wood supply chains, but restrictive policies can discourage investment and innovation in these emerging industries.

Photos by: Tomasz Zajda, PT pictures, Viachaslau. Oleg, Kletr on Adobe Stock

Key recommendations

Improve policy coherence through cross-sectoral coordination

- Establish inclusive governance mechanisms to align forest, trade, industrial and environmental policies.
- Develop a common definition of 'wood-based policy' at the EU level ensuring that policymaking reflects the range of wood-dependent industries and value chains.

Recognise the role of wood in reducing fossil fuel dependency

- Integrate the carbon storage potential of harvested wood products (HWPs) into climate change policies.
- Strengthen policy frameworks that promote the sustainable use of harvested timber while ensuring responsible forest management.

Monitor and adjust policies based on measurable results

- Establish robust tracking systems and policy impact assessments to evaluate the effectiveness of existing regulations and identify gaps.
- Introduce flexible mechanisms that allow policymakers to adopt regulations in response to industry needs and sustainability challenges.

A call for a more integrated approach

To fully address the complexities of wood-based policy, it is essential to consider the entire value chain, including construction, textiles, bioplastics, and chemicals, which increasingly rely on wood as a raw material. An integrative approach should:

Prioritise sustainable practices: Focus on producing carbon-neutral biomass, sustainable wood and non-wood products, and environmentally sound processing of these materials.

Align with broader EU objectives: Policies must support Sustainable Forest Management (SFM), nature conservation, improved air quality, energy efficiency, fair trade, and public health, aligning with the EU's broader bioeconomy and circular economy goals.

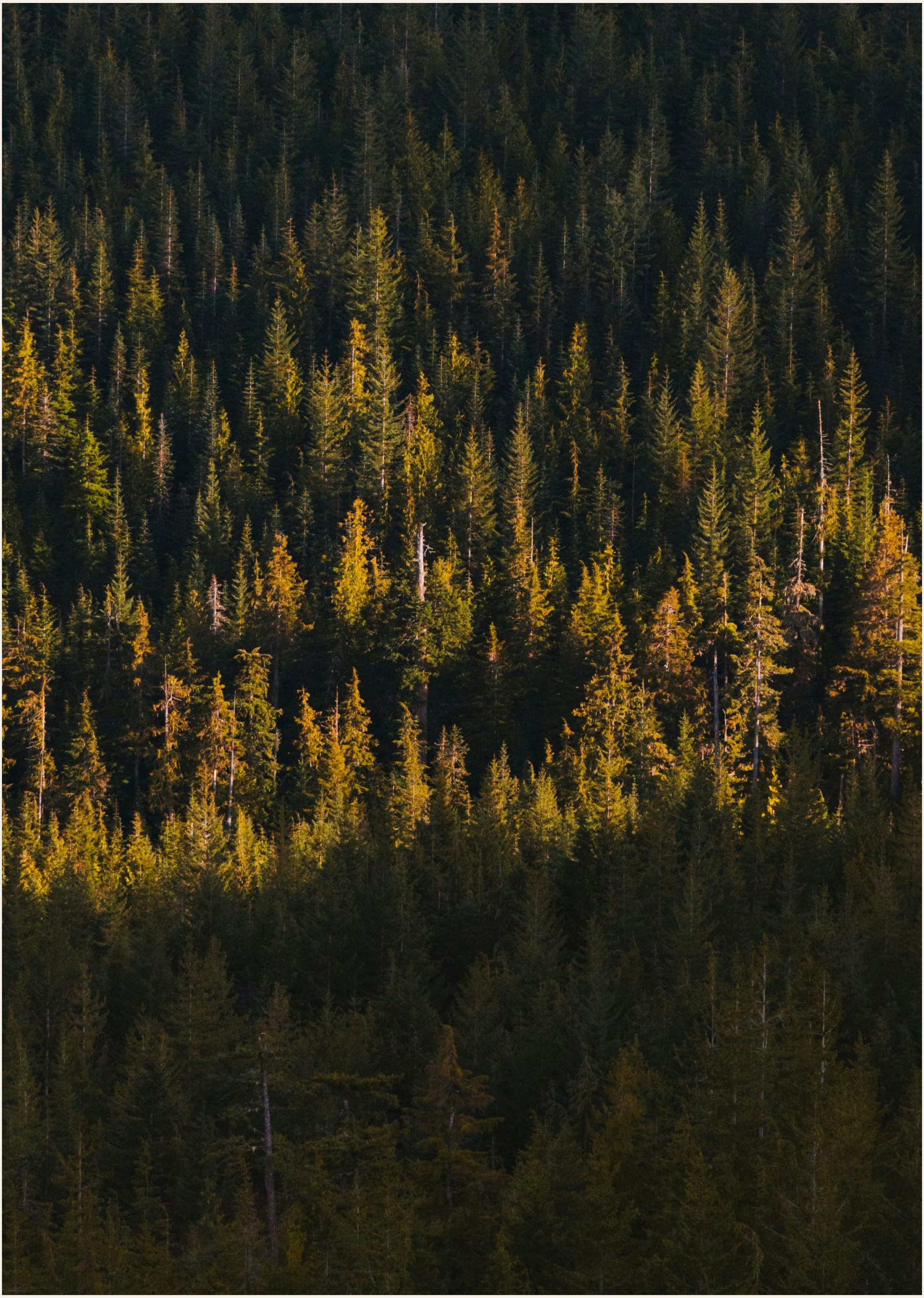


Photo by Luke Miller on Pexels

Photo by: Dola on Adobe Stock

RETHINKING WOOD POLICY

1. Rethinking wood policy

Forests and the wood-based sector encompass a wide spectrum of industries and interests that are gaining increased attention from and traction with national, European and international policymakers (Lazdinis et al., 2009, Winkel et al., 2013, Pülzl et al., 2018, Wolfslehner et al., 2020, Stubenrauch et al., 2022).

This heightened attention stems from forests' multifunctionality in providing a large variety of services and products, along with wood's unique and sustainable characteristics as a raw material and the different ways in which it can be used. Wood is not only a renewable and organic material; it can also replace materials such as steel, plastic and concrete, which have higher environmental impacts. In addition, wood plays an important role in reducing reliance on non-renewables and fostering a circular bioeconomy. For instance, carbon is also stored in Harvested Wood Products (HWPs) collected from the forests.

Forests also provide goods and forest ecosystem services (FES). They contribute to biodiversity by providing essential habitats for plants and animals. They also regulate ecosystems through nutrient cycling and pollination, which are crucial for wildlife and agriculture (Rock and Bolte, 2011, Rüter, 2011, Schwarzbauer et al., 2015, Aggestam and Giurca, 2022). Forest ecosystems sequester carbon (Verkerk et al., 2022) by storing it in trees and soils. They provide protective functions against avalanches, prevent erosion, offer flood control, play an important role in the provision of water resources, offer spaces for recreation and eco-tourism, and more.

However, balancing the use of wood and the use and protection of forests' other ecosystem services is not without controversy. Significant trade-offs exist between industrial wood use and the provision of FES, such as biodiversity protection, recreation and carbon storage. Moreover, there are varying perspectives on how best to use wood for climate mitigation. For instance, harvested wood can replace fossil-based materials and it stores carbon throughout its lifecycle, creating long-term climate benefits (Lindner et al., 2017, Hurmekoski et al., 2019, Hetemäki et al., 2020). Yet, this view competes with arguments favouring high forest carbon stocks, emphasising the need to leave trees standing to maximise carbon sequestration in situ.

Photo by: leszekglasner on Adobe Stock

The discourse around forest and wood use unfolds within a highly complex policy landscape, characterised by competing policy objectives and diverging stakeholder demands and interests (Aggestam and Pülzl, 2018, Lazdinis et al., 2019), Lindhal et al. 2023). It is also driven by European political programming such as the European Green Deal (EC, 2019), which put forward ambitious goals for biodiversity conservation and climate change action.

However, the role of forests is not described within the Green Deal, nor does it take account of industrial interests (Aggestam and Giurca, 2021). Another example concerns the role of wood in a bioeconomy. Forests face competing demands for forest management and wood use along different value chains, such as furniture production and wood construction (Schulz et al., 2022). Wood products, including sawn timber, pulpwood, wood-based textiles, chemicals, etc, must compete with alternative materials such as plastics, steel, concrete, cotton and fossil-based textiles. This competition necessitates reconciling diverse as well as opposing stakeholder interests, which are evident in many EU policy areas, across industries, countries and sectors (Winkel and Sotirov, 2016, Korhonen et al., 2018, Purkus et al., 2018, Aggestam and Pülzl, 2018).

For this study, the ***wood-based sector*** *includes any industry or sector that relies primarily on wood or wood-based products. These are industries based on materials such as roundwood, sawn wood, softwood, pulpwood, plywood, veneers, wood chips and pulp.*

Given this complex background there is significant value in examining the EU policy framework that shapes the use of wood, and in analysing the challenges and trade-offs the wood-based sector faces. This study aims to:

- Map the EU's policy and institutional frameworks and actor landscape that constitute the EU's wood-based policy;
- Provide an overview of the regulatory landscape affecting the construction sector in the EU;
- Reflect on how policy processes can better support wood use while balancing competing demands.

Photo by: marcin jucha on Adobe Stock


Photo by: agnormark on Adobe Stock

GOVERNANCE PATHWAYS FOR SUSTAINABLE WOOD POLICY

2. Governance pathways for sustainable wood policy

The EU wood-based sector is characterised by interconnections between many different sectors. Unlike sectors governed by cohesive policy instruments, wood governance operates within a fragmented EU policy landscape, requiring innovative approaches to achieve alignment across varied environmental and socio-economic policy objectives and priorities (Aggestam et al., 2017).

This complexity stems, in part, from the EU's lack of explicit competence in forest policy, resulting in a patchwork of regulatory and strategic policy frameworks that influence the wood-based sector directly and indirectly (Arts et al., 2013, Pülzl et al., 2018, Lazdinis et al., 2019, Aggestam, 2025). For example, policies promoting renewable energy and bioeconomy objectives may conflict with those designed to protect and restore biodiversity and mitigate climate change.

The international focus on climate change and biodiversity loss has increased the importance of sustainable wood governance. The European Green Deal, the EU Forest Strategy and the Biodiversity Strategy for 2030 reflect the EU's efforts to align wood-based policy with broader environmental and socio-economic priorities. However, significant challenges remain, such as reconciling industrial wood use with forest restoration. The following section reimagines governance pathways by focusing on sustainability challenges, cross-sectoral coordination and stakeholder engagement. It aims to explain how wood governance functions within the EU and how it can be improved to address future demands.

Photo by: admin_design on Adobe Stock

2.1 Sustainability versus industry

The wood-based sector faces numerous challenges stemming from its multifunctional role in providing socio-economic and environmental services. For example, biomass accounts for nearly 60% of the EU's total renewable energy consumption while hosting 80% of Europe's terrestrial biodiversity (Muys et al., 2022, Jonsson and Sotirov, 2025).

This dual role of a forest as an economic resource and biodiversity hotspot presents significant governance challenges. These challenges are amplified by the fragmented nature of EU wood-related policies, which intersect across sectors such as biodiversity, climate action and rural development.

These competing demands demonstrate the need for an approach that prioritises sustainability without undermining the economic viability of wood-based industries. Key areas of concern include reconciling the industrial demand for wood with the need to protect or restore forests and their ecosystem services, addressing policy inconsistencies that prevent coherent governance, and managing conflicting priorities between stakeholders. Recognising these challenges is critical to understanding the governance frameworks that affect wood use and forest management in Europe.

Photo by: Andrei Merkulov on Adobe Stock

What do we need to balance industrial demand for wood products with commitments to biodiversity, climate change and rural development?

Manage competing land uses

Forests are increasingly expected to sequester carbon while supplying raw materials for renewable energy and bio-based industries. For example, EU climate goals encourage using wood as a renewable energy source, supported by the Renewable Energy Directive (RED III) (Directive, 2009/28/EC, 2018/2001, 2023/2413), which promotes biomass energy. However, this can conflict with the EU Biodiversity Strategy's goals to expand protected areas and limit forest exploitation (EC, 2020a).

Ensure policy coherence

The fragmented nature of EU wood-related policies often results in conflicting objectives. For instance, the EU Forest Strategy prioritises afforestation and Sustainable Forest Management (SFM) (EC, 2021f), while the Common Agricultural Policy (CAP) includes financial incentives that may lead to land-use changes unfavourable to biodiversity (Regulation, 2021/2115, 2021/2116, 2021/2117). Similarly, the new Nature Restoration Law focuses on ecological recovery but could restrict wood harvesting practices essential for industrial supply chains (Regulation, 2024/1991).

Mitigate stakeholder conflicts

Diverse stakeholder groups, ranging from environmental NGOs advocating for conservation to industry representatives prioritising resource utilisation, often have conflicting priorities. For example, trade regulations such as the EU Timber Regulation (EUTR) aim to combat illegal logging but place additional compliance burdens on industries (Regulation, 995/2010, 2023/1115). To mediate competing interests, addressing these conflicts requires transparent governance mechanisms, such as the Civil Dialogue Group on Forestry and Cork.

Photo by: Fokke Baarssen on Adobe Stock

2.2 How does EU forest and wood governance work?

Understanding how the EU operates is vital. It helps to reveal the distribution of responsibilities and the opportunities for cross-sectoral collaboration. This section outlines the multi-level governance framework influencing wood policy, highlighting the roles of EU institutions, EU Member States (MS), and stakeholder engagement.

2.2.1 Council of the European Union

The Council of the European Union (also called the Council) serves as a central decision-making body within the EU. It brings together government ministers from all 27 member states as they represent their national interests. The Council plays a critical role in coordinating policy developments across various sectors, such as trade, environment and agriculture, reflecting the diverse priorities of its member countries. Alongside the European Parliament, it functions as one of the EU's co-legislators, making it a key institution in areas such as wood governance. Due to the EU's lack of explicit competencies in forestry, policies affecting the wood-based sector are shaped through multiple Council configurations.

The Council operates through 10 specific configurations, each focused on a particular policy area. Negotiations and discussions among MS typically occur within working groups, the Committee of Permanent Representatives (COREPER) framework and other specialised council formations. These meetings aim to build consensus on legislative proposals, ensuring that they accommodate the varied interests of all MS.

The Working Party on Forestry is a preparatory body within the Council. The main forest / wood-related Council coordinating bodies are for Agriculture and Fisheries, Environment, and Trade and Fisheries.

Working Party on Forestry (WPF)

instrumental in shaping EU positions on global forest governance forums, including Forest Europe, the United Nations Forum on Forests (UNFF) and the FAO's Committee on Forestry (COFO). Its key roles include leading international negotiations on SFM principles: assisting in drafting and refining EU regulations, such as the Forest Law Enforcement, Governance and Trade (FLEGT) initiative and the EUTR; and coordinating cross-sectoral policies to align climate action, trade and rural development objectives. For instance, in the past, its involvement in the Forest Europe process has shaped discussions on a potential Legally Binding Agreement (LBA) for forests.

Agriculture and Fisheries Council

focuses on integrating forestry into rural development, including promoting agroforestry systems and funding afforestation initiatives through the CAP.

Environment Council

tackles biodiversity conservation and climate mitigation by aligning wood-related policies with broader environmental goals, such as the EU Biodiversity Strategy.

Trade and Industry Council

ensures policy coherence between trade regulations such as the EUTR and measures supporting sustainable wood-based industries.

Photo by: respiro888 on Adobe Stock

The Council Presidency rotates every six months among MS to maintain consistency in long-term planning: 2025 Poland/Denmark, 2026 Cyprus/Ireland, 2027 Lithuania/Greece, 2028 Italy/Lativa, 2029 Luxembourg/Netherlands, 2030 Slovakia/Malta. A trio presidency system provides strategic continuity over time, e.g. 2025-26 Poland, Denmark, Cyprus.

2.2.2 European Commission

The European Commission (often called the Commission) functions as the executive branch of the EU. It has the exclusive authority to propose legislation, although the European Parliament can formally request proposals from the Commission under Article 225 of the TFEU. The Commission establishes strategic objectives and annual priorities, drafts legislative initiatives, oversees the implementation of EU policies, and manages the allocation of EU funds. The term "Commission" refers to the institution and the College of Commissioners, which serves as its political leadership. This College comprises 27 Commissioners, one from each MS, with each Commissioner supported by a dedicated Cabinet responsible for implementing their portfolio's objectives.

The Commission's operations are organised through various Directorates-General (DGs), each focusing on a specific policy area.[1] Additionally, executive agencies manage specific EU programmes, while service departments handle administrative responsibilities. Although the EU does not hold explicit competence over forests or wood policies, several DGs – including DG Environment, DG Agriculture and Rural Development, DG Energy, DG Trade, DG Internal Market, Industry, Entrepreneurship and SMEs, DG Climate Action, DG Regional Policy, and DG Research[2] – play vital roles in shaping and overseeing policies that impact the wood-based sector.

Through the Standing Forestry Committee (SFC) and Expert Groups, the Commission facilitates the implementation of non-legal and binding policy instruments. It ensures alignment between EU MS and broader EU policy objectives.

Standing Forestry Committee (SFC)

Chaired by the Commission, it serves as a forum for technical expertise and policy development. Its primary objectives include:

- *Policy development*, advising on measures related to rural development, environmental protection and climate action. Examples include afforestation programmes under the CAP and carbon sequestration initiatives;
- *Knowledge exchange*, acting as a platform for EU MS and Commission representatives to share technical expertise, identify best practices and address emerging challenges in forest management.

The SFC illustrates the EU's approach to forest governance through strategic non-legally binding policy instruments, focusing on voluntary collaboration rather than binding regulations.

Photo by: keremberk on Adobe Stock

[1] Commission departments and executive agencies: https://ec.europa.eu/info/departments (accessed 14.01.25).
[2] Commission DGs and Services: https://cordis.europa.eu/article/id/6335-commission-directoratesgeneral-and-services (accessed 14.01.25).

Forest and Forestry Stakeholder Platform

Launched in 2023, this platform represents the Commission's effort to engage stakeholders in policy design and implementation. Its activities focus on:

- *Stakeholder collaboration,* involving representatives from NGOs, industry groups, and academia to provide different perspectives on forest policy;
- *Implementation support,* facilitating the rollout of the third EU Forest Strategy (EC, 2021f) by addressing technical and operational challenges;
- *Policy impact assessment,* tracking developments in forestry and evaluating the effects of policy measures on the environment and the wood-based sector.

The platform has already impacted guidelines for biodiversity-friendly afforestation and closer-to-nature forest management, ensuring alignment with the EU Green Deal.

Inter-Service Group on Forestry

Established within the European Commission in 2001, this serves as a mechanism for intra-institutional collaboration. Its main function is coordinating across Directorate-Generals of the Commission responsible for wood-related policies, principally ensuring a unified approach to EU wood governance. Key functions include:

- *Policy coordination,* facilitating coherence between policies in areas such as rural development, environmental protection and climate action;
- *Platform for dialogue,* enabling DGs to share opinions and technical expertise, reducing fragmentation and promoting integrative decision-making;
- *Enhanced governance,* helping align EU wood-related policies with broader goals, such as those outlined in the Biodiversity Strategy and RED III.

2.2.3 European Parliament

The European Parliament (EP) is the EU's only directly elected institution, with its members elected every five years in the 27 MS. The current EP has 720 members. A President, elected by the Members of the European Parliament (MEPs) for 2.5 years, represents the Parliament and oversees its operations. Since the Lisbon Treaty came into effect, most EU legislation has been decided jointly by the EP and the Council through ordinary legislative procedures, giving the Parliament equal decision-making power with the Council. Additionally, the Parliament works alongside the Council to approve the EU budget.

The Parliament works through specialised standing committees, which are central to examining legislation, proposing amendments and overseeing EU policies. Currently, 24 committees are active,[3] with membership ranging from 25 to 88 MEPs per committee. Key committees relevant to forest-related issues include the Committee on Agriculture and Rural Development, the Committee on the Environment, Public Health and Food Safety, and the Committee on Regional Development.

[3] Parliament Committees: https://www.europarl.europa.eu/committees/en/about/list-of-committees (accessed 14.01.25).

2.2.4 Other committees and Expert Groups

Industry representatives interact with the European Commission primarily through formal and ad hoc mechanisms, enabling collaboration and communication on wood-related policies that affect their sector. These interactions occur within established committees and expert groups, offering valuable technical and strategic insights.

Expert Group on Forest-Based Industries and Sectorally Related Issues

Established in 2014, this group serves as a platform for cooperation between wood-based industries, EU MS authorities and the European Commission. Focus areas include facilitating dialogue and providing legal, economic and technical advice, ensuring that cross-cutting issues are addressed to align policies with industry needs and EU objectives, and supporting the development of legislation that influences the wood-based sector, such as policies promoting sustainable industrial practices. The group has played a role in advising on strategies to improve supply chain resilience and enhance the competitiveness of the wood-based sector during global market fluctuations.

Advisory Group on Construction Products

Focuses on woodworking and construction, particularly given the construction industry's significant role in driving demand for sawnwood and other wood products. Key contributions include advising on matters related to the Construction Products Regulation (Regulation, 305/2011), developing standards and guidelines to promote sustainable and efficient wood use in construction, and advancing green building initiatives. The group has supported the creation of a harmonised framework for sustainable wood certification in construction projects across member states.

Beyond these groups, other committees and working groups[4] address specific technical, environmental, or trade-related issues affecting wood-based industries (see Table 1 for an overview). Examples include advisory and trade-focused working groups that provide specialised guidance on compliance and market expansion opportunities and temporary working groups, such as for developing a proposal for a new EU framework for forest monitoring.[5]

[4] Register of Commission Expert Groups: https://ec.europa.eu/transparency/expert-groups-register/screen/home?lang=en (accessed 10.01.25).
[5] https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&groupID=103253 (accessed 10.01.25).

