
Cepi
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EUROPEAN PAPER

EU Green Week 2021
Towards Zero Waste ad Resource Efficiency: closing the Loops in the Pulp and Paper Industry
3 June 2021

European Pulp & Paper Industry's contribution to EU Green Deal

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About Cepi

Represents in Brussels

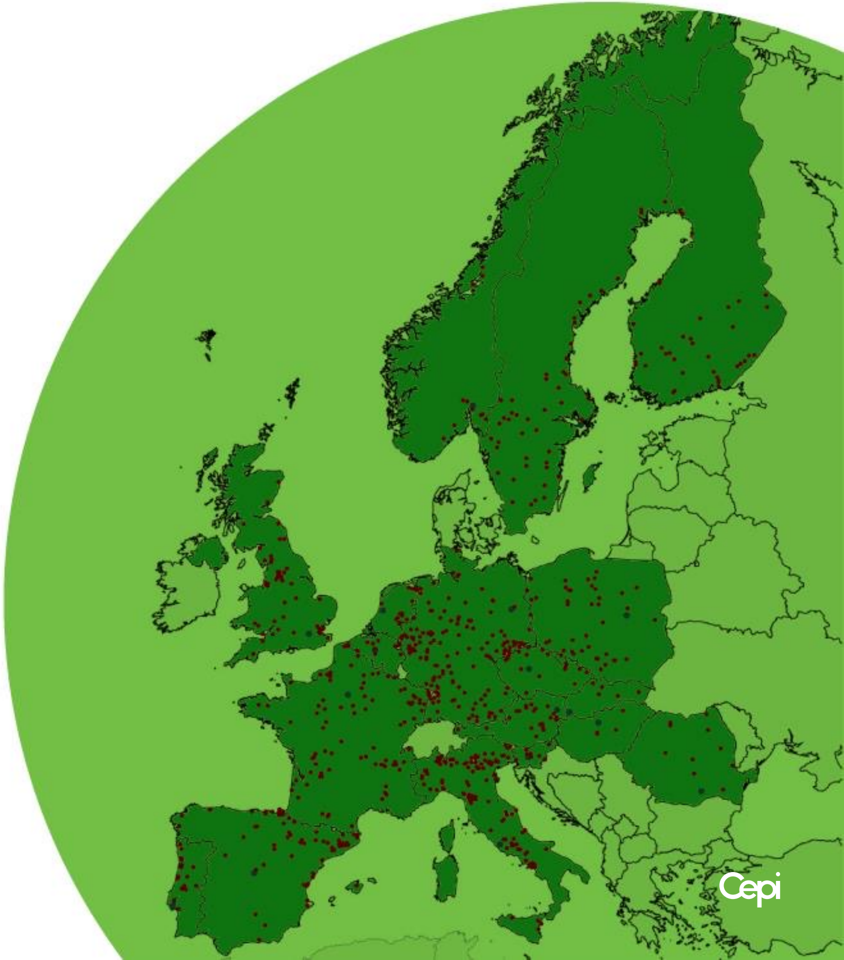
495 pulp, paper and board producing companies