Table 1.
Expert groups and others (see Aggestam 2025)

Expert groups led by DG Environment	
Commission Expert Group/Multi-Stakeholder Platform on Protecting and Restoring the World's Forests.	Advises on legislative proposals, policy initiatives, delegated acts and implementation of EU legislation related to forest protection and restoration, including the EU Timber Regulation and FLEGT Regulation.
EU Biodiversity Platform (sub-group: Working Group on Green Infrastructure and Restoration)	Supports the implementation of the EU Biodiversity Strategy for 2030.
Expert Group on Forest Fires	Monitors forest fire trends across Europe and identifies effective response strategies.
Informal Green Public Procurement Advisory Group	Promotes green public procurement and contributes to legislative preparation.
Working Group on Forests and Nature	Sub-group of the EU Biodiversity Platform (EUBP) that provides advice and expertise concerning forest ecosystems and their management.

Statistical and industry-related groups	
Expert Group on Forestry Statistics (led by Eurostat)	Facilitates knowledge sharing, experience exchange and dissemination of good practices among statistical institutions.
Commission Expert Group "Industrial Forum" (led by DG Grow)	Encourages best practice exchanges to drive industrial ecosystem transformations.

Council of the EU Working Groups	
Working Group on Technical Harmonisation	Reviews legislation to eliminate intra-EU trade barriers for goods, including topics like motor vehicles.
Working Party on Civil Protection (PROCIV)	Develops measures for disaster prevention, preparedness and response.

European Union

Relevant Directorate-General	Executive agencies
• Agriculture and Food (DG AGRI) • Climate, Net Zero and Clean Growth (DG CLIMA) • Competition (DG COMP) • Employment, Social Affairs and Inclusion (DG EMPLOYMENT) • Energy and Housing (DG ENER) • Environment, Water Resilience and Competitive Circular Economy (DG ENV) • Eurostat • Prosperity and Industrial Strategy (DG GROW) • Neighbourhood and Enlargement Negotiations (DG NEAR) • Regional and Urban Policy (DG REGIO) • Startups, Research and Innovation (DG RESEARCH) • Trade and Economic Security (DG TRADE)	• European Research Executive Agency • European Research Council Executive Agency • European Innovation Council and Small and Medium-sized Enterprises Executive Agency • European Climate, Infrastructure and Environment Executive Agency • Consumers, Health, Agriculture and Food Executive Agency **Forest-relevant groups** • Standing Forestry Commission (SFC) • Working Party on Forestry • Expert group Forest and Forestry Stakeholder Platform • Expert Group on Forest-based Industries and Sectorally Related Issues **Other** • European Environment Agency (EEA) • European Environmental Bureau (EEB)

Committee of the Regions

It is an advisory body composed of representatives from regional and local authorities across all MS. It serves as a formal channel for regions and cities to express their views on EU policymaking, ensuring that local and regional perspectives are considered in the legislative process. The Committee must be consulted on proposals that may directly impact regional and local governments, particularly in areas such as regional development, environment and social policy.

One of its significant contributions includes providing an official opinion on the EU Forest Strategy for 2030 (EC, 2022f), emphasising the importance of aligning forest management practices with local and regional priorities. Additionally, the Committee plays a role in discussions related to the allocation of structural funds, which substantially impact wood-related projects, such as reforestation, biodiversity preservation and sustainable land use. The Committee helps bridge the gap between European objectives and regional realities by facilitating dialogue between the EU institutions and subnational authorities.

European Economic and Social Committee

It is an advisory body representing diverse interest groups, including employers, workers, and civil society organisations. Its role is to ensure these stakeholders have a voice in EU policymaking.

As mandated by the Treaties, the Committee must be consulted on specific legislative proposals, especially those related to economic and social policies. It can also issue opinions on its own initiative, providing valuable insights into emerging issues.
For example, the Committee has issued an opinion on the role of the Amazon rainforest and the importance of tackling deforestation globally.

By offering perspectives from civil society and economic actors, the Committee shapes policies that balance environmental protection with economic and social priorities. This input is particularly relevant to the wood-based industries, as the Committee advocates for fair trade practices, sustainable resource use and integrating social considerations into EU environmental policies.

2.2.5 Informal coordination mechanisms

In addition to formal structures within the Council and the European Commission, wood governance benefits from informal coordination mechanisms designed to enhance coherence and collaboration.

Informal EU Forestry Director-General Meetings

These biannual informal meetings, organised by the rotating EU presidencies, serve as a platform for strategic dialogue on the role of forests in current policies and strategies. These meetings are attended by the DGs responsible for forestry from all 27 MS, representatives from the European Commission and selected stakeholder organisations. The focus is on discussing emerging challenges, such as forest resilience to climate change and balancing biodiversity goals with industrial demand. It also provides opportunities for exchanging views to align EU MS priorities and address cross-border forestry issues. These meetings offer a unique space for informal consensus-building, supplementing the formal decision-making channels.

Coordination in implementing the EU Forest Strategy

The EU Forest Strategy's non-binding nature requires strong coordination mechanisms to ensure effective implementation. The SFC and Inter-Service Group on Forestry facilitate formal and informal information exchanges and technical support to support implementation. Key initiatives include accelerating forest-related innovations, such as digital monitoring tools for SFM, and collaboration on strategic initiatives such as the proposed forest monitoring law, ensuring consistency with EU decision-making procedures involving the Council and European Parliament.

2.2.6 Who is responsible for what?

The Lisbon Treaty defines the division of responsibilities between the EU and its MS, categorising competencies into three main types.

Box 1.
Type of competences

Exclusive competences

- Only the EU can legislate and adopt binding decisions in these policy areas.
- MS can act only if explicitly authorised by the EU.
- It includes the customs union, conservation of marine biological resources (part of fisheries policy), establishing rules for the effective functioning of the internal market, the European Monetary Union and common commercial policy.

Shared competences

- Both the EU and MS can legislate.
- MS can exercise their legislative powers only when the EU has chosen not to act in these areas.
- It includes the internal market, social policy, economic, social and territorial cohesion, public health, agriculture and fisheries, environment, transport, consumer protection, area of freedom, security and justice, energy and trans-European networks.

Supporting competences

- The EU may assist, coordinate, or complement the MS initiatives.
- The EU cannot legislate or impose legally binding measures in these domains.
- It includes human health, culture, tourism, industry, civil protection, administrative cooperation, education, vocational training, youth and sport.

Forests are excluded from the exclusive and shared competencies of the EU, the only exception being cork and some non-wood forest products (NWFP). However, many different initiatives are set because of other policies. In other words, the main aim of legal and non-legal policy instruments is to protect the environment (e.g. protecting forests), store carbon (in forests) or trade products (wood-based products) within and outside of the Union.

2.2.7 Policymaking procedures

The EU legislative process is multi stage and offers opportunities for stakeholders to influence specific priorities at various points. Understanding the procedures and identifying the key players at each stage is essential for effective engagement.

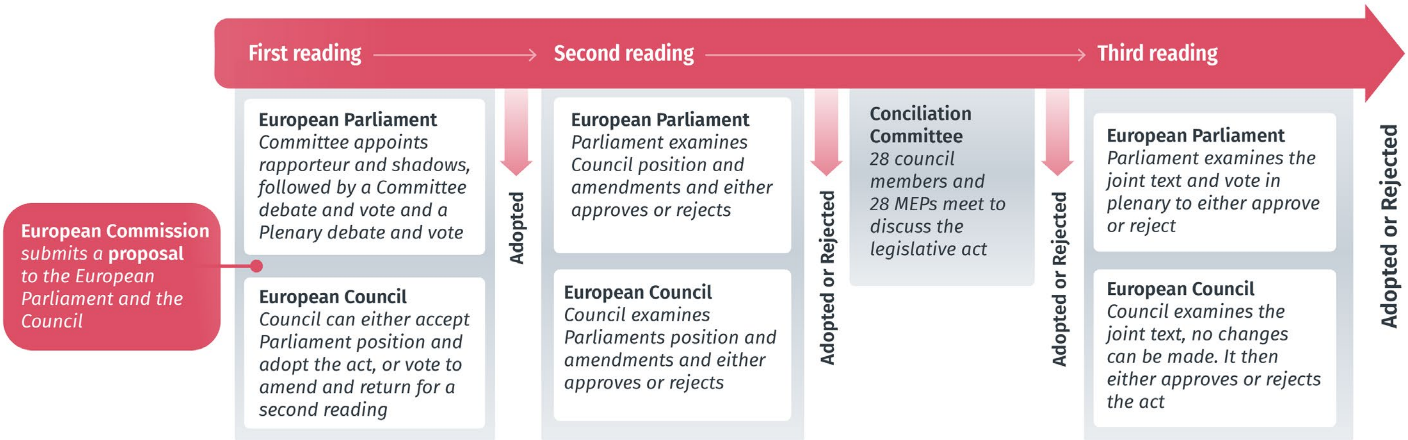


Figure 1. Multistage EU legislative process
Source: own figure

Ordinary legislative procedure

The ordinary legislative procedure, formerly known as co-decision, is the primary decision-making process in the EU (Figure 1). It applies to most policy areas under the TFEU, ensuring that the Parliament and the Council of the EU have equal roles in the adoption of legislation. Parliament has significant powers in this process, including the right to veto proposals. The ordinary legislative procedure consists of up to three stages once the European Commission has issued a proposal.

First Reading: the Parliament and the Council review the proposal independently and may suggest amendments. If agreement is reached at this stage, the proposal is adopted.

Second Reading: if agreement is not reached, the Parliament and the Council further review and refine the proposal. Amendments can still be introduced, but a common position becomes the focus.

Conciliation Committee and Third Reading: if disagreements persist, a Conciliation Committee, composed of representatives from both the Parliament and the Council, works to find a compromise. The final text is then submitted for a third reading in both institutions.

In practice, after the first or second reading, most legislation is finalised through so-called trilogues, which are informal negotiations involving representatives of the Parliament, the Council and the Commission. These trilogues aim to expedite the process by achieving a consensus before formal adoption. Figure 1 describes the process according to the Treaties of the European Union.

Box 2.
Policy instruments

Formulating a **legally binding instrument** implies a strong political commitment as it requires acceptance and legislative approval by MS and the European Parliament. However, legal enforcement mechanisms are not always robust, and the strength of implementation depends on how these mechanisms are designed (Steurer, 2013). For example, legally binding policies, such as trade regulations for wood products, may lack the capacity to ensure full compliance across MS.

Strategic policy instruments are voluntary and do not require legislative implementation at the MS level. Despite their non-binding nature, these instruments can set strategic priorities for timber production, sustainable wood use, or forest restoration, influencing policy action and investment. For instance, strategies promoting the circular bioeconomy may encourage MS to adopt practices that increase the use of wood in construction or energy, even without direct legal mandates.

Photo by: Emvats on Adobe Stock

Other legislative procedures

- *Consent procedure:* in the consent procedure, the Parliament must either approve or reject a proposal without making amendments. Approval requires an absolute majority of votes, and rejection acts as a veto. This procedure applies to specific areas such as international agreements, EU membership applications and budgetary matters with significant financial implications.
- *Consultation procedure*: in this procedure, the Parliament provides its opinion on legislative proposals, but the Council is not bound to follow it. The consultation procedure is now limited to specific areas, such as competition law and exemptions under the internal market.

Steps in the legislative process

- *Proposal development:* the Commission is responsible for drafting legislative proposals, which are often informed by public consultations, expert input and stakeholder feedback. Proposals are accompanied by an explanatory memorandum and, where relevant, an impact assessment that evaluates the proposed measure or instrument's economic, environmental and social implications.
- *Deliberation and adoption:* once a proposal is submitted, it undergoes scrutiny by both the Parliament and the Council. The Parliament's committees play a crucial role at this stage by preparing reports and proposed amendments for plenary debates and votes. Simultaneously, Council working groups led by the Presidency deliberate on the proposal to build consensus among MS.
- *Implementation and monitoring:* after adoption, the legislation is transposed into national law by MS (for directives) or directly applied (for regulations). The Commission oversees implementation and compliance, with periodic reviews or evaluations to assess effectiveness. During this process, expert groupings in the Commission may support the implementation.

Sections 5 provides more details about monitoring EU policymaking processes, including opportunities to influence wood-relevant policymaking.

Photo by: Tuomas Lahtinen on Adobe Stock

2.3 Which are the main private sector actors and representative organisations?

The forest and wood value chains are supported and influenced by a wide range of stakeholders, each bringing their perspectives and interests to the policymaking process. These stakeholders range from industry associations and non-governmental organisations (NGOs), to local and regional governments.

Stakeholder engagement with EU institutions is multifaceted, involving advocacy, consultation and partnership. While their objectives may vary, they commonly seek to influence EU policy in ways that reflect their interests and values. For instance, industry associations often aim for regulatory frameworks that support economic growth and competitiveness, while environmental NGOs prioritise the conservation of natural habitats and sustainable resource use. The outcomes these stakeholders pursue shape the forest value chain and may have broader implications for socio-economic and environmental policies across the EU.

Identifying relevant stakeholder groups and reviewing the qualitative issues influencing the wood-based sector is an important step to understanding the sector's key issues, players and dynamics. Stakeholder groups refer in this instance to European and/or international industrial interest groups (e.g., representatives of paper and pulp), mainly based out of Brussels. The focus here is on presenting a few industry-relevant actors representing paper and pulp, furniture, construction, sawnwood, energy and agriculture.

Photo by: Pellinni on Adobe Stock

Confederation of European Paper Industries (CEPI)[6]

is the pan-European association representing the forest fibre and paper industry. It has 18 national associations and represents around 495 companies that operate more than 900 pulp and paper mills across Europe, producing paper, cardboard, pulp and other bio-based products. CEPI is the leading association representing the paper industry in Brussels. It has (as compared to many of the other representative organisations) a significant number of staff and resources at its disposal to lobby for the wood-based industries. It can, as such, be considered to be an important actor.

New European Bauhaus initiative[7] – Wood4Bauhaus[8]

Recently the wood-based sector has launched the Wood Sector Alliance for the New European Bauhaus (Wood4Bauhaus). It aims to establish an open platform focusing on the transformation of the building sector into a circular model and share good practices about the circular economy and green buildings, as well as advancing the use of nature-based and innovative materials in the construction sector.

The alliance has been initiated by several umbrella organisations, including **InnovaWood**, the **European Panel Federation** (EPF), the **European Confederation of Woodworking Industries** (CEI-Bois), the **European Federation of Building and Woodworkers** (EFBWW) and the **European Organisation of the Sawmill Industry** (EOS).

European Confederation of Woodworking Industries (CEI-Bois)[9]:

supports the interests of the European woodworking industries, representing 22 European and national organisations from 16 countries and more than 180,000 companies, to promote wood and wood-based products. CEI-Bois mainly operates from its secretariat in Brussels, supported by many working groups dealing with sustainability, social affairs, construction, innovation and trade issues.

European Federation of Building and Woodworkers (EFBWW)[10]

focuses on representing workers from the building, woodworking, forestry, allied industries and trades. The EFBWW has 76 affiliated unions in 34 countries and represents around 2,000,000 members. The EFBWW is based out of Brussels and is a member organisation of the European Trade Union Confederation (ETUC)[11] as well as working in close cooperation with the Building and Woodworkers' International (BWI).[12]

6 https://www.cepi.org/about-cepi/organisation/.
7 https://europa.eu/new-european-bauhaus/partners-0/partners_en.
8 https://wood4bauhaus.eu/.
9 https://www.cei-bois.org/.
10 https://www.efbww.eu/.
11 https://www.etuc.org/en.
12 https://www.bwint.org/.

European Organisation of the Sawmill Industry (EOS)[13]

is another Brussels-based association representing the interests of the European sawmilling sector on an EU and international level. EOS represents manufacturing sawn boards, timber frames, glulam, decking, flooring, joinery, fencing and other wood products. It covers around 35,000 sawmills, representing 77% of the European sawnwood output, and 12 countries.

European Panel Federation (EPF)[14]

represents the European manufacturers of particleboard, MDF, OSB, hard and softboard, plywood and the supplier industries. EPF is also based out of Brussels, and it has members in 25 countries. It is an active participant in the International Organization for Standardization.

European Furniture Industries Confederation (EFIC)[15]

is the confederation representing furniture industries and manufacturers in Europe, which employs about one million workers in close to 120,000 enterprises, mainly SMEs, throughout the EU. EFIC currently represents around 70% of the furniture industry turnover.

Forest-based Sector Technology Platform (FTP)

The FTP[16] is one of the 38 European Technology Platforms (ETPs) dedicated to the forest-based sector. It is the meeting place for industry, forest owners and public authorities to discuss and build up a critical mass of knowledge on common research and innovation needs for the sector and make decisions for cooperation.

European Construction Technology Platform (ECTP)

The ECTP[17] is a European Seventh Framework Programme initiative to improve the competitive situation of the EU in the field of construction, covering organisations from the supply chain of the built environment.

European Construction Industry Federation[18]

supports the European construction industry, covering 33 national member federations in 29 European countries. It represents and promotes the interests of the European construction industry, and it is a recognised Social Partner representing employers in the European Sectoral Social Dialogue “Construction”.

[13] https://www.eos-oes.eu/en/index.php.
[14] https://europanels.org/.
[15] https://www.efic.eu/.
[16] https://www.forestplatform.org/.
[17] http://www.ectp.org/.

European Pallet Association (EPAL)[19]

undertakes communications and lobbying work regarding the Euro-pallet or EPAL-pallet (the standard European pallet). The association was founded in 1991 and consists of 14 National Committees and four EPAL representatives.

InnovaWood

is an umbrella organisation that integrates four European networks in the forest, wood-based and furniture industries into a more effective mechanism to support innovation in these sectors.

Analysing and understanding the interactions between organised interests (or representative organisations) and EU institutions represents a crucial dimension of the policymaking landscape in Brussels. This holds not just for the woodworking and wood-based industries, but it encompasses all relevant stakeholders. The interplay between these groups is foundational to understanding how policy is shaped and implemented across the EU. The following section delves into the principal EU stakeholder groups connected to the forest value chain, including their respective roles, and, to a certain degree, the objectives they strive to achieve.

Table 2 provides a more detailed list of representative organisations relevant to the wood-based value chain.

Photo by: ALIDA
Adobe Stock

[18] https://www.fiec.eu/.
[19] https://www.epal-pallets.org.

Table 2.
Private and public stakeholder organisations

Forest owners and foresters

- National Forest Owners Associations (covering all EU MS):
  - Portuguese Forest Owners Association
  - Association of Forest Owners from Basque Country
  - Confederation of Spanish Forest Owners
  - Association of Municipal and Private Forest Owners in the Czech Republic
  - Federation of Swedish Forest Owners Associations
- Confederation of European Private Forest Owners (CEPF)
- European Federation of Municipal Forest Owners (FECOF)
- Central Union of Agricultural Producers and Forest Owners (MTK)
- European Landowners Organization (ELO)
- European Network of Forestry Entrepreneur (ENFE)
- Union of Foresters of Southern Europe (USSE)
- European Organization of Agricultural, Rural and Forestry Contractors (CEETTAR)
- Young People in European Forests (YPEF)
- Nordic Family Forestry
- European State Forest Association (EUSTAFOR)
- Union of European Foresters (UEF)
- Committee of Professional Agricultural Organisations and General Confederation of Agricultural Co-operatives in the European Union (COPA-COGECA)
- International Family Forestry Alliance (IFFA)

Forest resources

- European Forest Nursery Association (EFNA)

Certification

- Forest Stewardship Council (FSC)
- Programme for the Endorsement of Forest Certification (PEFC)
- EU Ecolabel[20]

Trade

- National trade unions (covering all EU MS):
  - Austrian Trade Union Federation
  - Estonian Private Forest Union
  - Swedish Forest Industries Federation
  - Swedish Forest and Wood Trade Union
  - Forestry Commission Trade Unions
- European Trade Union Institute (ETUI)
- European Trade Union Confederation (ETUC)
- Timber Trade Federation

Regional and international

- UNECE Committee on Forests and the Forest Industry (COFFI)
- FAO European Forestry Commission
- Advisory Committee on Sustainable Forest-based Industries (FAO statutory body)
- United Nations Forum on Forests (UNFF)
- Forest Europe
- International Union for Conservation of Nature (IUCN)
- International Tropical Timber Organization (ITTO)
- *Secretariats:*
  - Alpine Convention
  - Carpathian Convention
  - Convention on Biological Diversity

Timber, woodworking, panels, etc.

- European Confederation of Woodworking Industries (Cei-Bois),
- European Organisation of the Sawmill Industry (EOS),
- European Panel Federation (EPF)
- European Pallet Association (EPAL)
- European Federation of Wooden Pallet and Packaging Manufacturers (FEFPEB)
- European Wood Preservative Manufacturers Group (EWPM)
- European Institute for Wood Preservation (WEI)
- European Timber Trade Federation (ETTF)
- European Organisation of Agricultural, Rural and Forestry Contractors (CEETTAR)

Construction

- European Construction Technology Platform (ECTP)
- Architects' Council of Europe (ACE)
- European Construction Industry Federation (FIEC)
- Building and Woodworkers' International (BWI)
- European Federation of Building and Woodworkers (EFBWW)
- Timber Construction Europe

Fibres, bioplastics, and textiles

- European Man-Made Fibres Association (CIRFS)
- EDANA (nonwovens and related industries)
- European Apparel and Textile Confederation (EURATEX)
- EuropaBio

Standardisation

- International Organization for Standardization (ISO)
- European Standardisation Organisations (ESO) including the European Committee for Standardization (CEN)
- European Committee for Electrotechnical Standardization (CENELEC)
- List of national standardisation agencies[21]

Paper, pulp, packaging, etc.

- Confederation of European Paper Industries (CEPI)
- Federation of the National Associations of Pulp Sellers in Western Europe (EUROPULP)
- Alliance for Beverage Cartons and the Environment (ACE)
- European Federation for Print and Digital Communication (INTERGRAF)
- International Confederation of Paper and Board Converters in Europe (CITPA)

Furniture

- European Furniture Industries Confederation (EFIC)
- European Furniture Manufacturers Federation (UEA)

[20] https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel_en
[21] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2020.104.01.0003.01.ENG

Energy

- European Biofuels Technology Platform (EBTP)
- European Sustainable Biofuels Forum (ESBF)
- European Biomass Association (AEBIOM)
- European Biomass Industry Association (EUBIA)
- European Renewable Energy Council (EREC)
- Association of European Renewable Energy (EUREC)
- European Forum for Renewable Energy Sources (EUFORES)
- Energy Efficient Buildings Association (E2BA)
- European Biogas Association (EBA)

Environmental NGOs

- Forests and the European Union Resource Network (FERN)
- Birdlife
- European Forum on Nature Conservation and Pastoralism
- Friends of the Earth
- Greenpeace
- World Wildlife Fund for Nature (WWF)
- Wild Europe
- ClientEarth
- Environmental Investigation Agency
- Forests Monitor
- Forest Peoples Programme
- Global Witness

Research and education

- European Forest Institute (EFI)
- National Council for Forest Research and Development (CONFORD)
- Forest-based Sector Technology Platform (FTP)
- International Union of Forest Research Organizations (IUFRO)
- Center for International Forestry Research (CIFOR)
- Finnish Forest Research Institute (METLA)
- Joint Research Centre (JRC)
- International Forestry Students' Association (IFSA)
- InnovaWood
- Circular Bio-Based Europe Joint Undertaking (CBE JU)
- Bio-based Industries Consortium (BIC)

Other

- European Consumer Organisation (BEUC)
- European Bioeconomy Alliance (EUBA)

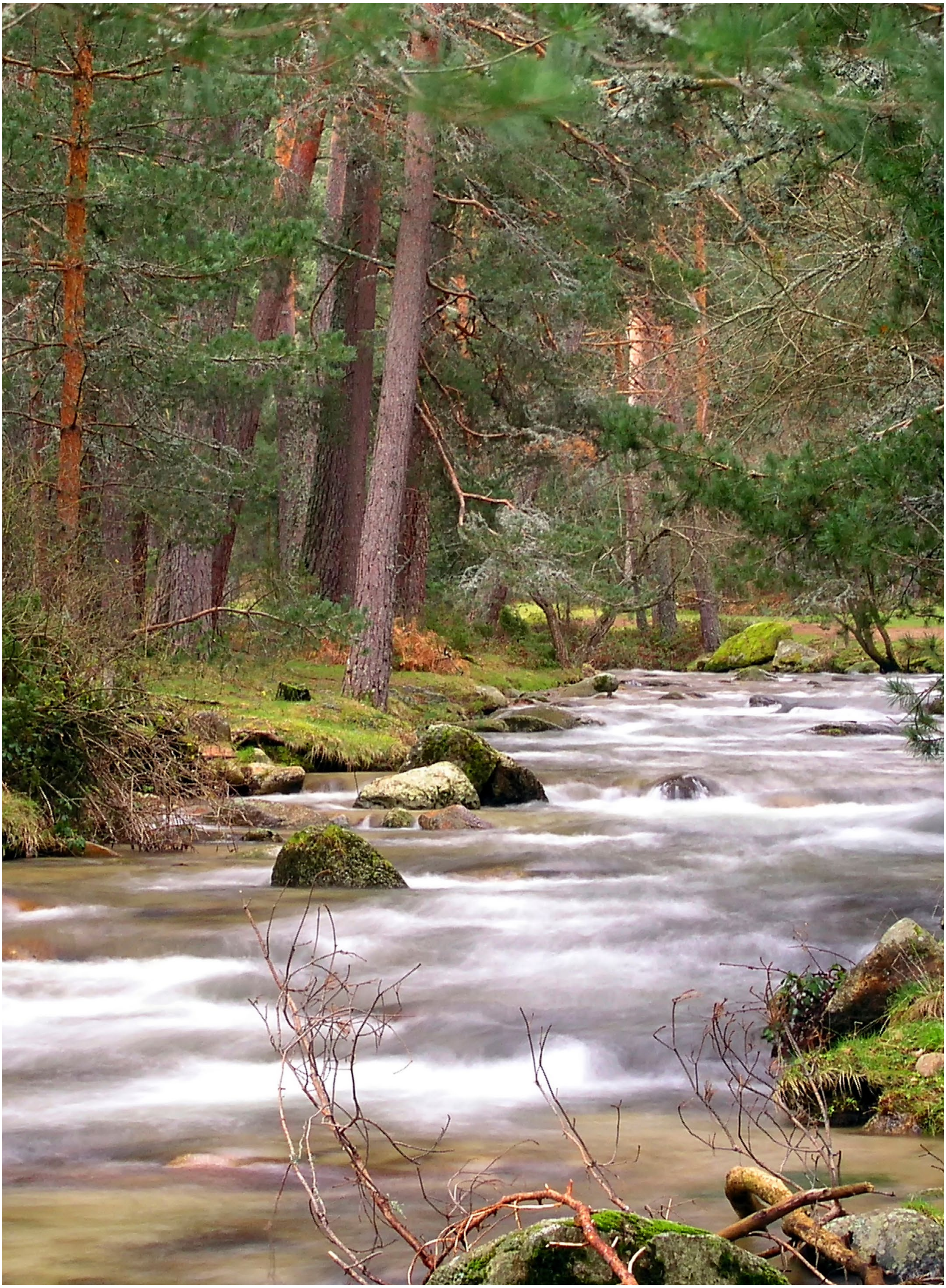


Photo by: Al Carrera on Adobe Stock

WOOD-RELEVANT POLICY INSTRUMENTS

3. Wood-relevant policy instruments

Since the 1960s, EU policies affecting wood-based sectors have mainly been rooted in agricultural and rural development policies, offering financial support for forestry-related investments (Pettenella, 1990, Arts et al., 2013, Pülzl et al., 2018, Lazdinis et al., 2019, Aggestam, 2024b). These measures – such as afforestation, fire prevention and forest road construction – indirectly shaped timber production and the wood-based sector.

The first explicit calls for an EU forest policy came in 1974 when the European Commission proposed a directive concerning forestry measures (EC, 1974). At that time, the importance of wood was clearly highlighted as all MS were net importers.

While the directive was never adopted, in 1978 the European Commission proposed a Council Resolution on several "principles of forestry policy". The resolution emphasised the need for better coordination of national forest policies to support timber production, environmental conservation and public access to forests for recreation (EC, 1978).

Although this resolution was also not adopted, many of the challenges identified during the 1970s remain relevant today, including the need for coordination, harmonisation of forest statistics and improved public awareness.

Since the EU does not have a common wood/forestry policy, formulating and implementing forest and wood-related policies fall under the principle of subsidiarity (Article 5(2) of the EC Treaty). This means that the wood-based sector is managed explicitly at the MS level. The only exceptions are certain NWFPs, such as cork and specific forest-related fruits. While these NWFPs receive explicit recognition, timber and wood products remain governed indirectly, posing challenges for any cohesive EU policy approach addressing the wood-based sector (Aggestam, 2025). The absence of a common EU wood-based policy has resulted in a fragmented governance framework where policies relevant to the wood-based industry are embedded within a broad range of policy areas. For example:

- The **Renewable Energy Directive (RED III)** promotes the use of biomass, including wood, as a renewable energy source, impacting the wood-based sector indirectly by influencing demand.

- The **Common Agricultural Policy (CAP)** provides funding for afforestation and agroforestry projects, indirectly affecting timber production and forest management.
- The **EU Biodiversity Strategy for 2030** highlights the need to protect forests as critical biodiversity hotspots, creating potential restrictions on wood harvesting practices.

The ongoing reliance on indirect policy measures underscores persistent challenges. These include inconsistencies between the objectives of different EU policy instruments and MS priorities, resulting in policy fragmentation (Wolfslehner et al., 2020, Aggestam, 2025). It further emphasises problems related to subsidiarity versus coordination. While subsidiarity allows for localised wood policies, it complicates efforts to harmonise policies and achieve coherent outcomes at the EU level (Aggestam and Pülzl, 2018, 2020, Kleinschmit et al., 2018). Moreover, there are challenges associated with balancing competing policy goals. For instance, the dual pressures of maintaining biodiversity and meeting industrial demands for wood products can result in impossible trade-offs (Rivera León et al., 2016, Biber et al., 2020, Dieterle and Karsenty, 2020).

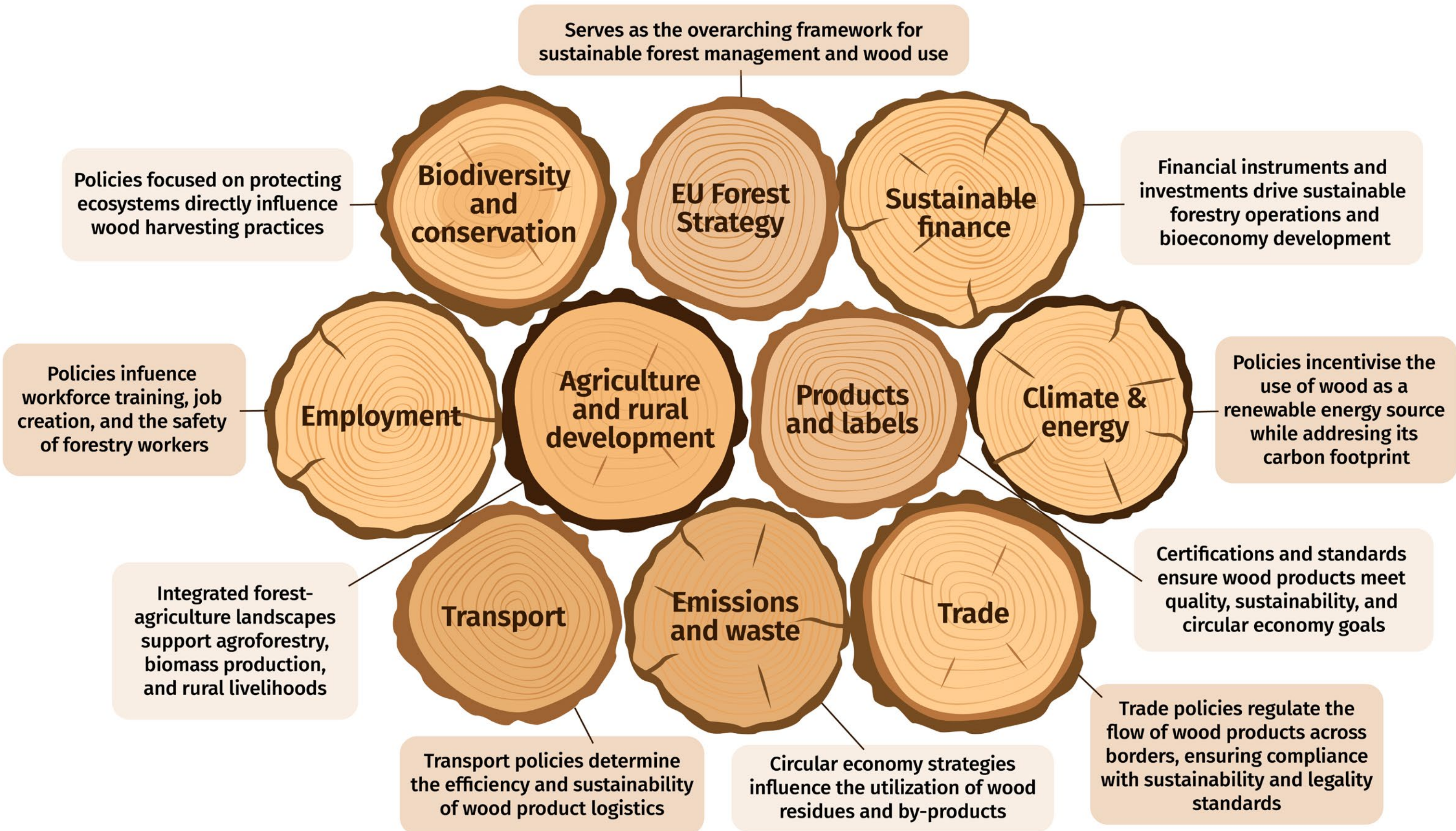


Figure 2. Mosaic of policy areas affecting wood production and use
Source: own figure

3.1 Policy overview

Wood-related policy refers to EU policy instruments that impact the wood-based sector, even if they do not explicitly target wood. In other words, this report distinguishes between policy instruments that target wood production (in forests) and the use of wood (in various value chains).

For the former, this study analyses policy instruments that encourage or hinder wood production. For the latter, wood-related policies pertain to instruments that directly influence wood-dependent industrial operations, such as the Single-Use Plastics Directive relevant to a subset of wood-based industries (Aggestam and Pülzl, 2018, 2020, Aggestam and Giurca, 2021). The wood-based industries encompass a wide and diverse range of sectors and enterprises (Figure 2). These include sawn wood, wood construction, furniture, energy, paper, plastics and textile production(Rivera León et al., 2016). Therefore, the application of policy instruments that target wood use varies depending on the specific part of the wood-based sector being examined.

Providing a precise overview of EU wood-related policy is challenging due to the absence of a unified definition or a common EU competency on forestry or wood. It is further complicated by the many sectors involved. The purpose of the following sub-sections is to provide a brief overview of strategic frameworks, regulatory instruments and economic tools affecting the wood-based sector. Moreover, although forestry is undoubtedly relevant for all wood-based industries, the focus is on wood (as a raw material) and derivatives thereof. This means that forest management and forestry will not be considered extensively.

3.1.1 Strategic frameworks

The EU's strategic approach to wood governance is represented by its forest strategies. The first **EU Forest Strategy**, adopted in 1998, represented the first coordinated forest policy approach at the Union level (EC, 1998). This was followed by the second strategy issued in 2013 and the third in 2021 (EC, 2013, 2021f, 2021a). These non-binding strategies provide a voluntary framework for MS to align their national policies with broader EU objectives. The third strategy, for example, emphasises:

- Protection, restoration and sustainable management of forests
- Multifunctionality of forests, including their role in biodiversity conservation, carbon sequestration and economic development
- Monitoring and data collection initiatives including the proposed EU Forest Observation framework
- Reforestation efforts, with a target to plant three billion additional trees by 2030, following ecological principles.

Four voluntary guidelines have been published in the framework of the third EU Forest Strategy:

- Guidelines on biodiversity-friendly afforestation, reforestation and tree planting (March 2023)
- Commission guidelines for defining, mapping, monitoring and strictly protecting EU primary and old-growth forests (March 2023)
- Guidelines for closer-to-nature forest management (July 2023)
- Guidance on the development of public and private payment schemes for forest ecosystem services (July 2023)

The **EU Biodiversity Strategy** for 2030 (EC, 2020a) also plays a critical role, with specific measures to expand protected areas and restore degraded ecosystems, including forest landscapes. These strategic frameworks align with the **European Green Deal** (EC, 2019), emphasising the importance of forests in achieving climate neutrality while fostering a circular bioeconomy.

Other strategic initiatives include the:

- **EU Strategy on Adaptation to Climate Change** (EC, 2021e): addressing forest resilience to climate change through targeted planning and funding mechanisms
- **Bioeconomy Strategy** (EC, 2018a, 2018c): encouraging innovation in wood-based industries to support sustainable economic growth.

3.1.2 Regulatory instruments

Regulatory instruments, such as the **EU Timber Regulation** (EUTR) (Regulation, 995/2010) and **Forest Law Enforcement, Governance, and Trade** (FLEGT) (Regulation, 2173/2005, 1024/2008), aim to curb illegal logging and ensure sustainable sourcing of timber. The recent **Regulation on Deforestation-Free Products** (Regulation, 2023/1115) also mandates due diligence for companies importing timber and other commodities to ensure compliance with anti-deforestation standards.

These instruments collectively shape the regulatory landscape, impacting wood availability and trade. Furthermore, the **Nature Restoration Law** (Regulation, 2024/1991) and **RED III** (Directive, 2023/2413) influence forest management by setting ambitious targets for ecological restoration and renewable energy production, which intersect with wood use.

Photo by: Srisa on Adobe Stock

3.1.3 Economic tools

Economic tools significantly shape wood-related policies, particularly through the **Common Agricultural Policy** (CAP) and various funding mechanisms. Approximately 90% of EU forest funding comes from the **European Agricultural Fund for Rural Development** (EAFRD), a component of the CAP (Regulation, 2020/2220, 2021/2115).

The CAP supports

- Afforestation and agroforestry projects
- Restoration initiatives following natural disasters or adverse weather events
- SFM practices through financial incentives.

In the latest CAP reform (2023–2027), MS are required to develop strategic plans addressing key objectives such as climate change mitigation, biodiversity protection and rural development (Regulation, 2021/2115, 2021/2116, 2021/2117).

Specific measures include:

- Investments in renewable energy production from forestry, with an expected capacity of nearly 1,560 MW across MS
- Payments for **Natura 2000** and **Water Framework Directive** (Directive, 2000/60/EC) requirements, covering 1.9 million ha of forest and agricultural land
- Innovation and knowledge exchange programmes, including the **European Innovation Partnership for Agricultural Productivity and Sustainability** (EIP-AGRI).[22]

Beyond the CAP, the **LIFE Programme** (Regulation, 2021/783) and the **EU Taxonomy for Sustainable Economic Activities** (Regulation, 2020/852) incentivise investments in sustainable forestry and wood-based industries.

The **Just Transition Fund**[23] also supports regions transitioning from carbon-intensive industries, potentially benefiting sustainable forestry initiatives.
Other economic tools include:

- **Horizon Europe:** funding research and innovation in forest monitoring, biodiversity conservation and wood-based bioeconomy[24]
- **InvestEU Programme:** mobilising private investments in sustainable forestry projects.[25]

[22] https://ec.europa.eu/eip/agriculture/content/EIPAGRIabout.html (accessed 15.01.25).
[23] https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/just-transition-fund_en (accessed 15.01.25).
[24] https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/horizon-europe_en (accessed 15.01.25).
[25] https://investeu.europa.eu/investeu-programme_en (accessed 15.01.25).

Photo by: Anton Symbiot on Adobe Stock

3.2 EU policy areas influencing wood-based industries

The following subsections provide a more detailed review of key EU policy areas and instruments that directly or indirectly affect the wood-based sector. Examining these policies reveals the interplay between regulatory, strategic and economic measures, highlighting both challenges and opportunities for the sector.

3.2.1 Protecting forests – Biodiversity and conservation policies

Biodiversity policies in the EU play an important role in safeguarding forest ecosystems and ensuring SFM practices. These policy instruments set out to balance biodiversity conservation and support the provision of wood-based goods and services, such as timber and carbon sequestration. Below, we consider some of the key instruments and frameworks.:

Frameworks and directives supporting biodiversity conservation

Biodiversity Strategy for 2030 (EC, 2020a): this strategy sets ambitious targets, including protecting 30% of EU land and sea areas, restoring degraded ecosystems and integrating biodiversity considerations into forestry policies. It serves as a comprehensive framework to halt biodiversity loss while promoting ecosystem resilience.

Habitats Directive (Directive, 92/43/EEC): this directive complements the Birds Directive and focuses on conserving natural habitats and species of EU-wide importance. It underpins the Natura 2000 network, including Special Areas of Conservation (SACs) such as old-growth forests, enhancing European biodiversity protection.

Birds Directive (Directive, 2009/147/EC): this directive, focused on conserving wild bird species, establishes Special Protection Areas (SPAs) that safeguard critical habitats, including forest areas crucial for bird populations.

Funding and restoration measures

LIFE Programme (Regulation, 2021/783): this funding mechanism supports nature conservation projects, including forest biodiversity restoration, SFM practices and the protection of forest-dependent species.

EU Nature Restoration Regulation (Regulation, 2024/1991): aiming to restore 20% of EU land and sea by 2030 and all degraded ecosystems by 2050, this regulation highlights forest biodiversity restoration as a priority. Key provisions include restoration measures targeting forest structure, connectivity, carbon stock and species diversity; indicators, such as deadwood presence, forest bird index trends and ecosystem health metrics; and articles directly relevant to forests, such as article 12 on forest ecosystem restoration and article 13 on planting three billion additional trees.

While focused on ecological restoration, these measures may affect wood availability by influencing forest management approaches. For instance, balancing restoration goals with timber production could result in stricter harvesting regulations. Moreover, despite its ambitious goals, the Nature Restoration Regulation faces significant challenges.

- **Diluted targets:** the shift from binding commitments (30%) to non-binding aims (20%) risks failing international biodiversity commitments, such as those under the Kunming-Montreal Global Biodiversity Framework (Aggestam, 2024a).
- **Weak enforcement:** European Parliament amendments have reduced enforcement mechanisms, undermining MS accountability.
- **Conflicting restoration approaches**: debate persists over whether restoration should prioritise local tree populations or use climate-adapted restoration strategies. Research shows that relying solely on local populations could reduce forest carbon sinks in the long term (Chakraborty et al., 2024).

Photo by: Antony Weerut on Adobe Stock

Cross-sectoral implications

EU biodiversity policies are closely linked to forests' role in providing goods and ecosystem services. Their implementation affects **timber harvesting** (e.g., ensuring sustainable practices while maintaining biodiversity objectives), **forest resilience** (e.g., enhancing resilience to climate risks, such as pests, diseases, and extreme weather) and other **ecosystem services** (e.g., strengthening recreational opportunities, human health benefits and natural hazard protection). Challenges in implementation, enforcement and balancing conservation with socio-economic needs could influence the availability of wood and the broader role of forests.

3.2.2 Protecting forests – climate and energy policies

EU climate and energy policies significantly impact the wood-based value chain, presenting both opportunities and challenges. These policy instruments aim to address global climate goals, enhance renewable energy use and ensure SFM while addressing trade-offs between conservation and wood use.

Frameworks linking climate and energy

European Green Deal (EC, 2019) and **Fit for 55 Package** (EC, 2021d): central to the EU's climate ambitions, these initiatives aim to reduce net greenhouse gas (GHG) emissions by at least 55% by 2030 and achieve climate neutrality by 2050. Binding targets include renewable energy expansion, increased energy efficiency and enhanced natural carbon sinks, which directly affect forest management and wood-based industries.

European Climate Law (Regulation, 2021/1119): (Regulation, 2021/1119): establishes a legally binding framework for achieving climate neutrality by 2050, requiring MS to collectively reduce emissions and enhance carbon sequestration in forests. This dual goal influences harvesting practices to balance emissions reductions with sustainable wood supply.

Land Use, Land Use Change and Forestry (LULUCF) Regulation (Regulation, 2018/841): this regulation sets stringent commitments for compensating land-use emissions with CO2 removals. The revised regulation introduces accounting rules for biomass use, benchmarks for forest reference levels, and a 2030 removal target of 310Mt CO2e, emphasising improved monitoring and compliance (Regulation, 2023/839).

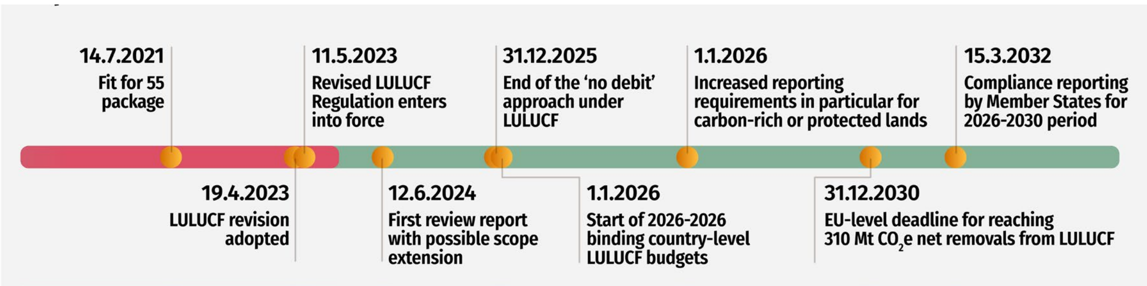


Figure 2. **LULUCF Regulation implementation timeline.**
Source: EPRS (2023c)

Renewable energy and decarbonisation efforts

Renewable Energy Directive (Directive, 2009/28/EC, 2018/2001, 2023/2413): RED III establishes a 42.5% target for renewable energy in EU energy consumption by 2030, incentivising biomass use, including wood. While promoting renewable fuels, RED III has faced criticism for insufficient safeguards ensuring sustainable biomass production and carbon accounting. regulation introduces accounting rules for biomass use, benchmarks for forest reference levels, and a 2030 removal target of 310Mt CO2e, emphasising improved monitoring and compliance (Regulation, 2023/839).

Figure 3. **Renewable Energy Directive implementation timeline.**
Source: EPRS (2023d)

Biomass Action Plan (EC, 2005, 2010): while non-binding, this plan promotes biomass as an alternative energy source, shaping demand for wood-based bioenergy and impacting the raw material supply for other uses.

Energy Efficiency Directive (Directive, 2012/27/EU, 2023/1791): this directive sets ambitious energy reduction targets of 11.7% by 2030, influencing energy use across industries, including wood-based sectors. These reductions impact energy-intensive operations and promote efficiency in wood processing and use.

Energy Performance of Buildings Directive (Directive, 2024/1275): this directive aims to decarbonise buildings by 2030, creating opportunities for wood-based construction materials. It focuses on zero-emission new buildings and retrofitting poorly performing structures, promoting the use of renewable and sustainable materials such as wood.

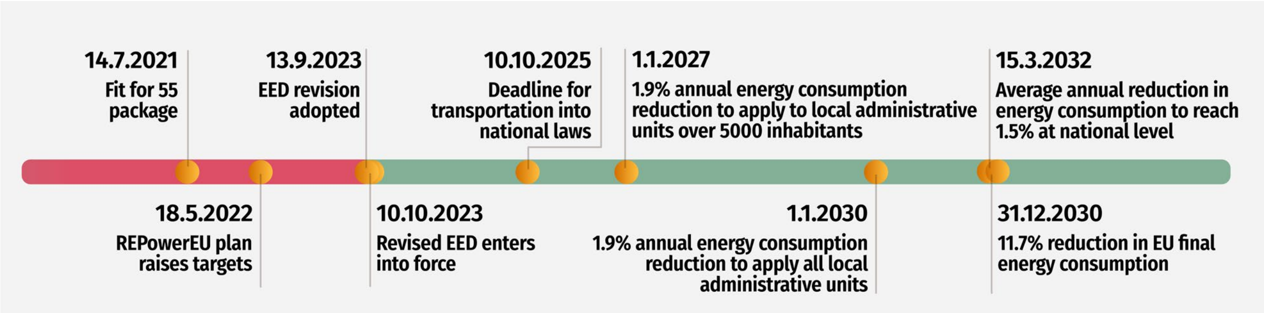


Figure 4. Revised Energy Efficiency Directive (EED) implementation timeline.
Source: EPRS (2023e)

Carbon pricing and certification mechanisms

Carbon Border Adjustment Mechanism (CBAM) (Regulation, 2023/956): this regulation introduces a carbon pricing system for imported goods, levelling the playing field for EU industries, including wood-based products, while preventing carbon leakage.

Certification for Carbon Removal Regulation (EC, 2022g): establishes the EU’s first voluntary framework for certifying carbon removals, including carbon farming and long-term storage in wood products. The framework incentivises sustainable forestry practices and wood utilisation in carbon-storing applications such as construction.

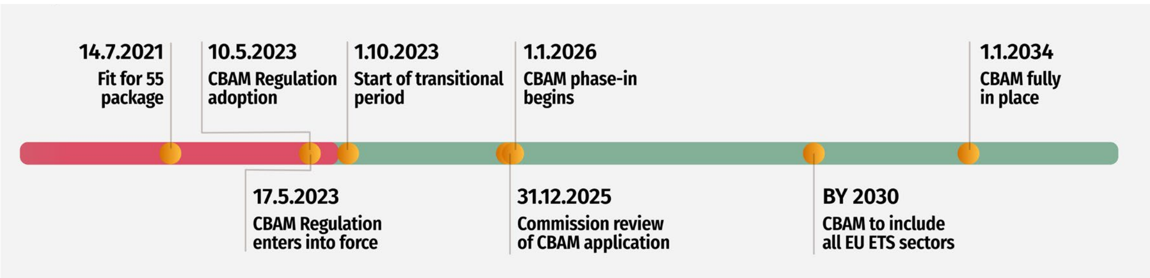


Figure 5. Carbon Border Adjustment Mechanism (CBAM) timeline
Source: EPRS (2023a)

Opportunities, challenges, and trade-offs

Policies encouraging biomass for renewable energy, such as RED III, increase competition for wood as a raw material, potentially driving up prices and limiting availability for traditional uses. Moreover, the dual demand for forests as carbon sinks and biomass sources creates tension. While forest restoration and carbon farming can limit short-term wood availability, long-term investments in resilient forests may stabilise the wood supply. It can also be noted that existing frameworks, such as RED III and LULUCF, have been criticised for insufficient clarity on sustainable biomass production and carbon accounting, suggesting the need for improvements in transparency and enforcement.

EU climate and energy policies open new avenues for the wood-based sector.

- **Wood promotion:** directives such as the Energy Performance of Buildings Directive promote wood as a sustainable building material, supporting long-term carbon storage.
- **CO_2 technologies:** initiatives under the EU Industrial Carbon Management Strategy (2024/62) encourage investment in CO_2 capture, storage and use technologies, presenting growth opportunities for innovative wood-based solutions.
- **Energy costs:** while energy legislation affects energy costs, it also incentivises efficient use of renewable energy within the wood sector.

EU climate and energy policies underscore the critical role of forests in achieving climate goals while driving demand for renewable energy and sustainable materials. Striking a balance between conservation and use will require enhanced governance, innovative practices and robust safeguards to ensure forests remain productive and resilient.

3.2.3 Financing forests – agriculture and rural development policies

The CAP is a key policy tool for advancing forest-related goals, offering financial incentives and subsidies tailored to MS priorities. The CAP and EAFRD finance forest-related initiatives within the EU, driving SFM, rural development and climate resilience.

Structure and financing mechanisms

The CAP is financed through two primary funds:

European Agricultural Guarantee Fund (EAGF): provides direct support to farmers and funds market measures;

European Agricultural Fund for Rural Development (EAFRD): finances rural development, including forestry-related initiatives such as afforestation, forest restoration and agroforestry. Forestry funding under EAFRD focuses primarily on incentivising SFM and supporting MS in addressing rural development challenges through national strategic plans.

Reformed CAP (2023–2027)
The reformed CAP, effective from 2023, introduced significant changes to enhance sustainability, inclusivity and performance in agriculture and rural development (Regulation, 2021/2115, Regulation, 2021/2116, Regulation, 2021/2117). Key features included a redistributive income support mechanism targeting smaller farms, a new ‘green architecture’ emphasising environmental sustainability, and a performance-based approach, requiring MS to report achievements annually.

Forest-related key objectives in the national CAP strategic plans

The 2023–2027 programming period identified 10 key objectives in the national CAP strategic plans (EC, 2023a). Forests are addressed under the following:

- **Objective 8,** focusing on jobs, growth and equality in rural areas, with measures explicitly supporting sustainable forestry and knowledge exchange
- **Objective 10,** explicitly promoting innovation and knowledge transfer in forestry practices
- **Objective 4,** indirectly addresses forests, emphasising climate change mitigation, adaptation and renewable energy
- **Objective 6,** indirectly addresses forests, targeting biodiversity protection and enhanced ecosystem services.

Strategic priorities and national plans

MS have tailored their CAP strategic plans to include specific forestry-related interventions (section 3.1.3). The EU has allocated approximately €3.2 billion for investments in the forestry sector, complemented by rural development initiatives under programmes such as EIP-AGRI (European Innovation Partnership for Agricultural Productivity and Sustainability), LEADER, and Community-Led Local Development (CLLD).[26]

Rural development programme (RDPs) evaluations indicate that they have been instrumental in promoting forestry measures (Wolfslehner et al., 2019, Alliance Environnement et al., 2018). However, the design and implementation of these measures vary widely across MS due to differences in priorities, administrative capacities and regional contexts.

- **Funding for forests:** RDPs provide critical support for afforestation, forest restoration and sustainable forest infrastructure development.
- **Variability in programming approaches:** leads to inconsistent outcomes and a mixed picture of EU-wide impacts. Some MS prioritise forestry measures more than others, resulting in uneven distribution of benefits.

Innovation, knowledge sharing, and challenges

Integrating innovation-focused programmes, such as EIP-AGRI, fosters knowledge exchange and the application of innovative forestry practices. These programmes enable stakeholders to share best practices, develop new technologies and improve rural livelihoods through SFM. However, the variability in MS implementation and differing national priorities highlight the need for a more harmonised approach to maximise the impact of wood-relevant funding and ensure balanced outcomes across the EU (Alliance Environnement et al., 2018).

[26] https://ec.europa.eu/enrd/leader-clld_en.html (accessed 15.01.25).

3.2.4 Financing forests – sustainable economic activities

The EU Taxonomy for Sustainable Economic Activities is a classification system that establishes clear criteria to determine whether an economic activity qualifies as environmentally sustainable (Regulation, 2020/852). This system aims to guide enterprises and investors by defining which activities can be labelled as climate-friendly and providing recognition for green investments.

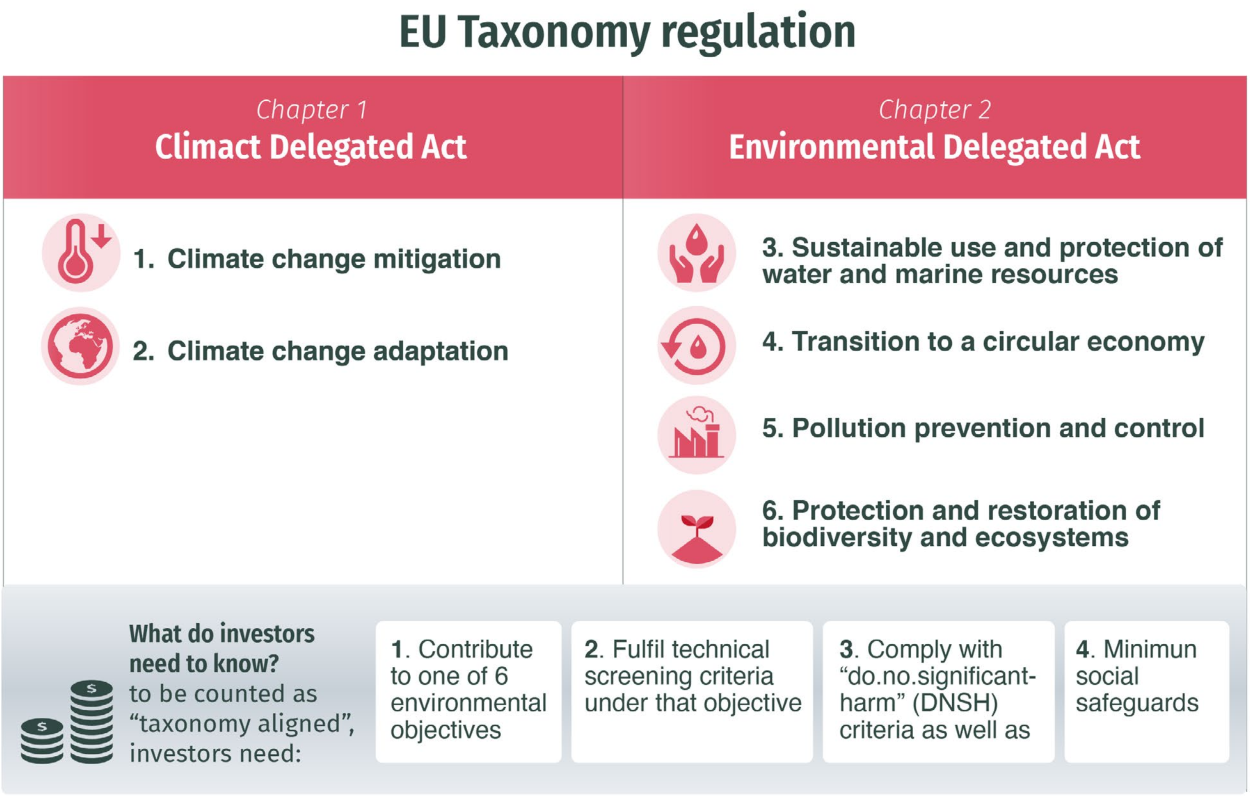


Figure 6. EU Taxonomy regulation.
Source: Nabuurs et al. (2024)

Core criteria for environmental sustainability

To qualify as environmentally sustainable under the taxonomy, an activity must meet four key criteria:

- Substantial contribution to 1 of 6 environmental objectives.
- No significant harm to any of the 6 environmental objectives.
- Adherence to minimum social safeguards as outlined in Article 18 of the regulation.
- Compliance with technical screening criteria tailored to each environmental objective.

The 6 environmental objectives include:

1. Climate change mitigation.
2. Climate change adaptation.
3. Sustainable use and protection of water and marine resources.
4. Transition to a circular economy.
5. Pollution prevention and control.
6. Protection and restoration of biodiversity and ecosystems.

Forest management under the taxonomy

Forest management is recognised as contributing to climate change mitigation due to forests' role as carbon sinks. However, certain limitations and exclusions exist.

- The taxonomy emphasises **forests as carbon sinks** without considering carbon sequestration in wood-based products (except for bioenergy).
- **SFM** is defined using criteria from national forestry laws, the Forest Europe process and certifications like PEFC.
- **Forest-related criteria** under the objective of Protection and Restoration of Biodiversity and Ecosystems are not included in the Environmental Delegated Act, leaving their future status uncertain.

The taxonomy aims to influence investment decisions by encouraging disclosures and introducing new tools for sustainable financing. Financial market participants and advisors will be required to report how their investments align with environmental objectives, potentially affecting the wood-based sector by encouraging investment in SFM practices and forest-based projects as well as shaping financial products labelled as sustainable, emphasising activities such as bioenergy production over broader wood-based product contributions.

Criticisms and future prospects

The taxonomy has faced criticism for certain inclusions and exclusions. For example, activities such as nuclear energy and natural gas are considered transitional and eligible as sustainable investments, raising questions about consistency. The exclusion of biodiversity objectives from forest criteria underlines gaps in the regulation's environmental scope. Moreover, the taxonomy's potential to drive meaningful investment shifts remains unclear, but ongoing dialogue and revisions suggest that updates may address these criticisms (Begemann et al., 2023). For instance, further changes could better integrate the taxonomy with sustainable forest resource use and align investments with broader EU environmental goals.

Photo by: adamikarl on Adobe Stock

3.2.5 Minimum standards and employment policies

EU policies and directives significantly shape employment standards across MS, particularly in labour-intensive sectors such as wood-based industries, which are associated with higher occupational risks. These policy instruments aim to improve workers' safety and wellbeing, enhance productivity and promote fair working conditions.

Employment policies and directives

Working Time Directive: establishes minimum standards for working hours, including limits on weekly working hours, daily rest periods and other measures to safeguard workers' health and safety (Directive, 2003/88/EC).

Framework on Health and Safety at Work (2021-2027): this updated framework builds on existing directives to prevent workplace risks and promote safer, healthier working conditions. Specific provisions include noise exposure limits and other preventative measures relevant to labour-intensive sectors (EC, 2021c, EC, 2014).

Directives on Chemical, Carcinogenic, and Mutagenic Risks: multiple directives focus on reducing occupational exposure to harmful substances (Directive, 89/391/EEC, 2004/37/EC, 98/24/EC). Regular updates (most recently in 2024) reflect evolving risks, indicating occupational exposure limits for chemical agents.

Relevance to wood-based industries

Wood-based industries face unique challenges due to their labour-intensive nature and risk-prone environments, including **physical risks** (for example, handling heavy loads and operating machinery exposes workers to high rates of injury), **chemical exposure** (for example, the use of chemicals in wood processing requires adherence to strict preventive measures, including reducing exposure in line with EU standards); **noise and vibrations** (for example, equipment used in forestry and wood processing often generates high noise levels, necessitating compliance with noise exposure limits). Three lists of indicative occupational exposure limits for chemical agents have been published since 2000, which require wood-based industries to adopt measures that mitigate these risks, ensuring safer workplaces.

EU employment policies may increase production costs. However, the benefits in terms of worker safety, health, and long-term productivity arguably outweigh the costs. Impacts on wood-based industries include:

- **Increased costs:** compliance with EU safety directives often requires investment in protective equipment, updated machinery, and workplace modifications, which can drive up production costs (Rivera León et al., 2016).

- **Enhanced safety and productivity:** despite higher costs, these measures improve worker safety, reduce workplace accidents and enhance overall productivity. This is crucial for sectors such as forestry and agriculture, which have some of the highest rates of fatal and serious injuries compared to other industries.

While national governments are responsible for setting employment standards, the EU complements these by establishing minimum standards in employment law. This ensures coherence in worker protection across MS while allowing flexibility for national implementation.

Photo by: omaset on Adobe Stock

3.2.6 Transporting wood-based products

Transport policies influence the wood-based value chain by shaping the movement of raw materials and finished products across supply chains. These policies affect maritime, road and waste transport and introduce environmental, operational and regulatory requirements that affect costs, logistics and compliance.

Maritime transport

Sulphur Directive (Directive, 2012/33/EU, Directive, 2016/802): this directive sets maximum limits on the sulphur content of marine fuels used by ships calling at EU ports. While reducing air pollution, this directive increases maritime transport costs by requiring low-sulphur fuels or alternative compliance mechanisms.
Carbon Dioxide Emissions from Maritime Transport (Regulation, 2015/757): establishes monitoring, reporting and verification (MRV) systems for CO_2 emissions from large ships, aligning maritime transport with EU climate targets.

Waste transport

Waste Shipment Regulation (Regulation, 1013/2006, 2024/1157): covers procedures for transboundary waste movement, including wood-based by-products. The 2024 revision simplifies waste shipments within the EU, supports circular economy goals and ensures that exported waste is managed sustainably. Enforcement mechanisms have also been strengthened to combat illegal waste shipments.

Road freight transport

Road transport is vital for moving wood and wood-based products, especially in forestry operations. Key regulations include:
Emission Performance Standards: these standards set limits for CO_2 emissions from vehicles, aligning with EU climate targets under the European Green Deal.
Road-Haulage Specifications: these specifications cover the maximum authorised weights and dimensions, ensuring safety and reducing road damage caused by overloaded vehicles.
Fuel Quality Directive (Directive, 2009/30/EC): this directive establishes technical specifications for fuels harmonised with renewable energy requirements under RED III to address land use impacts, such as bioenergy demand.

Renewable energy and climate neutrality goals

Renewable Energy Directive (RED III): sets ambitious transport targets, allowing MS to choose between a 14.5% reduction in GHG intensity or a 29% share of renewable energy in transport energy consumption by 2030. This increases the demand for renewable fuels, including bioenergy derived from wood (Directive, 2018/2001, 2023/2413).

Fit for 55 Package: introduces legislative proposals to align transport policies with EU climate neutrality goals by 2050. For instance, the proposed Euro 7/VII emission standards set stricter vehicle requirements, impacting logistics costs and operations within the wood-based sector (EC, 2022i).

Implications for the wood-based sector

EU transport policies aim to reduce emissions, enhance sustainability and align logistics with climate goals. While these measures introduce operational and cost challenges, they also present opportunities for the wood-based sector to innovate, adapt and contribute to the EU's broader environmental objectives. EU transport policies intersect with the wood-based sector in several ways.

- **Cost implications:** stricter fuel, emissions and waste transport regulations increase logistics costs for the sector.
- **Opportunities for sustainability:** circular economy initiatives under the Waste Shipment Regulation promote reuse and recycling, potentially benefiting wood-based industries.
- **Adaptation to renewable energy:** increased reliance on renewable energy in transport aligns with the growing demand for bioenergy, impacting wood production and land use patterns.

Photo by: Halfpoint on Adobe Stock

3.2.7 Trade, illegal logging and deforestation

Trade policies shape the operations of wood-based industries in the EU. By implementing policy measures to ensure fair competition, regulate imports and combat illegal logging and deforestation, the EU aims to create a sustainable and transparent market for wood and wood-based products. However, these policies also introduce challenges for businesses within the sector.

EU trade defence instruments

The EU enforces trade defence measures in alignment with World Trade Organization (WTO) rules, including:

- **Anti-Dumping and Anti-Subsidy Measures:** protect EU industries from harm caused by dumped or subsidised imports (Regulation, 1225/2009, 597/2009, 2017/2321).
- **Common Tariff System:** this system sets zero tariffs on most wood products but applies tariffs on certain manufactured wooden goods, such as furniture, to protect domestic industries (Council Regulation, 2658/87, Implementing Regulation, 2015/1754).

These measures aim to establish competitive conditions, but they can result in tariff barriers and duties that challenge EU wood-based industries' ability to compete with subsidised or cheaper foreign goods.

Phytosanitary requirements

To safeguard plant and forest health, the EU enforces phytosanitary regulations (Regulation, 2019/2072), including:

- **Phytosanitary certificates:** required for wood imports to prevent the spread of pests and diseases.
- **Specific standards for wood packaging:** (e.g., ISPM 15): manufacturers must ensure wood packaging, such as pallets, complies with the EU's and destination countries' requirements.

These rules affect manufacturers and exporters by adding compliance costs but are critical for maintaining the integrity of EU ecosystems. It can also be noted that the Commission submitted a proposal for revision in 2023 (EC, 2023e). It addresses gaps found during the implementation of its predecessor and aims to simplify reporting obligations.

Frameworks to combat illegal logging

The EU has implemented two frameworks to promote legal timber trade and reduce illegal logging.

- **EU Timber Regulation (EUTR):** effective since 2013, the EUTR prohibits the sale of illegally harvested wood in the EU. It requires operators and traders to apply due diligence, ensuring the traceability and legality of their wood sources. Products covered by the regulation are listed in its annexe (Regulation, 995/2010).
- **Forest Law Enforcement, Governance and Trade (FLEGT):** the FLEGT Regulation strengthens forest governance and promotes trade in legally produced wood through the FLEGT Action Plan. Key elements include Voluntary Partnership Agreements (VPAs), which represent trade deals between the EU and timber-producing countries to ensure legally logged wood is verifiable and traceable, and FLEGT Licensing, which certifies wood legality for imports into the EU, preventing illegal timber from entering EU markets (Regulation, 2173/2005, 1024/2008).

Regulation on deforestation-free products

The **EU Deforestation-Free Products Regulation (EUDR)** (Regulation, 2023/1115) sets out to reduce deforestation and forest degradation linked to EU consumption. Key aspects include:

- Due diligence rules which require companies to demonstrate that their products are deforestation-free and legally produced, including timber and other commodities such as palm oil, soy and cocoa
- Global application, so that the regulation applies to goods produced inside and outside the EU
- Implementation timeline, which was initially set for 2025, but enforcement was postponed to 2026 due to concerns about bureaucratic implications for stakeholders in EU and non-EU countries.

The EUDR underscores the EU's commitment to sustainable sourcing but raises concerns over compliance costs and administrative burdens for the wood-based sectors.

Implications for the wood-based sector

EU trade policies introduce opportunities and challenges for wood-based industries.

- **Sustainability and market access:** policies such as the EUTR and FLEGT promote responsible sourcing, enhance market credibility and align with global sustainability goals.
- **Increased costs and competition:** compliance with trade and phytosanitary regulations, tariffs and due diligence requirements adds operational costs. Protectionist subsidies and export tariffs imposed by non-EU countries further disadvantage EU producers.
- **Impact on global markets**: the EUDR has the potential to reshape global timber markets by incentivising sustainable practices and discouraging deforestation-linked trade.

EU trade policy instruments aim to create a level playing field for sustainable and legal wood trade while protecting ecosystems. However, the associated costs and complexities highlight the need for balanced implementation to support the competitiveness of EU wood-based industries in global markets. Further harmonisation and stakeholder collaboration will be essential to address these challenges effectively.

Photo by: Szymon Bartosz on Adobe Stock

3.2.8 Wood-based products and labels

While no dedicated EU policy domain exists for wood-based products, many regulations and strategies shape how wood-processing industries operate, produce and label their products. These frameworks affect consumer safety, environmental performance and the sector's competitiveness.

Regulations on consumer and environmental safety

Several EU directives and regulations govern the production and labelling of wood-based products, ensuring safety and sustainability.

General Product Safety Directive: establishes standards to ensure consumer safety across various products, including wood-based items (Directive, 2001/95/EC).
Food Contact Materials Regulation: this regulation provides harmonised rules for materials intended to come into contact with food, including packaging materials (Regulation, 1935/2004, 2019/1381). A revision, announced under the Farm to Fork Strategy in 2020, is underway to modernise these standards (EC, 2020b).
EU Ecolabel Scheme (Council Regulation, 880/92): a voluntary certification system for products meeting stringent environmental criteria. This applies to paper, wooden furniture, floor coverings and other wood-based goods, promoting environmentally friendly production.

The European Commission published a proposal for a Green Claims Directive in 2023 to ensure that companies substantiate their product or performance claims about environmental aspects using robust, science-based and verifiable methods (EC, 2023c). The proposal is currently being debated by the two co-legislators (the Council and the European Parliament).

Chemicals and biocidal products

Chemicals used in wood-based industries are regulated under comprehensive EU frameworks:
Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation: introduces a unified registration and authorisation system for chemical substances affecting most wood-processing industries (Regulation, 1907/2006). A planned revision under the EU Green Deal and Chemical Strategy for Sustainability has yet to materialise.
Biocidal Product Regulation (ECHA): this regulation governs the use of biocides to treat wood materials to protect against pests and bacteria. Products treated with biocides must meet strict authorisation requirements before entering the market (Regulation, 528/2012).
Classification, Labelling and Packaging Regulation (CLP Regulation): this regulation ensures that chemical hazards are clearly communicated to workers and consumers (Regulation, 1272/2008). Proposed revisions aim to improve hazard identification, online sales regulations and emergency health response measures, with a provisional agreement reached in 2024 (EC, 2022j).environmentally friendly production.

Strategic frameworks shaping the wood-based sector

Several overarching EU strategies influence the wood-based sector, including:

Industrial Strategy for Europe: aim to strengthen the Single Market and drive the green and digital transitions, closely monitoring competitiveness (EC, 2020d, EC, 2021g).

Circular Economy Action Plan: this plan focuses on extending the lifecycle of products, including wood, through waste minimisation and resource efficiency (EC, 2020c).

Bioeconomy Strategy and Action Plan: promotes using renewable resources, including wood, to scale up sustainable bioeconomy practices (EC, 2018c, EC, 2018a).

Green Deal Industrial Plan for the Net-Zero Age: enhances EU competitiveness in net-zero industries, highlighting wood-based products as substitutes for fossil-based materials in construction, textiles and chemicals (EC, 2023b).

Clean Industrial Deal: aims to make energy affordable for the industry, increase demand for clean products (including 'made-in-Europe' criteria in public and private procurements), mobilise funding, aggregate critical raw material demand and acting globally while promoting skills and creating quality jobs (EC, 2025).

Boosting Biotechnology and Biomanufacturing Actions: emphasises the role of wood-derived products in replacing non-renewables with planned updates to relevant standards (EC, 2024a).

Implications for the wood-based sector

The applicability and impact of these regulations varies significantly depending on the type and degree of wood processing.

- **Paper and paperboard manufacturers:** heavily affected by REACH and Food Contact Materials regulations.
- **Woodworking industries (such as sawn wood):** more directly impacted by the Biocidal Product and CLP regulations.

The interplay between EU regulations and strategies creates a complex policy environment for wood-based industries. While these frameworks promote safety, sustainability and market competitiveness, they also introduce compliance challenges that vary across value chains.

3.2.9 Environmental protection and human health

The EU's environmental policy framework is important in regulating emissions and waste from industrial operations, including the wood-based sector. These measures aim to protect ecosystems and public health while incentivising sustainable practices and aligning industries with the EU's climate and environmental goals. However, they also impose significant compliance obligations and financial burdens on businesses.

Industrial emissions and Best Available Techniques (BATs)

The **Industrial Emissions Directive (IED)** is a cornerstone of EU environmental regulation for managing industrial emissions (Directive, 2010/75/EU, 2024/1785). Its key features include:

- Emission limits and BATs Reference Documents (BREFs): the IED establishes EU-wide emission limits for pollutants and requires industries to adopt BATs to achieve high environmental standards. BREFs provide tailored guidance for specific sectors, including pulp and paper production, wood preservation with chemicals, and wood-based panels. These documents ensure industries implement the best practices to minimise their environmental footprint[27]
- Permit requirements: industries covered by the IED must secure permits, which include conditions based on BATs. Member States enforce compliance, ensuring no installation operates without meeting environmental protection standards.

The Industrial Emissions Portal,[28] a recent addition, enhances transparency and monitoring by providing publicly accessible data on emissions from regulated facilities, thereby holding industries accountable (Regulation, 2024/1244).

Air quality and emission standards

Air quality legislation targets pollutants that affect human health and ecosystems, with significant implications for industries.

- **Ambient Air Quality Directive:** the revised directive aligns air quality standards with WHO recommendations for 2030 and beyond (Directive, 2008/50/EC, 2024/2881). Regular reviews will ensure standards remain relevant. The stricter regulations particularly affect high-emission industries, such as pulp and paper.
- **National Emission Ceilings Directive:** this directive sets binding national limits for key air pollutants, driving industries to adopt cleaner technologies to comply with reduction targets (Directive, 2016/2284).

[27] https://eippcb.jrc.ec.europa.eu/reference/ (accessed 15.01.25).
[28] https://industry.eea.europa.eu/ (accessed 15.01.25).

These regulations improve air quality and raise compliance costs, such as installing emission control technologies.

Waste management and the circular economy

Waste management policies form a central part of the EU's environmental strategy and have significant effects on wood-based industries.

- **Waste Framework Directive:** this directive introduces key principles such as extended producer responsibility (EPR) and the polluter pays principle. Under EPR, industries must accept responsibility for managing post-consumer waste, including collection, recycling and disposal (Directive, 2008/98/EC). The polluter pays principle shifts the financial burden of waste management to producers, ensuring accountability. The directive is currently under revision to align with the EU Strategy for Sustainable and Circular Textiles (EC, 2022d), emphasising reducing food and textile waste (EC, 2023d).
- **Packaging and Packaging Waste Directive::** this directive, which is being revised, aims to ensure that all packaging sold in the EU is recyclable by 2030 (Directive, 94/62/EC). This policy promotes the use of renewable materials, including wood and biomass, as substitutes for non-recyclable alternatives.

Other relevant waste regulations:
- **Landfills Directive:** regulates waste disposal to minimise environmental impact (Directive, 1999/31/EC).
- **Wastewater Treatment Directive:** this directive sets standards for treating industrial wastewater, which is highly relevant to the pulp and paper industries (Directive, 91/271/EEC).

These directives encourage industries to innovate and adopt circular economy principles, increasing resource efficiency and reducing waste.

Environmental liability and accountability

The **Environmental Liability Directive** imposes strict and fault-based liability for environmental damage (Directive, 2004/35/EC). Key aspects include:

- Strict liability: applies to dangerous activities, such as those involving hazardous chemicals or waste
- Fault-based liability: covers damage to protected habitats and species, provided a causal link can be established.

The **Environmental Crime Directive** complements this framework by addressing criminal offences related to environmental damage, while traditional civil liabilities remain governed by national laws (Directive, 2024/1203).

Implications for the wood-based sectors

The EU's environmental policy framework continuously evolves under initiatives such as the European Green Deal, which aims to enhance sustainability and achieve climate neutrality by 2050. Recent updates include:

- **Stricter standards for industrial emissions:** the revised IED expands the scope of emissions monitoring and enforcement
- **Alignment with circular economy goals:** revisions to waste and packaging directives incentivise sustainable materials and recycling practices
- **Regular reviews of air quality standards:** ensures legislation keeps pace with scientific advancements and environmental challenges.

While these policies generate compliance costs, they also create opportunities for the wood-based sector to lead in sustainability and innovation.

- **Operational adjustments:** industries must invest in cleaner technologies, efficient waste management systems and sustainable packaging solutions
- **Market advantages:** adopting circular economy principles and compliance with environmental standards can enhance market credibility and open new markets for sustainable products.

Balancing compliance costs with long-term environmental benefits remains a key challenge and opportunity for the sector. For instance, smaller enterprises may face difficulties in meeting compliance requirements due to limited resources, highlighting the need for targeted support mechanisms.

3.2.10 Bioplastics and biodegradability

Advancements in bio-based materials offer promising avenues for the wood-based sectors.

- **Wood industry by-products:** by-products such as lignin and tannin are being used to produce composites, adhesives and foams, expanding wood's utility beyond traditional applications
- **Cellulose-based bioplastics:** these bioplastics, manufactured predominantly from softwood-derived cellulose, are gaining traction as sustainable alternatives to fossil-based plastics.

While global demand for bio-based plastics is growing, they remain a niche market, accounting for only 1% of total annual plastic production in Europe (Bajpai, 2019). Moreover, recent EU legislation and policy frameworks are reshaping the landscape for bioplastics, with both opportunities and challenges.

Bioplastic legislation and policy frameworks

- **Single-Use Plastics Directive:** this directive aims to reduce marine litter by banning specific single-use plastic products, such as straws, cutlery and plates. While it represents a step forward in tackling plastic pollution, it has significant implications for producing cellulose-based bioplastics (Directive, 2019/904).
- **Policy Framework for Biobased Plastics:** this framework guides the sourcing, labelling and use of biobased, biodegradable and compostable plastics. However, a dedicated legal framework is still lacking, creating uncertainties for industries investing in bioplastic production (EC, 2022c).

Implications for the wood-based sectors

Despite sustainability benefits, the production of cellulose-based plastics faces significant challenges.

- **Redefinition of "plastic" in EU guidelines**: including cellulose-based fibres as plastics under the Single-Use Plastics Directive could deter investments in bio-based materials. This redefinition creates potential conflicts with other EU initiatives, such as the Bioeconomy Strategy, which encourages the development of bio-based plastics.
- **Policy fragmentation:** the lack of coherence between policies promoting bioeconomy goals and those regulating plastics could slow innovation and limit the adoption of wood-based bioplastics.

The production of bioplastics from wood-based materials represents one possible step toward achieving the EU's sustainability goals. However, to unlock its full potential, the regulatory environment would need to harmonise definitions and objectives across related policy instruments, ensuring consistency between environmental and bioeconomy strategies. It would also need to provide clarity and incentives for industries to invest in bio-based and biodegradable materials and address the unique characteristics of cellulose-based bioplastics, distinguishing them from fossil-based plastics.


Photo by: hxdyl on Adobe Stock

3.3 Concluding remarks

This chapter provided a brief overview of strategic frameworks, regulatory instruments and economic tools affecting the wood-based sector. Given that there is no definition of wood policy and that the wood value chains per se differ extensively, this analysis was done in the most comprehensive way.

It must be acknowledged, however, that it may be the case that some policy instruments have not been mentioned, as the value chains were not predefined. The aim was, rather, to paint the complex and far-reaching policy environment that governs the wood-based sector, from when the products leave the forests to when they are traded in Europe and globally.

Photo by: annaia on Adobe Stock

WOOD IN CONSTRUCTION – A CASE STUDY

4. Wood in construction – a case study

Increasing the use of wood as a construction material contributes to the EU's targets to reduce carbon emissions.

Construction produces over a third of the EU's CO_2 emissions (Sharmina et al., 2023). **Storing CO_2 and using less CO_2-intensive material** than concrete or steel, timber buildings help reduce emissions and contribute to a transition towards a circular economy.

Examining the use of wood as a construction material allows for a more detailed overview of how policy instruments can affect a specific sector.

Photo by: Alizada Studios on Adobe Stock

4.1 EU policy instruments affecting construction

*The **Construction Products Regulation** (CPR Regulation, 305/2011) establishes the legal framework for marketing construction products within the EU. After undergoing a review, the revised CPR was adopted in 2022 (EC, 2022h) and further consolidated in 2024 under Regulation (2024/2769) in alignment with the EU's Circular Economy Package. The updated framework aims to streamline rules, reduce administrative burdens, promote the free movement of construction products across the single market and advance the industry's adoption of circular economy principles and technological innovation.*

Key provisions of the CPR

- **Marketing and CE marking:** the regulation sets conditions for placing construction products on the market, requiring manufacturers to apply the CE marking and provide technical documentation, including a performance statement. Distributors and importers are responsible for verifying compliance with CE certification and associated documentation.

- **Performance assessment and safety:** while the CPR outlines criteria for assessing the performance of construction products, MS retain authority over safety, environmental and energy standards for construction projects. The regulation does not specify product-level standards but ensures consistency in technical assessment methods.

Stakeholder roles and contributions

- **Standing Committee on Construction (SCC)**: comprised of public representatives and nominated experts from MS, the SCC supports the Commission in implementing the CPR.

- **Advisory Committees and Expert Groups:** industry stakeholders contribute to regulatory discussions through the Advisory Committee on Construction Products and the Commission Expert Group on the CPR Technical Acquis process, ensuring diverse input on technical and environmental aspects.

Integrating sustainability and circular economy goals

The revised CPR introduces an environmental footprint assessment system to enhance the sustainability of construction products and their use in projects. This aligns with the EU's Strategy for a Sustainable Built Environment, which seeks to improve the environmental performance of building materials. However, the progress of the strategy has been limited to date.

Additionally, the **Eco-design for Sustainable Products Regulation** (EC, 2022e) and the **Eco-design and Energy Labelling Working Plan 2022–2024** (EC, 2022b) complement the CPR by promoting sustainable production practices and more energy-efficient products across the EU market.

Other EU initiatives supporting sustainable construction

- **New European Bauhaus Initiative**: launched in 2021, this initiative supports the European Green Deal by integrating sustainability, aesthetics and inclusion into the transformation of urban and rural areas. In 2024, the Commission introduced the Bauhaus Investment Guidelines to accelerate investment in sustainable and innovative building projects (EC, 2024b).
- **Renovation Wave Strategy:** part of the European Green Deal, this strategy focuses on accelerating the renovation of Europe's existing building stock to achieve a decarbonised building environment by 2050. Key elements include financial incentives, regulatory frameworks and enabling measures to support renovations. The Energy Performance of Buildings Directive underpins these efforts by setting binding measures to improve energy efficiency and sustainability in building construction and retrofitting (Directive, 2024/1275).

The construction sector intersects with energy policy during the production of building materials and throughout a building's operational lifespan. To address energy consumption in buildings, the EU has developed a robust legislative framework that includes the **Energy Performance of Buildings Directive** (Directive, 2018/844) and the **Energy Efficiency Directive** (Directive, 2012/27/EU). Updates to these directives introduced several measures, including creating and implementing a unified set of

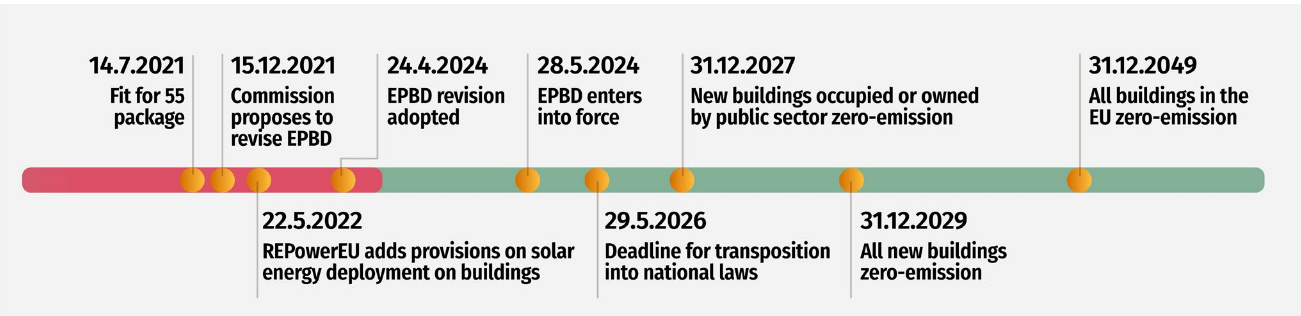


Figure 8. Energy Performance of Buildings Directive implementation timeline
Source: EPRS (2023b)

standards and technical reports known as the **Energy Performance of Buildings Standards** (EPB standards). These standards are overseen and maintained by the **European Committee for Standardization** (CEN),[29] ensuring consistent benchmarks for energy performance across MS.

In addition, the European Commission actively promotes **Green Public Procurement** (GPP) as a tool to minimise the public sector's environmental footprint. To ensure consistency across MS, the Commission's Joint Research Centre coordinates the development of voluntary GPP criteria in collaboration with the **GPP Advisory Group** (GPP AG). This approach is particularly impactful given that construction represents the third-largest expenditure area within public procurement, after office IT and transportation.

GPP criteria have been tailored to various sectors to incorporate environmental considerations into public procurement processes. For instance:

- Office building design, construction and management criteria were first published in 2016 and are currently under revision (EC, 2016);
- Criteria for textiles (EC, 2017), furniture (EC, 2018b) and road transport (EC, 2021b) have also been developed in subsequent years.

The GPP criteria for office building design serve as an example of this initiative's scope. They address every stage of the procurement cycle, including design, site preparation, construction and the ongoing maintenance and management of office buildings. These criteria help public authorities integrate green requirements into tender specifications, fostering sustainability across the lifecycle of public construction projects.

Photo by: Milos on Adobe Stock

[29] https://www.cencenelec.eu/ (accessed 16.01.25).

4.2 Industrial standards and norms

*Standards play an important role in establishing trust in the performance, safety and environmental sustainability of wood products used in construction. At the EU level, harmonised standards are the technical foundation for assessing construction product performance. These standards support manufacturers in preparing the **Declaration of Performance** (DoP) as mandated by the CPR Regulation and affixing the CE marking to their products (Regulation, 305/2011).*

For example, the APA-Engineered Wood Association has identified 56 EU standards relevant to wood-based construction products, ranging from codes of practice (e.g., EN 1995-1-1) to harmonised standards (e.g., EN 13986), durability requirements (e.g., EN 335), and fire classification methods (for example, EN 13501-1).[30]

Standardisation organisations and processes

Norm-setting for wood-based products and environmentally sustainable construction occurs at national, European and global levels. **The International Organization for Standardization** (ISO) and the **European Committee for Standardization** (CEN) are two key organisations. These organisations cooperate closely under the Vienna Agreement (1991), which ensures technical collaboration, mutual representation at meetings and alignment of standard-setting activities.

- ISO is an entirely private organisation focused on developing global standards.
- CEN operates primarily in the European context but often works under mandates from the European Commission. For example, the CPR mandates that the CEN develops harmonised standards (Article 28).

Although voluntary in their application, CEN standards frequently become national law or directly binding in specific contexts, such as trade contracts. Courts often regard these standards as common rules of practice, underscoring their significance in regulatory and legal frameworks (Ludvig and Weiss, 2013, Kanevskaia, 2024).[31]

Within CEN, standards are created by Technical Committees (TCs), which involve participation from the national standardisation bodies of EU MS and other European countries. On a global scale, CEN member institutions are also members of ISO, ensuring further alignment between European and international norms.

30 https://apawood-europe.org/official-guidelines-3/individual-standards/ (accessed 16.12.2024).
31 https://www.cencenelec.eu/european-standardization/.

Relevant technical committees for wood in construction

Several CEN TCs are particularly important for developing standards related to wood used in construction. These include:

CEN/TC 35: Building; woodwork, ironmongery (dimensions, quality)
CEN/TC 38: Durability of wood and wood-based products
CEN/TC 103: Adhesives for wood and derived timber products
CEN/TC 112: Wood-based panels
CEN/TC 124: Timber structures
CEN/TC 126: Acoustic properties of building elements and buildings
CEN/TC 127: Fire safety in buildings
CEN/TC 128: Roof covering products for discontinuous laying and products for wall cladding
CEN/TC 142: Woodworking machines – Safety
CEN/TC 250: Structural Eurocodes
CEN/TC 350: Sustainability of construction works
CEN/TC 351: Construction products – Assessment of release of dangerous substances

Photo by: JAH on Adobe Stock

4.3 Voluntary certification schemes for sustainable construction

Voluntary certification systems are key in promoting sustainability in the construction sector, particularly in wood-based construction. These schemes evaluate a building's environmental, economic and social performance, offering a standardised framework for assessing sustainability.

Typically independent and non-mandatory, they aim to encourage environmentally friendly practices and provide transparency by publicly communicating the 'green' credentials of construction projects. These certifications incentivise the sector to adopt more sustainable approaches and improve environmental performance.

Leading sustainable building certification systems

Some of the most widely recognised certification schemes for sustainable buildings include Leadership in Energy and Environmental Design (LEED) from the USA, the Building Research Establishment Environmental Assessment Methodology (BREEAM) from the UK, Haut Qualité Environnementale (HQE™) from France, and the Deutsche Gesellschaft für Nachhaltiges Bauen (DGNB) system from Germany (Hafner, 2013, UN-Habitat, 2017, Weiss et al., 2021, Oberfrancová and Wollensak, 2021, Sánchez Cordero et al., 2020, Polli et al., 2022).

- **Leadership in Energy and Environmental Design (LEED):** launched in 1998 by the US Green Building Council (USGBC), LEED is one of the world's most recognised green building certification programmes. By 2024, buildings in 186 countries have achieved LEED certification, demonstrating its global reach (USGBC, 2024).[32]

- **Building Research Establishment Environmental Assessment Methodology (BREEAM):** developed in 1990 in the UK, BREEAM is a widely used assessment method for sustainable buildings (BREEAM, 2021). As of 2021, it has been applied to certify 590,000 building assessments across more than 85 countries.[33]

- **High Environmental Quality (Haut Qualité Environnementale, HQE™):** this certification has existed for more than 20 years and has certified 125 million square meters of housing and tertiary infrastructure in 2023.

[32] www.usgbc.org/LEED (accessed 17.01.25).
[33] www.breeam.com (accessed 17.01.25).

It is designed for a diverse group of stakeholders, including building owners, managers, users, developers, investors, urban planners and local authorities, and confirms the successful implementation of sustainability goals for a project.[34]

- **German Sustainable Building Council (Deutsche Gesellschaft für Nachhaltiges Bauen, DGNB):** created in 2009, the DGNB system provides a holistic approach to sustainable building assessment, addressing environmental, economic, socio-cultural and functional criteria. It is versatile, covering building types such as office, industrial and residential projects. By 2024, more than 10,000 projects in 30 countries had been certified under this system.[35]

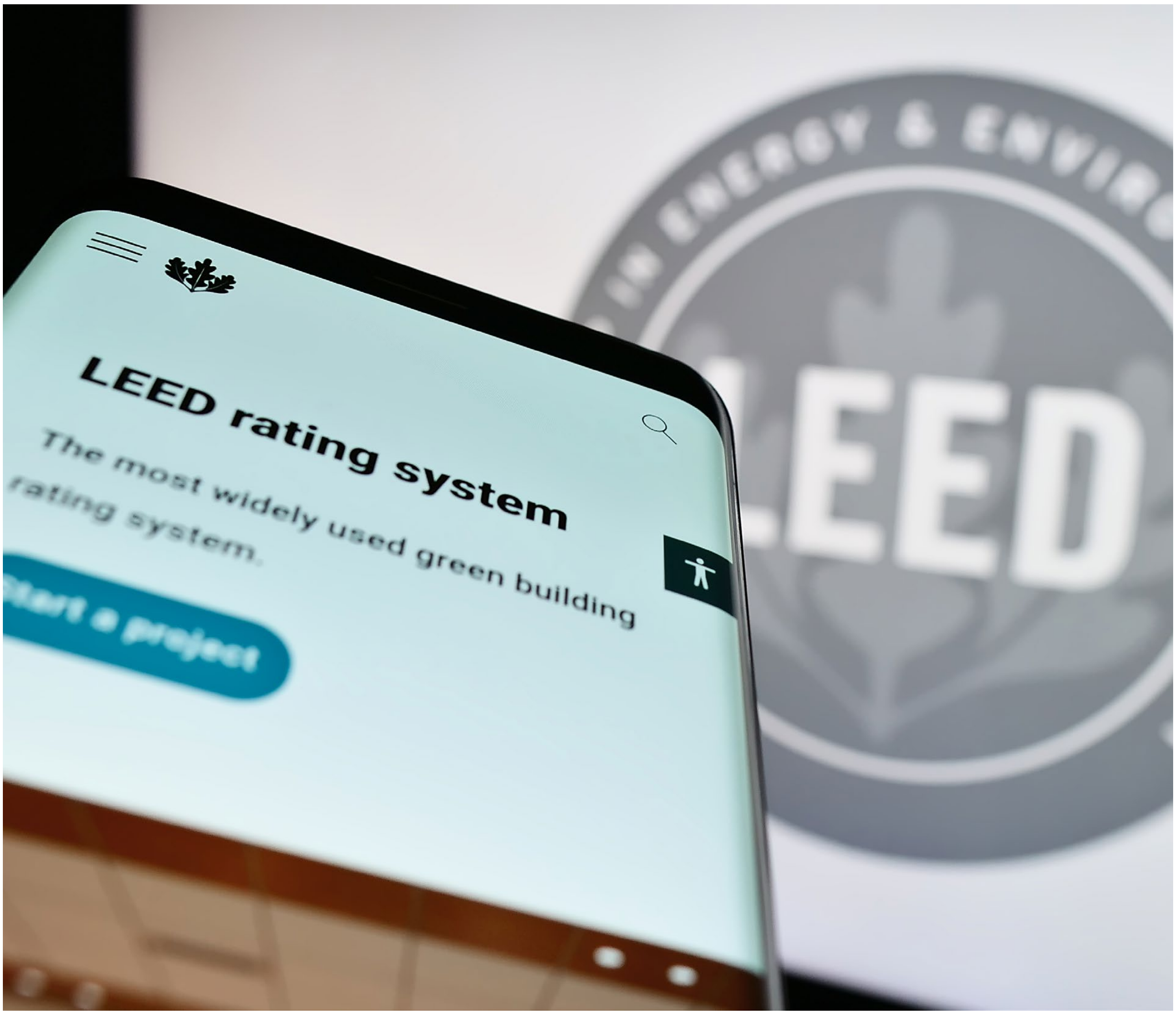


Photo by: Timonon Adobe Stock

[34] https://www.hqegbc.org/ (accessed 17.01.25).
[35] www.dgnb.de/en.

4.4 Circularity in construction: advancing sustainable practices

Efforts to enhance sustainability in the construction sector are closely tied to the principles of the ***EU Circular Economy Action Plan.*** *Among its six core objectives, three – waste reduction, increased use of sustainable products and promoting bio-based materials – directly address the construction industry (EC, 2020c).*

Complementing this, the **EU Taxonomy Regulation** encourages circularity by promoting sustainable construction activities and materials (Regulation, 2020/852). In recent years, several measures have been introduced to advance these goals. For instance, the revised **Circular Economy Monitoring Framework**[36] introduced new indicators to assess material footprints, resource productivity and consumption patterns, while the **Ecodesign for Sustainable Products Regulation** established a systemic approach to sustainability across product lifecycles (Regulation, 2024/1781).

Despite these efforts, wood recycling and reuse remain low (Parobek and Paluš, 2024), with much of the waste being incinerated for energy production (EC, 2022a). Addressing this challenge requires systemic measures to improve the sorting, segregation and recovery of wood waste, enabling material reuse and increasing the proportion of reclaimed wood re-entering supply chains (Aggestam et al., 2021). Effective strategies include enhanced deconstruction practices and closer collaboration across the value chain, such as between municipalities, architects, construction companies and end users.

Box 5.
Wood waste and recycling

Waste has long been regarded as an unavoidable residue of construction work. Waste has primarily been managed with a focus on health and safety impacts, not from a recycling perspective (Osmani and Villoria-Sáez, 2019).Wood waste is the second most significant component of construction debris, following concrete, and accounts for 35% of the overall waste disposed in landfills globally (Caro et al., 2024). In contrast, only 10% to 15% of the wood used in construction is currently recycled, reused or upcycled (Parobek and Paluš, 2024). This implies that the construction sector holds significant potential to be more circular, including integrating wood waste into a broader systems loop (Kaufmann and Nerdinger, 2012, Lignatec, 2015, Dangel, 2017, Ludvig et al., 2021, Zhu and Feng, 2024, Parobek and Paluš, 2024, Caro et al., 2024, UNEP, 2023).

[36] https://ec.europa.eu/eurostat/web/circular-economy/monitoring-framework (accessed 17.01.25).

Recovery challenges in construction materials

Recovery of wood waste necessitates specific organisational structures and infrastructure. Efficient recycling processes require materials to be easily separable, yet contaminated wood often poses significant barriers. For instance, metal fixtures and residues from concrete formwork are challenging to remove without damaging tools or equipment. These additional steps, often performed manually, increase costs and reduce recovery efficiency (Aggestam et al., 2021).

To overcome such barriers, design innovations in timber construction are critical. Mass timber buildings, for example, can be designed for extended lifespans by using durable materials and incorporating techniques such as glueing, dowelling, or applying surface coatings. Prolonging the lifespan of wooden structures reduces demand for new materials and improves resource efficiency (Orfanidou et al., 2023).

Design for disassembly and material efficiency

Incorporating design-for-disassembly principles is another promising approach.[37] This involves ensuring that buildings can be dismantled at the end of their lifecycle to recover materials for reuse. Techniques such as modular solid wood components, prefabrication and multi-functional building designs can minimise raw material usage while enabling more precise construction processes. These strategies reduce waste and enhance material efficiency during the design phase (Aggestam et al., 2021).

Beyond structural design, circular approaches involve considering the entire lifecycle of a building. Renovations, changes in ownership and evolving user needs mean that a building's lifecycle comprises multiple phases. Effective circular construction requires assessing impacts at three levels: raw materials, construction products and the building as a whole. Additionally, exploring new markets for recycled wood – such as landscaping mulch, boiler fuel, or composite board production – can expand opportunities for reclaimed materials.

Challenges and trade-offs

Despite the benefits of circular principles, trade-offs must be carefully managed. For example, treating wood to enhance its durability may complicate recycling efforts or result in increased pollution. This underscores the need to balance prolonged use with recyclability and to evaluate construction systems for their overall sustainability impacts. Circular practices must also ensure that wood originates from sustainably managed forests and that treatments involve renewable, non-toxic materials.

Infrastructure for material separation and recycling, supported by harmonised standards and norms, is essential to advance circularity in construction. Developing these systems will be crucial for achieving long-term environmental and economic benefits as the sector transitions toward more sustainable practices.

While circular construction principles hold significant promise, their successful implementation requires multi-stakeholder collaboration, investment in infrastructure and tailored strategies to address each construction project's unique challenges. These steps will advance the sustainability of wood-based materials and support broader efforts towards a circular economy.

[37] "Design for disassembly" refers to the design of buildings to facilitate future changes and recovery of systems, components and materials, ensuring the building can be recycled as efficiently as possible at the end of its life.

HOW TO MONITOR EU POLICYMAKING

5. How to monitor EU policymaking

This chapter will explain some EU policymaking processes to offer insights into how public and private actors may track, engage, or participate in EU policymaking.

Photo by: olrat on Adobe Stock

5.1 Engaging the European Commission

There are, generally speaking, two ways to engage with the Commission: technical or political. The technical level (Directorate-Generals (DGs) and relevant lead units) is important when a policy is being developed. In contrast, the political level (Commissioners and their cabinets) is useful for delivering overarching political messages.

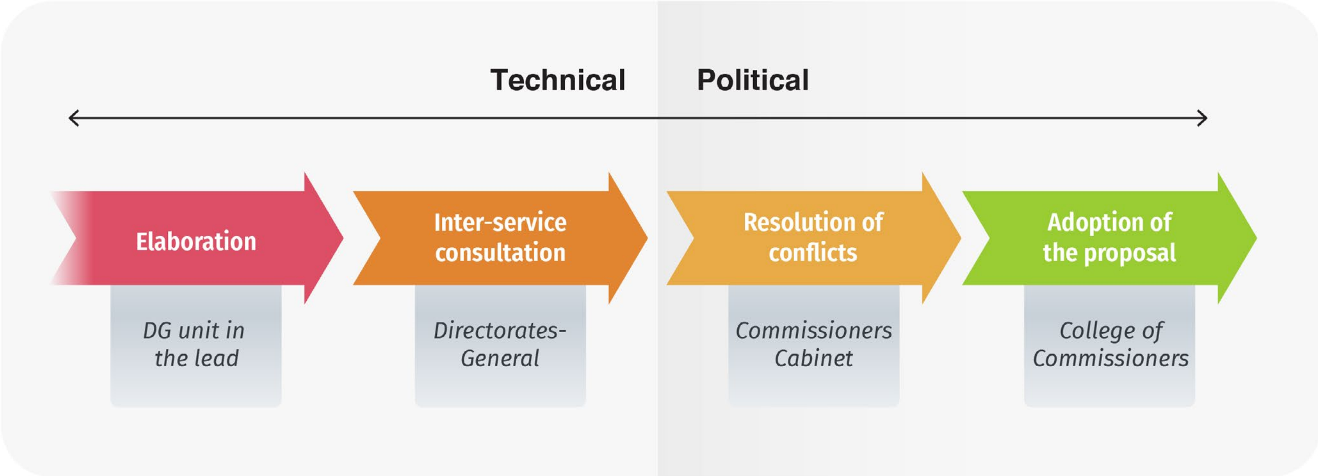
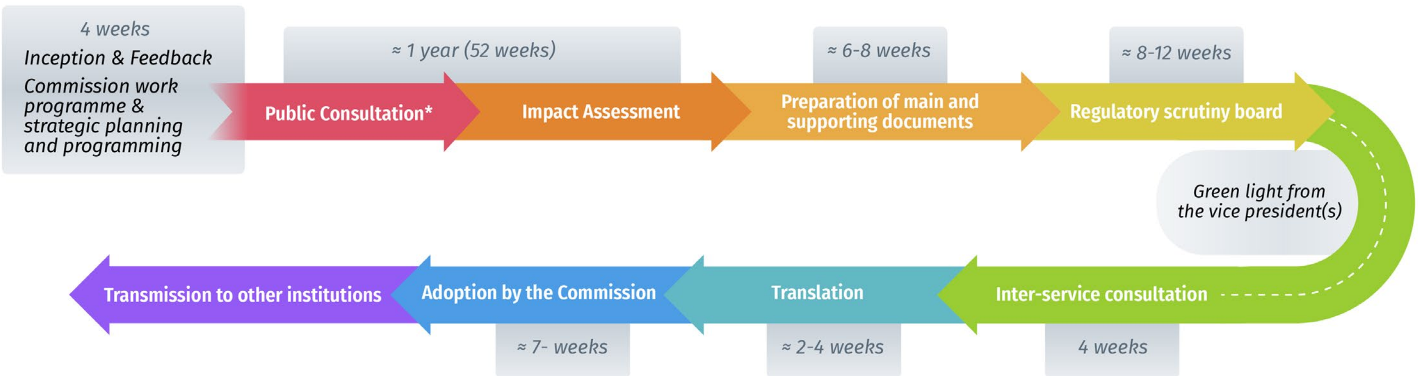


Figure 8. Proposal development in the Commission
Source: Own figure

It should be kept in mind that the legislative procedure is not quick. For example, legislative initiatives can take up to two years. Non-legislative initiatives (such as communications, green papers and white papers) can be produced more quickly. It should be noted that non-legislative policy documents can be a vital part of developing formal legislative proposals, such as the EU Biodiversity Strategy for 2030 (EC, 2020a). For the wood-based sector, the EU Forest Strategy, for example, is a non-legally binding policy instrument (EC, 1998, EC, 2013) which included a call for a proposal on an EU framework for forest monitoring.



* Public consultations are mandatory.

Figure 9. Timeline for proposal developments by the European Commission
Source: Own figure

There are several opportunities for stakeholders to engage in the policymaking process, such as during consultations[38] or as feedback on the call for evidence and impact assessments.

[38] All procedures are described here: https://commission.europa.eu/law/law-making-process/planning-and-proposing-law_en#:~:text=The%20Commission%20uses%20Call%20for,existing%20laws%20and%2For%20policies

Box 6.
Opportunities to engage in the policymaking process

The European Commission regularly invites input from citizens and stakeholders during the development of policies and legislation. This participatory process is integral to shaping effective policies and provides an opportunity to engage directly with Commission representatives. Consultations can take various forms, depending on the specific stage of policy development or evaluation. For instance, stakeholders may be asked to provide feedback on various aspects as detailed below.

- **Call for evidence:** outlines the problems identified, possible options and expected impacts within a short document to collect stakeholder information
- **Impact assessments:** detailed (technical) reviews that assess the advantages and disadvantages of alternative policy approaches
- **Evaluations or fitness checks:** exercises to determine whether the regulatory framework in a particular sector remains fit for purpose.

Consultations may include open-ended or structured questions, allowing participants to share their perspectives in diverse ways.

Call for evidence

A call for evidence is a targeted consultation tool that outlines the problem at hand, sets objectives and explains the necessity of EU action. It also proposes policy options, describes the strategy for further consultations and replaces earlier roadmaps and inception impact assessments. Depending on the issue, it may indicate whether a questionnaire-based public consultation will be conducted.

Impact assessments

Impact assessments are conducted during the initial stages of policy or legislative development to evaluate the need for EU intervention. These assessments analyse the potential economic, environmental and social impacts of proposed solutions, providing evidence to guide decision-making. All initiatives with likely significant impacts are required to undergo this process. For cases where an impact assessment is deemed unnecessary, a roadmap or explanatory document will clarify the rationale. By employing tools such as consultations, calls for evidence and impact assessments, the Commission ensures that policymaking is informed, inclusive and aligned with stakeholder priorities.

After publication of legislative proposals, stakeholders can provide feedback. In addition, the Commission may consider feedback when further developing the policy proposal.

5.2 Horizon scanning and timing

Timing is essential when considering the EU policymaking process. The opportunity for any party to have an impact on the process largely depends on acting at the right moment and in the legislative and political process closely.

Below are some key points to consider when trying to map the policymaking process.

- **Understand the political agenda.** This could be by noting announcements in the State of the Union speech[39] and monitoring the Commission's annual work programme, including flagship initiatives announced in the State of the Union address or in priority areas such as the European Green Deal or Digital Europe. For instance, at the beginning of its mandate, the von der Leyen Commission II published its Political Guidelines[40] and the mission letters for the new Commissioners-designates[41] that defined an agenda and several relevant political priorities for 2024-2029.

- **Horizon scanning.** Looking ahead and engaging early is critical, whether directly talking to the Commission services developing early policy thinking or reviewing roadmaps and public consultations.

- **Actively monitor the legislative and non-legislative initiatives.** To know what proposals the Commission is planning to bring forward, ongoing procedures can be tracked systematically.

- **Start as early as possible.** To gain access to policy discussions and early drafts, one can consider informally contacting the Commission, Members of Parliament or Members of the European Council as soon as they start drafting something (e.g., informal contacts may provide access to draft documents).

- The Commission regularly applies the **recast method** rather than the revision method when it comes to adopting new legal acts.[42] For this reason it is essential to keep track of this process to review changes through recast.

- Follow the **implementation phase** to review whether relevant priorities are being addressed.

[39] https://state-of-the-union.ec.europa.eu/index_en
[40] https://commission.europa.eu/document/download/e6cd4328-673c-4e7a-8683-f63ffb2cf648_en?filename=Political%20Guidelines%202024-2029_EN.pdf
[41] https://commission.europa.eu/about/commission-2024-2029/commissioners-designate-2024-2029_en
[42] There are two types of recasting: (1) two or more original acts covering related subjects (and their amendments) are incorporated in a single new act, or (2) an original act and its amendments are merged into a single new act.

Photo by: momius on Adobe Stock

Box 7.
How to keep track of the EU policymaking process

General:

- EU Presidency priorities.[43]
- EU Calendar provides a breakdown of forthcoming events and news.[44]
- EP Plenary Agenda tracker.[45]
- The Commission's annual work programme can be accessed on the Commission at work website.[46]
- Each DG has its own website, with regular updates on what they are developing.[47]
- Commission publishes regular updates on publications and adoption dates for new initiatives.[48]

Forest-specific:

- Standing Forestry Committee.[49]
- Working Party on Forests.[50]
- Expert group on Forest and Forestry Stakeholder Platform
- Expert Group on Forest-based Industries and Sectorally Related Issues.[51]

43 https://www.consilium.europa.eu/en/council-eu/presidency-council-eu/.
44 https://www.consilium.europa.eu/en/meetings/calendar/.
45 https://www.europarl.europa.eu/plenary/en/agendas.html.
46 https://ec.europa.eu/info/strategy-documents_en.
47 https://ec.europa.eu/info/departments_en.
48 https://commission.europa.eu/strategy-and-policy_en
49 https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&do=groupDetail.groupDetail&groupID=3550
50 https://www.consilium.europa.eu/en/council-eu/preparatory-bodies/working-party-forestry/.
51 https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/consult?lang=en&do=groupDetail.groupDetail&groupID=1356

5.3 Identifying relevant decision-makers involved in policymaking

It can be helpful to identify relevant stakeholders involved in the forest-relevant policymaking process and to review their positions, interests, and decision-making power concerning the legislative process.

Steps that can be taken to map stakeholder positions and interests are as follows.

- **Map out people, organisations, or processes involved** in the policymaking process. It can, for instance, be members of the EP or Council (e.g., those holding the presidency could also be relevant). It can be equally relevant to contact key people, such as the rapporteur,[52] the political coordinator, permanent representatives and staff within the secretariat of the EP to gain insights into who is involved.
- **Build contacts with a member states' permanent representations in Brussels, as this may help you** develop an understanding of their positions and principal concerns.
- **Engage with permanent representatives,** both related to specific files and, more generally, to get access to relevant contact points in the MS. It can also be relevant to contact the technical negotiators of the presidency as they can facilitate contacts with the team of the next presidency.
- **Establish contacts with relevant national members of Parliament** to gain insights into their views on the policymaking process. MEPs have a double role in that they shape policy work in the committees and the EP and work with their national governments.
- **Interview the vice-presidents of Committees** (such as the Standing Forestry Committee), who play a crucial role in coordinating relevant activities.
- **Map out the interests of different DGs** and use this information when interviewing relevant people in the respective Commission services.
- **Contact and interview representative organisations,** such as CEPI, CEI-Bois, EPF or InnovaWood who may share their views and position on relevant policy issues.

[52] A rapporteur is a member of the EP responsible for handling a legislative proposal drawn up by the Commission.

Photo by: Jittapon on Adobe Stock

Photo by: Dee karen on Adobe Stock

NAVIGATING EU POLICY FOR THE WOOD-BASED SECTOR

6. Navigating EU policy for the wood-based sector

As outlined in the previous sections, the wood-based sector operates at the intersection of different EU policy areas and instruments, legally binding and non-binding, which influence the sector's value chains in complex and varied ways. Understanding these dynamics requires acknowledging the varied interplay between environmental protection, economic growth and sectoral priorities, and recognising the need for coherent governance.

The picture is further complicated by the diversity of wood value chains, spanning sectors such as construction, furniture, energy, paper, plastics, and textiles. Policy instruments can have different impacts depending on where companies operate within the supply and value chains. In other words, EU policies exert differing impacts on wood-based industries depending on their position within the value and supply chain. This comes in two formats:

Diverse policy exposure: a furniture company faces distinct regulatory challenges compared to a sawmill or bioplastics producer. For instance, the Single-Use Plastics Directive directly affects bioplastic producers by altering the regulatory framework for cellulose-based materials.

Definition of the sector linked to wood-based policies: what constitutes relevant wood-based policies often depends on how the sector is defined and the varying exposure of subsectors to specific policy objectives.

The third EU Forest Strategy highlights forestry-related measures but fails to provide a comprehensive overview of policies affecting wood-based industries. These omissions in the EU Forest Strategy include the following key areas.

- **Industrial and environmental regulations:** energy production and use, industrial emissions, air quality and waste management
- **Health, safety and trade-related policies:** product safety, health and safety at work, packaging, trade defence and tariffs
- **Phytosanitary and transport standards:** requirements for road safety, waste shipment and marine fuels.

The wood-based sector must navigate competing priorities, such as **environmental protection**

versus economic growth (e.g., balancing biodiversity-friendly afforestation guidelines, which may restrict wood supply, with the need to foster economic development through innovative wood products), and **carbon sequestration versus fossil dependency** (e.g., weighing the role of harvested wood products in reducing reliance on fossil materials against their function as carbon sinks).

To address these challenges effectively, critical action is needed:

- **Enhance policy coherence through cross-sectoral coordination** – e.g., develop integrative governance mechanisms that bridge the gaps between forestry and wood-based industrial policies.
- **Recognise the role of wood in reducing fossil fuel dependency** – e.g. through promoting carbon storage of harvested wood products (HWP) into all climate policies
- **Expand financial support for innovation** – e.g., increase funding for research and innovation in the wood-based sector to drive sustainable practices and technological advancements, and
- **Monitor and adapt policies** – e.g., establish robust monitoring systems and adapt policies based on measurable outcomes to ensure they remain relevant and effective).

This fragmentation underscores the need for integrative governance mechanisms that align policy objectives across sectors and ensure consistency. To fully address the complexities of wood-based policy, it is essential to consider the entire value chain, including construction, textiles, bioplastics and chemicals, which increasingly rely on wood as a raw material. An integrative approach should consider the following aspects.

- **Prioritise sustainable practices:** focus on producing carbon-neutral biomass, sustainable wood and non-wood products, and environmentally sound processing of these materials
- **Align with broader EU objectives:** policies must support SFM, nature conservation, improved air quality, energy efficiency, fair trade and public health, aligning with the EU's broader bioeconomy and circular economy goals.

Moreover, the complexity of policy instruments influencing the wood-based sector necessitates a shared understanding of what constitutes "wood-based policy" at the EU level. This definition should transcend traditional policy domain boundaries and focus on relevance to specific wood-based value chains. Rather recently WoodPoP[53], a policy dialogue platform situated in Europe and that aims to advance the sustainable use of wood, has agreed a definition for sustainable wood policy and related principles. It is backed by several EU ministers and represents a promising step toward filling this gap by fostering a unified and comprehensive approach to wood-based sector governance.

Ultimately, there are many ways to actively participate in the policy-making process in Europe and the European Union. Timing, and continuous horizon scanning are important for policymakers, scientists, and stakeholders alike.

[53] https://woodpop.eu/ (accessed 15.01.25).

Photo by: Василь Івасюк on Adobe Stock

Photo by: JSF15photo on Adobe Stock

References

- AGGESTAM, F. 2024a. Crosswalking the EU Nature Restoration Regulation and the Kunming-Montreal Global Biodiversity Framework: A Forest-Centred Outlook. Sustainability, 16, 4863.
- AGGESTAM, F. 2024b. Through Smoke to Policy: Framing the EU Forest Fire Policy Landscape. Land, 13, 1450.
- AGGESTAM, F. 2025. European Forest Policy and Governance: An Integrative Analytical Framework, Milton, United Kingdom, Routledge.
- AGGESTAM, F. & GIURCA, A. 2021. The Art of the "Green" Deal: Policy pathways for the EU Forest Strategy. Forest Policy and Economics, 128, 102456.
- AGGESTAM, F. & GIURCA, A. 2022. Implementing Circular-Bioeconomy Principles across Two Value Chains of the Wood-Based Sector: A Conceptual Approach. Land [Online], 11.
- AGGESTAM, F., KACPRZAK, A. & WOLLNIK, R. 2021. Circularity concepts in forest-based industries. In: ECE (ed.). Geneva: United Nations Economic Commission for Europe.
- AGGESTAM, F. & PÜLZL, H. 2018. Coordinating the uncoordinated: the EU Forest Strategy. Forests, 9, 125, DOI: https://doi.org/10.3390/f9030125.
- AGGESTAM, F. & PÜLZL, H. 2020. Downloading Europe: A Regional Comparison in the Uptake of the EU Forest Action Plan. Sustainability, 12.
- AGGESTAM, F., WINKEL, G., PÜLZL, H. & SOTIROV, M. 2017. The EU policy framework. In: WINKEL, G. (ed.) Towards a sustainable European forest based bioeconomy – assessment and the way forward. What Science Can Tell Us 8. European Forest Institute.
- ALLIANCE ENVIRONNEMENT, ORÉADE-BRÈCHE SARL, IEEP & EFI. 2018. Evaluation study of the forestry measures under Rural Development. Luxembourg: Publications Office of the European Union.
- ARTS, B., GIESSEN, L. & VISSEREN-HAMAKERS, I. 2013. International Forest Policy and Europe: Four pathways of mutual influence. In: PÜLZL, H., HOGL, K., KLEINSCHMIT, D., WYDRA, D., ARTS, B., MAYER, P., PALAHI, M., WINKEL, G. & WOLFSLEHNER, B. (eds.) European Forest Governance: Issues at Stake and the Way Forward. EFI Series: What Science can tell us; 37-43.
- BAJPAI, P. 2019. Biobased polymers: properties and applications in packaging, Amsterdam, The Netherlands, Elsevier.
- BEGEMANN, A., DOLRIIS, C. & WINKEL, G. 2023. Rich forests, rich people? Sustainable finance and its links to forests. Journal of Environmental Management, 326, 116808.
- BIBER, P., FELTON, A., NIEUWENHUIS, M., LINDBLADH, M., BLACK, K., BAHÝL, J., BINGÖL, O., BORGES, J. G., BOTEQUIM, B., BRUKAS, V., BUGALHO, M. N., CORRADINI, G., ERIKSSON, L. O., FORSELL, N., HENGEVELD, G. M., HOOGSTRA-KLEIN, M. A., KADıOĞULLARı, A. I., KARAHALIL, U., LODIN, I., LUNDHOLM, A., MAKRICKIENĖ, E., MASIERO, M., MOZGERIS, G., PIVORIŪNAS, N., POSCHENRIEDER, W., PRETZSCH, H., SEDMÁK, R. & TUČEK, J. 2020. Forest Biodiversity, Carbon Sequestration, and Wood Production: Modeling Synergies and Trade-Offs for Ten Forest Landscapes Across Europe. Frontiers in Ecology and Evolution, 8.
- BREEAM 2021. BREEAM International New Construction V6 - Technical Standard Summary for US projects. BRE Global Limited
- CARO, D., LODATO, C., DAMGAARD, A., CRISTÓBAL, J., FOSTER, G., FLACHENECKER, F. & TONINI, D. 2024. Environmental and socio-economic effects of construction and demolition waste recycling in the European Union. Science of The Total Environment, 908, 168295.
- CHAKRABORTY, D., CICEU, A., BALLIAN, D., BENITO GARZÓN, M., BOLTE, A., BOZIC, G., BUCHACHER, R., ČEPL, J., CREMER, E., DUCOUSSO, A., GAVIRIA, J., GEORGE, J. P., HARDTKE, A., IVANKOVIC, M., KLISZ, M., KOWALCZYK, J., KREMER, A., LSTIBŮREK, M., LONGAUER, R., MIHAI, G., NAGY, L., PETKOVA, K., POPOV, E., SCHIRMER, R., SKRØPPA, T., SOLVIN, T. M., STEFFENREM, A., STEJSKAL, J., STOJNIC, S., VOLMER, K. & SCHUELER, S. 2024. Assisted tree migration can preserve the European forest carbon sink under climate change. Nature Climate Change, 14, 845-852.
- DANGEL, U. 2017. Turning Point in Timber Construction: a New Economy. Basel, Switzerland: Birkhäuser.
- DIETERLE, G. & KARSENTY, A. 2020. "Wood Security": the importance of incentives and economic valorisation in conserving and expanding forests. International Forestry Review, 22, 81-92.

- EPRS 2023a. Carbon border adjustment mechanism. In: MORGADO SIMÕES, H. (ed.) AT A GLANCE - Fit for 55 explainer. Brussels, Belgium: European Parliamentary Research Service.
- EPRS 2023b. Energy Performance of Buildings Directive. In: DULIAN, M. (ed.) AT A GLANCE - Fit for 55 explainer. Brussels, Belgium: European Parliamentary Research Service.
- EPRS 2023c. Land use, land-use change and forestry. In: JENSEN, L. (ed.) AT A GLANCE - Fit for 55 explainer. Brussels, Belgium: European Parliamentary Research Service.
- EPRS 2023d. Renewable Energy Directive. In: WIDUTO, A. (ed.) AT A GLANCE - Fit for 55 explainer. Brussels, Belgium: European Parliamentary Research Service.
- EPRS 2023e. Revised Energy Efficiency Directive. In: DULIAN, M. (ed.) AT A GLANCE - Fit for 55 explainer. Brussels, Belgium: European Parliamentary Research Service.
- HAFNER, A. 2013. Voluntary building certification. In: KUITTINEN, M., LUDVIG, A. & WEISS, G. (eds.) Wood in Carbon Efficient Construction. Tools, methods and applications. Brussels: CEI-Bois.
- HETEMÄKI, L., PALAHÍ, M. & NASI, R. 2020. Seeing the wood in the forests. Knowledge to Action 01. Joensuu: European Forest Institute.
- HURMEKOSKI, E., LOVRIĆ, M., LOVRIĆ, N., HETEMÄKI, L. & WINKEL, G. 2019. Frontiers of the forest-based bioeconomy – A European Delphi study. Forest Policy and Economics, 102, 86-99.
- JONSSON, R. & SOTIROV, M. 2025. Future Wood Availability in Europe in Light of Climate and Energy Policy and Geopolitical Developments—A Wood Resource Balance-Based Assessment. Sustainability [Online], 17.
- KANEVSKAIA, O. 2024. Is it really all about the money? The future of European standardization after PublicResourceOrg. European Journal of Risk Regulation, 1-8.
- KAUFMANN, H. & NERDINGER, W. 2012. Building with Timber, Paths into the Future. New York, USA: Prestel.
- KLEINSCHMIT, D., PÜLZL, H., SECCO, L., SERGENT, A. & WALLIN, I. 2018. Orchestration in political processes: Involvement of experts, citizens, and participatory professionals in forest policy making. Forest Policy Econ., 89, 4-15. https://doi.org/10.1016/j.forpol.2017.12.011.
- KORHONEN, J., GIURCA, A., BROCKHAUS, M. & TOPPINEN, A. 2018. Actors and Politics in Finland's Forest-Based Bioeconomy Network. Sustainability, 10.
- LAZDINIS, M., ANGELSTAM, P. & LAZDINIS, I. 2009. Governing Forests of the European Union: Institutional Framework for Interest Representation at the European Community Level. Environmental Policy and Governance, 19, 44–56.
- LAZDINIS, M., ANGELSTAM, P. & PÜLZL, H. 2019. Towards sustainable forest management in the European Union through polycentric forest governance and an integrated landscape approach. Landscape Ecology, 34, 1737-1749.
- LIGNATEC 2015. Climate-Friendly and Energy-Efficient Construction with Wood: Basic Information and Implementation. Zurich, Switzerland: Lignum.
- LINDNER, M., HANEWINKEL, M. & NABUURS, G.-J. 2017. How can a forest-based bioeconomy contribute to climate change adaptation and mitigation? In: WINKEL, G. (ed.) Towards a sustainable European forest-based bioeconomy – assessment and the way forward. Joensuu: European Forest Institute.
- LUDVIG, A., BRAUN, M., HESSER, F., RANACHER, L., FRITZ, D., GSCHWANTNER, T., JANDL, R., KINDERMANN, G., LEDERMANN, T., PÖLZ, W., SCHADAUER, K., SCHMID, B. F., SCHMID, C., SCHWARZBAUER, P., WEISS, G., WOLFSLEHNER, B. & WEISS, P. 2021. Comparing policy options for carbon efficiency in the wood value chain: Evidence from Austria. Journal of Cleaner Production, 292, 125985.
- LUDVIG, A. & WEISS, G. 2013. Governing carbon efficiency. The international regime of standards in wooden construction. Osterreichische Zeitschrift für Politikwissenschaft, 42, 329-342.
- MUYS, B., ANGELSTAM, P., BAUHUS, J., BOURIAUD, L., JACTEL, H., KRAIGHER, H., MÜLLER, J., PETTORELLI, N., PÖTZELSBERGER, E., PRIMMER, E., SVOBODA, M., THORSEN, B. J. & VAN MEERBEEK, K. 2022. Forest Biodiversity in Europe. From Science to Policy 13. Joensuu, Finland: European Forest Institute.
- NABUURS, G. J., BEGEMANN, A., LINSER, S., PAILLET, Y., PETTENELLA, D. & ERMGASSEN, S. 2024. Sustainable finance and forest biodiversity criteria. From Science to Policy 16. Joensuu, Finland: European Forest Institute.
- OBERFRANCOVÁ, L. & WOLLENSAK, M. 2021. Architectural design quality and social sustainability in building certification systems. Architecture Papers of the Faculty of Architecture and Design STU, 26, 13-23.
- ORFANIDOU, V. S., RACHANIOTIS, N. P., TSOULFAS, G. T. & CHONDROKOUKIS, G. P. 2023. Life Cycle Costing Implementation in Green Public Procurement: A Case Study from the Greek Public Sector. Sustainability [Online], 15.

- OSMANI, M. & VILLORIA-SÁEZ, P. 2019. Chapter 19 - Current and Emerging Construction Waste Management Status, Trends and Approaches. In: LETCHER, T. M. & VALLERO, D. A. (eds.) Waste (Second Edition). Academic Press.
- PAROBEK, J. & PALUŠ, H. 2024. Wood-Based Waste Management—Important Resources for Construction of the Built Environment. In: BRAGANÇA, L., CVETKOVSKA, M., ASKAR, R. & UNGUREANU, V. (eds.) Creating a Roadmap Towards Circularity in the Built Environment. Cham: Springer Nature Switzerland.
- PETTENELLA, D. 1990. EEC FORESTRY POLICY DEVELOPMENTS. First Annual Conference on AGRICULTURAL POLICY AND THE ENVIRONMENT. Motta di Livenza, Italy: University of Minnesota.
- POLLI, G., SÁ, A. & PAVANI, B. 2022. Qualitative Analysis of Sustainability Certification Systems Based on ISO 21929-1. U.Porto Journal of Engineering, 8, 47-64.
- PÜLZL, H., WYDRA, D. & HOGL, K. 2018. Piecemeal Integration: Explaining and Understanding 60 Years of European Union Forest Policy-Making. Forests, 9, 719.
- PURKUS, A., HAGEMANN, N., BEDTKE, N. & GAWEL, E. 2018. Towards a sustainable innovation system for the German wood-based bioeconomy: Implications for policy design. Journal of Cleaner Production, 172, 3955-3968.
- RIVERA LEÓN, L., BOUGAS, K., AGGESTAM, F., PÜLZL, H., ZOBOLI, E., RAVET, J., GRINIECE, E., VERMEER, J., MAROULIS, N., ETTWEIN, F., VAN BRUSSELEN J. & GREEN, T. 2016. An assessment of the cumulative cost impact of specified EU legislation and policies on the EU forest-based industries. Brussels: DG GROW.
- ROCK, J. & BOLTE, A. 2011. Auswirkungen der Waldbewirtschaftung 2002 bis 2008 auf die CO2-Bilanz. AFZ-DerWald, 66, 22-24.
- RÜTER, S. 2011. Welchen Beitrag leisten Holzprodukte zur CO2-Bilanz? AFZ, der Wald, 15, 15-18.
- SÁNCHEZ CORDERO, A., GÓMEZ MELGAR, S. & ANDÚJAR MÁRQUEZ, J. M. 2020. Green Building Rating Systems and the New Framework Level(s): A Critical Review of Sustainability Certification within Europe. Energies [Online], 13.
- SCHULZ, T., LIEBERHERR, E. & ZABEL, A. 2022. How national bioeconomy strategies address governance challenges arising from forest-related trade-offs. Journal of Environmental Policy & Planning, 24, 123-136.
- SCHWARZBAUER, P., BRAUN, M. & STERN, T. 2015. Klimaschutz durch den Aufbau eines Harvested Wood Product Pools: Von der Berechnung von THG Emissionseinsparungen bis zur Steuerung der Speicherwirkung durch Harvested Wood Products. Endbericht an den Klima und Energiefonds Österreich. Wien: PjNr. B287609.
- SHARMINA, M., PAPPAS, D., SCOTT, K. & GALLEGO-SCHMID, A. 2023. Impact of Circular Economy Measures in the European Union Built Environment on a Net-Zero Target. Circular Economy and Sustainability, 3, 1989-2008.
- STEURER, R. 2013. Disentangling governance: a synoptic view of regulation by government, business and civil society. Policy Sciences, 46, 387-410.
- STUBENRAUCH, J., GARSKE, B., EKARDT, F. & HAGEMANN, K. 2022. European Forest Governance: Status Quo and Optimising Options with Regard to the Paris Climate Target. Sustainability, 14, 4365.
- UN-HABITAT 2017. Building Sustainability Assessment and Benchmarking: An Introduction. In: HERDA, G. (ed.). Nairobi: United Nations Settlements Programme (UN-Habitat).
- UNEP 2023. Building Materials and the Climate: Constructing a New Future. Nairobi, Kenya: United Nations Environment Programme.
- USGBC 2024. Accelerating Green Buildings to Improve Lives and Livelihoods. USGBC Impact Report. Washington D.C., USA: U.S. Green Building Council and Green Business Certification, Inc.
- VERKERK, P. J., DELACOTE, P., HURMEKOSKI, E., KUNTTU, J., MATTHEWS, R., MÄKIPÄÄ, R., MOSLEY, F., PERUGINI, L., REYER, C. P. O., ROE, S. & TRØMBORG, E. 2022. Forest-based climate change mitigation and adaptation in Europe. From Science to Policy 14. Joensuu, Finland: European Forest Institute.
- WEISS, G., AGGESTAM, F., LUDVIG, A. & PÜLZL, H. 2021. Holzpolitik in Europa: Holzrelevante Politik, institutioneller Rahmen und Akteurslandschaft auf EU-Ebene. Waldpolitik Blickwinkel No. 2/2021. Wien: Universität für Bodenkultur, Europäisches Forstinstitut, Wien.
- WINKEL, G., AGGESTAM, F., SOTIROV, M. & WEISS, G. 2013. Forest Policy in the European Union. In: PÜLZL, H., HOGL, K., KLEINSCHMIT, D., WYDRA, D., ARTS, B., MAYER, P., PALAHÍ, M., WINKEL, G. & WOLFSLEHNER, B. (eds.) European Forest Governance: Issues at Stake and the Way Forward.
- WINKEL, G. & SOTIROV, M. 2016. Whose integration is this? European forest policy between the gospel of coordination, institutional competition, and a new spirit of integration. Environ. Plann. C., 34, 496-514, https://doi.org/10.1068/c1356j.

- WOLFSLEHNER, B., AGGESTAM, F., PULZL, H., HENDRIKS, K., LINDNER, M., SOTIROV, M., KULIKOVA, E., SECCO, L., LOVRIC, M., NABUURS, G.-J., HURMEKOSKI, E., PETTENELLA, D., ARETS, E., BAULENAS SERRA, E., BOZZANO, M., DERKS, J., GATTO, P., LINSER, S., MASIERO, M., MAVSAR, R. & GIESSEN, L. 2019. Study on progress in implementing the EU Forest Strategy. Final report. Luxembourg: Publications Office of the European Union. DOI:10.2762/160685.
- WOLFSLEHNER, B., PÜLZL, H., KLEINSCHMIT, D., AGGESTAM, F., WINKEL, G., CANDEL, J., ECKERBERG, K., FEINDT, P., MCDERMOTT, C., SECCO, L., SOTIROV, M., LACKNER, M. & LAZYA ROUX, J. 2020. European forest governance post-2020. From Science to Policy 10. Joensuu, Finland: European Forest Institute. https://doi.org/10.36333/fs10
- ZHU, S. & FENG, H. 2024. Enhancing circularity of wood waste through deconstruction in building sector. Journal of Cleaner Production, 485, 144382.

Annex: EU documents relevant to wood policy

- COUNCIL REGULATION 880/92. Community eco-label award scheme. No L 99 / 1. Brussels: Official Journal of the European Communities.
- COUNCIL REGULATION 2658/87. Tariff and statistical nomenclature and on the Common Customs Tariff. In: EU, C. O. T. (ed.). Brussels, Belgium: Official Journal of the European Communities.
- DIRECTIVE 89/391/EEC. The introduction of measures to encourage improvements in the safety and health of workers at work. In: COUNCIL, E. (ed.) L183/1. Brussels: Official Journal of the European Union.
- DIRECTIVE 91/271/EEC. Urban waste water treatment. L 135/40. Brussels: Official Journal of the European Communities.
- DIRECTIVE 92/43/EEC. The conservation of natural habitats and wild fauna and flora. L 206/7. Official Journal of the European Union: European Council.
- DIRECTIVE 94/62/EC. Packaging and packaging waste. L 365/10 Brussels: Official Journal of the European Communities.
- DIRECTIVE 98/24/EC. Protection of the health and safety of workers from the risks related to chemical agents at work. L 131/11. Brussels: Official Journal of the European Communities.
- DIRECTIVE 1999/31/EC. Landfill of waste. L 182/1. Brussels: Official Journal of the European Communities.
- DIRECTIVE 2000/60/EC. Establishing a framework for Community action in the field of water policy. L 327/1. Brussels: Official Journal of the European Communities.
- DIRECTIVE 2001/95/EC. General product safety. In: COUNCIL, E. P. A. (ed.) L 11/4. Brussels, Belgium: Official Journal of the European Communities.
- DIRECTIVE 2003/88/EC. Organisation of working time. In: COUNCIL, E. P. A. (ed.) L 299/9. Brussels: Official Journal of the European Union.
- DIRECTIVE 2004/35/EC. Environmental liability with regard to the prevention and remedying of environmental damage. L 143/56. Brussels: Official Journal of the European Union
- DIRECTIVE 2004/37/EC. Protection of workers from the risks related to exposure to carcinogens or mutagens at work L 158/50. Brussels: Official Journal of the European Union.
- DIRECTIVE 2008/50/EC. Ambient air quality and cleaner air for Europe Official Journal of the European Communities: European Council.
- DIRECTIVE 2008/98/EC. On waste and repealing certain Directives. Official Journal of the European Communities: European Council.
- DIRECTIVE 2009/28/EC. Promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC. L 140/17. Official Journal of the European Union: European Parliament abd Council.
- DIRECTIVE 2009/30/EC. Specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions. In: COUNCIL, E. P. A. O. T. (ed.). Brussels: Official Journal of the European Union.
- DIRECTIVE 2009/147/EC. Conservation of wild birds. In: COUNCIL, E. P. A. O. T. (ed.). Brussels: Official Journal of the European Union.
- DIRECTIVE 2010/75/EU. Industrial emissions (integrated pollution prevention and control). Official Journal of the European Communities: European Council.
- DIRECTIVE 2012/27/EU. Energy efficiency. In: COUNCIL, E. P. A. O. T. (ed.). Brussels: Official Journal of the European Union.
- DIRECTIVE 2012/33/EU. Sulphur content of marine fuels. In: COUNCIL, E. P. A. (ed.) L 327/1. Brussels: Official Journal of the European Union.
- DIRECTIVE 2016/802. Reduction in the sulphur content of certain liquid fuels. L 132/58 Brussels: Official Journal of the European Union
- DIRECTIVE 2016/2284. Directive on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC. In: PARLIAMENT, E. (ed.) L 344/1. Brussels: Official Journal of the European Union.
- DIRECTIVE 2018/844. Amending Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency. L 156/75. Brussels: Official Journal of the European Union.
- DIRECTIVE 2018/2001. Promotion of the use of energy from renewable sources. L 328/82 Brussels: Official Journal of the European Union
- DIRECTIVE 2019/904. Reduction of the impact of certain plastic products on the environment. In: PARLIAMENT, E. (ed.) L 155/1. Brussels: Official Journal of the European Union.
- DIRECTIVE 2023/1791. Energy efficiency and amending Regulation (EU) 2023/955. In: COUNCIL, E. P. A. (ed.) L 231/1. Brussels, Belgium: Official Journal of the European Union.

- DIRECTIVE 2023/2413. Amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652. In: COUNCIL, E. P. A. (ed.). Brussels, Belgium: Official Journal of the European Union.
- DIRECTIVE 2024/1203. Protection of the environment through criminal law and replacing Directives 2008/99/EC and 2009/123/EC. In: COUNCIL, E. P. A. (ed.). Brussels, Belgium: Official Journal of the European Union.
- DIRECTIVE 2024/1275. Energy performance of buildings. In: COUNCIL, E. P. A. (ed.). Brussels, Belgium: Official Journal of the European Union.
- DIRECTIVE 2024/1785. Amending Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions (integrated pollution prevention and control) and Council Directive 1999/31/EC on the landfill of waste In: COUNCIL, E. P. A. (ed.). Brussels, Belgium: Official Journal of the European Union.
- DIRECTIVE 2024/2881. Ambient air quality and cleaner air for Europe (recast). In: COUNCIL, E. P. A. (ed.). Brussels, Belgium: Official Journal of the European Union.
- EC 1974. PROPOSAI, FOR A COUNCIL DIRECTIVE CONCERNING FORESTRY MEASURES. COM(74)170 final. Brussels: European Commission.
- EC 1978. Proposal for a Council resolution concerning the objectives and principles of forestry policy. COM (1978) 621. Brussels: European Commission.
- EC 1998. A forestry strategy for the European Union. COM 1998/649 final. Brussels: European Commission.
- EC 2005. Biomass Action Plan. COM(2005) 628 final. Brussels: European Commission.
- EC 2010. Sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling In: COMMISSION, E. (ed.) COM(2010)11 final. Brussels.
- EC 2013. A new EU Forest Strategy: for forests and the forest-based sector. COM(2013) 659 final. Brussels: European Commisson.
- EC 2014. An EU Strategic Framework on Health and Safety at Work 2014-2020. COM(2014) 332 final. Brussels.
- EC 2016. EU GPP Criteria for Office Building Design, Construction and Management. SWD (2016) 180. Brussels: European Commission.
- EC 2017. EU green public procurement criteria for textiles products and services. SWD(2017) 231 final. Brussels: European Commission.
- EC 2018a. Bioeconomy: the European way to use our natural resources Action plan 2018. Brussels: European Commission.
- EC 2018b. EU GPP Criteria for Furniture. SWD(2017) 283 final/2. Brussels: European Commission.
- EC 2018c. A sustainable Bioeconomy for Europe: Strengthening the connection between economy, society and the environment. COM(2018) 673 final. Brussels: European Commission.
- EC 2019. The European Green Deal. COM(2019) 640 final. Brussels: European Commission.
- EC 2020a. EU Biodiversity Strategy for 2030: Bringing nature back into our lives. COM(2020) 380 final. Brussels: European Commission.
- EC 2020b. A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system. COM(2020) 381 final. Brussels: European Commission.
- EC 2020c. A new Circular Economy Action Plan: For a cleaner and more competitive Europe. COM(2020) 98 final. Brussels: European Commission.
- EC 2020d. A New Industrial Strategy for Europe. COM(2020) 102 final. Brussels: European Commission.
- EC 2021a. Annex to the New EU Forest Strategy for 2030: Roadmap of the Commission’s action to implement the pledge to plant 3 billion additional trees by 2030 in the EU. COM(2021) 572 final. Brussels: European Commission.
- EC 2021b. EU green public procurement criteria for road transport. SWD(2021) 296 final. Brussels: European Commission.
- EC 2021c. EU strategic framework on health and safety at work 2021-2027 Occupational safety and health in a changing world of work. COM(2021) 323 final. Brussels, Belgium: European Commission.
- EC 2021d. ‘Fit for 55’: delivering the EU’s 2030 Climate Target on the way to climate neutrality. COM(2021) 550 final. Brussels: European Commission.
- EC 2021e. Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change. COM(2021) 82 final. Brussels: European Commission.
- EC 2021f. New EU Forest Strategy for 2030. COM(2021) 572 final. Brussels: European Commission.
- EC 2021g. Updating the 2020 New Industrial Strategy: Building a stronger Single Market for Europe’s recovery. COM(2021) 350 final. Brussels: European Commission.
- EC 2022a. Background data collection and life cycle assessment for construction and demolition waste (CDW) management, Publications Office of the European Union.
- EC 2022b. Ecodesign and Energy Labelling Working Plan 2022-2024. In: COMMISSION, E. (ed.) C 182/1. Brussels: Official Journal of the European Union.

- EC 2022c. EU policy framework on biobased, biodegradable and compostable plastics. COM(2022) 682 final. Brussels, Belgium: European Commission.
- EC 2022d. EU Strategy for Sustainable and Circular Textiles. COM(2022) 141 final. Brussels, Belgium: European Commission.
- EC 2022e. On making sustainable products the norm. COM(2022) 140 final. Brussels: European Commission.
- EC 2022f. Opinion of the European Committee of the Regions — EU Forest Strategy for 2030. C 301/61. Brussels: Official Journal of the European Union.
- EC 2022g. Proposal for a regulation establishing a Union certification framework for carbon removals. COM(2022) 672 final. Brussels, Belgium: European Commission.
- EC 2022h. Proposal for a Regulation laying down harmonised conditions for the marketing of construction products, amending Regulation (EU) 2019/1020 and repealing Regulation (EU) 305/2011. COM(2022) 144 final. Brussels: European Commission.
- EC 2022i. Proposal for a Regulation on type-approval of motor vehicles and engines and of systems, components and separate technical units intended for such vehicles, with respect to their emissions and battery durability (Euro 7) and repealing Regulations (EC) No 715/2007 and (EC) No 595/2009. COM(2022) 586 final. Brussels: European Commission.
- EC 2022j. Proposal for amending Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures. COM(2022) 748 final. Brussels, Belgium: European Commission.
- EC 2023a. Approved 28 CAP Strategic Plans (2023-2027): Summary overview for 27 Member States, Facts and figures. Brussels: European Commission.
- EC 2023b. A Green Deal Industrial Plan for the Net-Zero Age. COM(2023) 62 final. Brussels, Belgium: European Commission.
- EC 2023c. Proposal for a directive on substantiation and communication of explicit environmental claims (Green Claims Directive). COM(2023) 166 final. Brussels, Belgium: European Commission.
- EC 2023d. Proposal for amending Directive 2008/98/EC on waste. COM(2023) 420 final. Brussels, Belgium: European Commission.
- EC 2023e. Proposal for amending Regulation (EU) 2016/2031 of the European Parliament and of the Council as regards multiannual survey programmes, notifications concerning the presence of regulated non-quarantine pests, temporary derogations from import prohibitions and special import requirements and establishment of procedures for granting them, temporary import requirements for high risk plants, plant products and other objects, the establishment of procedures for the listing of high risk plants, the content of phytosanitary certificates, the use of plant passports and as regards certain reporting requirements for demarcated areas and surveys of pest. COM(2023) 661 final. Brussels, Belgium: European Commission.
- EC 2024a. Building the future with nature: Boosting Biotechnology and Biomanufacturing in the EU. COM(2024) 137 final. Brussels, Belgium: European Commission.
- EC 2024b. New European Bauhaus Investment Guidelines. Ares(2024)4318756. Brussels, Belgium: European Commission.
- EC 2025. The Clean Industrial Deal: A joint roadmap for competitiveness and decarbonisation. COM(2025) 85 final. Brussels, Belgium: European Commission.
- IMPLEMENTING REGULATION 2015/1754. Amending Annex I to Council Regulation (EEC) No 2658/87 on the tariff and statistical nomenclature and on the Common Customs Tariff. In: COMMISSION, E. (ed.). Brussels, Belgium: Official Journal of the European Union.
- REGULATION 305/2011. Laying down harmonised conditions for the marketing of construction products In: COUNCIL, E. P. A. O. T. (ed.). Brussels: Official Journal of the European Union.
- REGULATION 528/2012 Making available on the market and use of biocidal products (BPR) In: COUNCIL, E. P. A. O. T. (ed.). Brussels: Official Journal of the European Communities.
- REGULATION 597/2009. Protection against subsidised imports from countries not members of the European Community. In: COUNCIL, E. P. A. (ed.) L 188/93. Brussels: Official Journal of the European Union.
- REGULATION 995/2010. Laying down the obligations of operators who place timber and timber products on the market. OJ L 295. Brussels: Official Journal of the European Union.
- REGULATION 1013/2006. Shipments of waste In: COUNCIL, E. P. A. (ed.). Brussels: Official Journal of the European Union.
- REGULATION 1024/2008. Commission Regulation laying down detailed measures for the implementation of Council Regulation (EC) No 2173/2005 on the establishment of a FLEGT licensing scheme for imports of timber into the European Community. In: PARLIAMENT, E. (ed.) L 277/23. Brussels: Official Journal of the European Union.

- REGULATION 1225/2009. Protection against dumped imports from countries not members of the European Community. L 343/51. Brussels: Official Journal of the European Union.
- REGULATION 1272/2008. Classification, labelling and packaging of substances and mixtures (CLP Regulation). In: COUNCIL, E. P. A. O. T. (ed.). Brussels: Official Journal of the European Union.
- REGULATION 1907/2006. Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). OJ L 396. Brussels: Official Journal of the European Communities.
- REGULATION 1935/2004. Materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC. 1935/2004. Brussels: European Parliament.
- REGULATION 2015/757. Monitoring, reporting and verification of carbon dioxide emissions from maritime transport, and amending Directive 2009/16/EC. L 123/55 Brussels: Official Journal of the European Union.
- REGULATION 2017/2321. Amending Regulation (EU) 2016/1036 on protection against dumped imports from countries not members of the European Union and Regulation (EU) 2016/1037 on protection against subsidised imports from countries not members of the European Union. In: COUNCIL, E. P. A. (ed.) L 338/1 Brussels, Belgium: Official Journal of the European Union.
- REGULATION 2018/841. Inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework, and amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU. L 156/1. Brussels: Official Journal of the European Union.
- REGULATION 2019/1381. Transparency and sustainability of the EU risk assessment in the food chain and amending Regulations (EC) No 178/2002, (EC) No 1829/2003, (EC) No 1831/2003, (EC) No 2065/2003, (EC) No 1935/2004, (EC) No 1331/2008, (EC) No 1107/2009, (EU) 2015/2283 and Directive 2001/18/EC. In: PARLIAMENT, E. (ed.) L 231/1. Brussels: Official Journal of the European Union.
- REGULATION 2019/2072. Commission Implementing Regulation establishing uniform conditions for the implementation of Regulation (EU) 2016/2031 of the European Parliament and the Council, as regards protective measures against pests of plants, and repealing Commission Regulation (EC) No 690/2008 and amending Commission Implementing Regulation (EU) 2018/2019. In: COMMISSION, E. (ed.) L 319/1. Brussels: Official Journal of the European Union.
- REGULATION 2020/852. Establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/208. L 198/13. Brussels: Official Journal of the European Union.
- REGULATION 2020/2220. Laying down certain transitional provisions for support from the European Agricultural Fund for Rural Development (EAFRD) and from the European Agricultural Guarantee Fund (EAGF) in the years 2021 and 2022. In: PARLIAMENT, E. (ed.) L 437/1. Brussels: Official Journal of the European Union.
- REGULATION 2021/783. Establishing a Programme for the Environment and Climate Action (LIFE), and repealing Regulation (EU) No 1293/2013. In: PARLIAMENT, E. (ed.) L 172/53. Brussels: Official Journal of the European Union.
- REGULATION 2021/1119. Establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law'). In: PARLIAMENT, E. (ed.) L 243/1. Brussels: Official Journal of the European Union.
- REGULATION 2021/2115. Establishing rules on support for strategic plans to be drawn up by Member States under the common agricultural policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulations (EU) No 1305/2013 and (EU) No 1307/2013. In: COUNCIL, P. A. (ed.) L 435/1. Brussels: Official Journal of the European Union.
- REGULATION 2021/2116. On the financing, management and monitoring of the common agricultural policy and repealing Regulation (EU) No 1306/2013. In: COUNCIL, P. A. (ed.) PE/65/2021/INIT. Brussels: Official Journal of the European Union.
- REGULATION 2021/2117. Establishing a common organisation of the markets in agricultural products, (EU) No 1151/2012 on quality schemes for agricultural products and foodstuffs, (EU) No 251/2014 on the definition, description, presentation, labelling and the protection of geographical indications of aromatised wine products and (EU) No 228/2013 laying down specific measures for agriculture in the outermost regions of the Union. In: COUNCIL, P. A. (ed.) L 435/262. Brussels: Official Journal of the European Union.
- REGULATION 2023/839. Amending Regulation (EU) 2018/841 as regards the scope, simplifying the reporting and compliance rules, and setting out the targets of the Member States for 2030, and Regulation (EU) 2018/1999 as regards improvement in monitoring, reporting, tracking of

progress and review. In: COUNCIL, E. P. A. (ed.) L 107/1. Brussels, Belgium: Official Journal of the European Union.

- REGULATION 2023/956. Establishing a carbon border adjustment mechanism. In: COUNCIL, E. P. A. (ed.) L 130/52. Brussels, Belgium: Official Journal of the European Union.
- REGULATION 2023/1115. Making available on the Union market and the export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010. L 150/206. Brussels: Official Journal of the European Union.
- REGULATION 2024/1157. Shipments of waste, amending Regulations (EU) No 1257/2013 and (EU) 2020/1056 and repealing Regulation (EC) No 1013/2006. In: COUNCIL, E. P. A. (ed.). Brussels, Belgium: Official Journal of the European Union.
- REGULATION 2024/1244. Reporting of environmental data from industrial installations, establishing an Industrial Emissions Portal and repealing Regulation (EC) No 166/2006. In: COUNCIL, E. P. A. (ed.). Brussels, Belgium: Official Journal of the European Union.
- REGULATION 2024/1781. Establishing a framework for the setting of ecodesign requirements for sustainable products, amending Directive (EU) 2020/1828 and Regulation (EU) 2023/1542 and repealing Directive 2009/125/EC. In: COUNCIL, E. P. A. (ed.). Brussels, Belgium: Official Journal of the European Union.
- REGULATION 2024/1991. Regulation (EU) 2024/1991 of the European Parliament and of the Council of 24 June 2024 on nature restoration and amending Regulation (EU) 2022/869. In: COUNCIL, E. P. A. (ed.). Brussels, Belgium: Official Journal of the European Union.
- REGULATION 2024/2769. Commission Delegated Regulation (EU) 2024/2769 of 30 May 2024 supplementing Regulation (EU) No 305/2011 of the European Parliament and of the Council by laying down the applicable systems to assess and verify constancy of performance of construction products in relation to the essential characteristics on environmental sustainability and amending that Regulation as regards the assessment and verification of constancy of performance of construction products based on a modelling approach. In: COUNCIL, E. P. A. (ed.). Brussels, Belgium: Official Journal of the European Union.
- REGULATION 2173/2005. Council Regulation on the establishment of a FLEGT licensing scheme for imports of timber into the European Community. In: COUNCIL, E. (ed.) L 347/1. Brussels: Official Journal of the European Union.

KNOWLEDGE TO ACTION

Knowledge to Action (K2A) is an EFI publication series bringing a wide range of research, projects and initiatives on forest-related issues closer to society. _Knowledge to Action_ complements the existing EFI series, _What Science Can Tell Us_ and _From Science to Policy_.

The European Forest Institute is an international organisation established by European states. EFI conducts research and provides policy advice on forest-related issues. It facilitates and stimulates forest-related networking and promotes the dissemination of unbiased and policy-relevant information on forests and forestry. It also advocates for forest research and for the use of scientifically sound information as a basis for forest policies.

EFI

www.efi.int I April 2025