891 mills across Europe

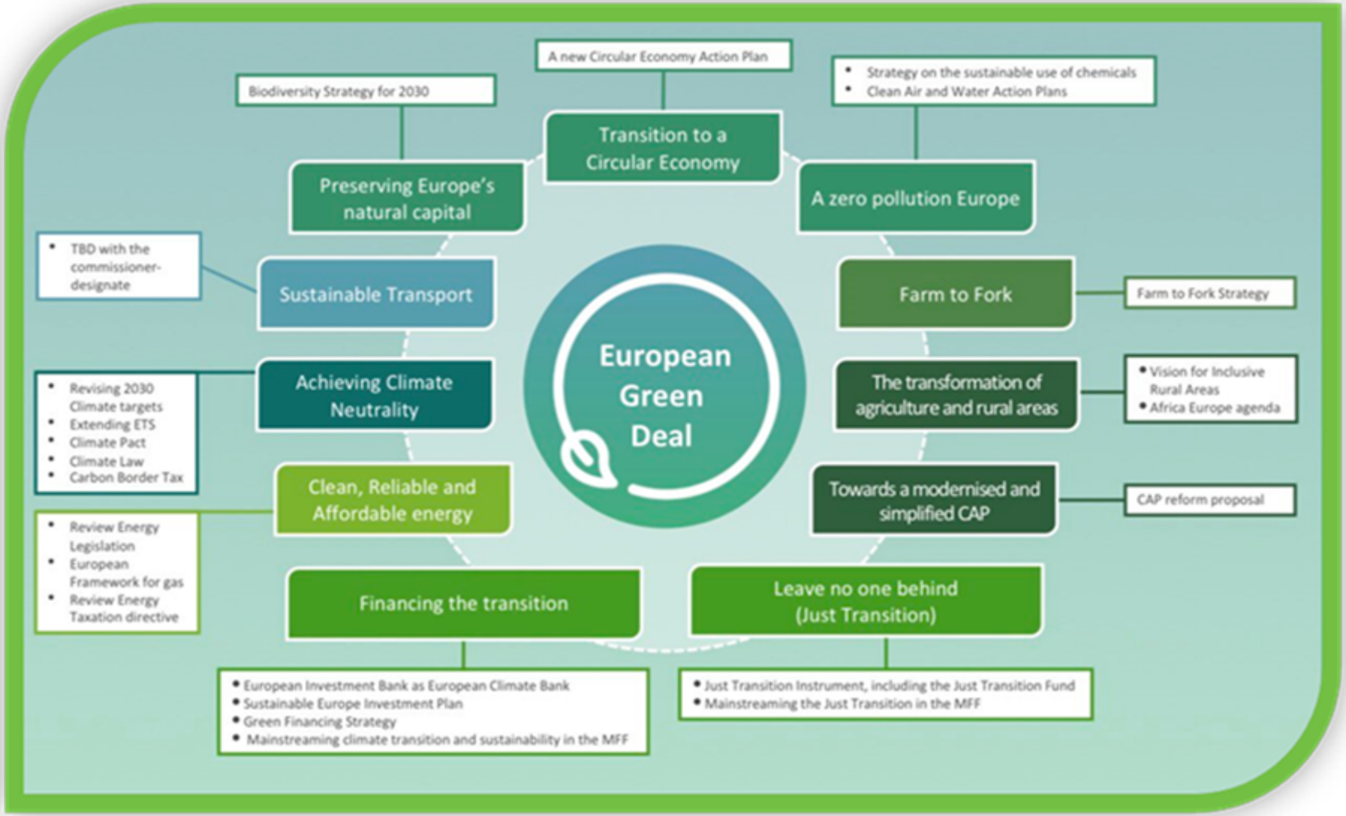
182,000 people employed directly

18 national associations

Working across the value chain –
from forest owners to converters and further



European Green Deal



Our ambition

Cepi was the first industry association to launch its **2050 Roadmap** in 2011, embarking on the journey as a sector.

In 2019, European pulp and paper industry **CEOs declared intention** to be at the forefront, supporting the 2050 carbon neutral society.

In 2020, Cepi **2030 Industry Manifesto**, responds to the tightening climate change policy in the EU and the call for greener and more resilient economy to recover from the Corona crisis.

The European paper industry delivers on its competitiveness and sustainability agenda

75%
WOOD BOUGHT CERTIFIED

2X
HIGHER INVESTMENTS THAN AVERAGE MANUFACTURING

€90
BILLION TURNOVER

€20
BILLION ADDED TO THE EUROPEAN GDP EVERY YEAR

22%
GLOBAL PAPER PRODUCTION

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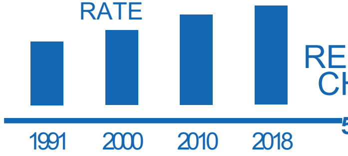
22%
OF PAPER PRODUCTION IS EXPORTED

CO_2
-48%
CO_2 PER TONNE OF PRODUCT SINCE 1990
(-27% SINCE 2005)

60%
OF OUR ENERGY PRODUCTION AND USE IS BIO-BASED (2019)

EUROPEAN PAPER RECYCLING RATE
72.0%



WORLD RECYCLING CHAMPION
58.4% GLOBAL AVERAGE (2017)

Climate effects of the forest-based sector

-447 Mt CO_2e/yr

Forest sink & carbon storage in products remove CO_2

-410 Mt CO_2e/yr

Material substitution prevents CO_2 emissions

+51 Mt CO_2e/yr

Fossil emissions

Our mitigation effect corresponds to 20% (-806 Mt CO2e/yr) of total EU CO_2 emissions

Source: EU FOREST-BASED INDUSTRIES 2050: CO2 effect calculation supporting sector's vision of sustainable choices for a climate-friendly future (Cepi, 2020)

Energy Solutions Forum

- The pulp & paper industry has reduced its **carbon emissions** by 28% from 2005 to date
- It is the largest industrial generator and user of **renewable energy** - 60% of industry's total primary annual energy consumption is biomass-based
- Options to phase out fossil fuel combustion are costly, the imminent risk of **carbon leakage** leaves no room for more expensive alternatives
- Need to timely bring to the market **innovative and sustainable solutions**
- ESF gathers the pulp and paper industry and technology suppliers to accelerate the **development and implementation of carbon-reducing technologies and concepts**, through:
  - Facilitating the exchange of knowledge
  - Ensuring the crucial R&D&I topics are included in European R&D calls
  - Facilitating the set-up of common development projects
  - Supporting suppliers to develop the required technologies and accelerate the implementation
  - Creating a stimulating environment

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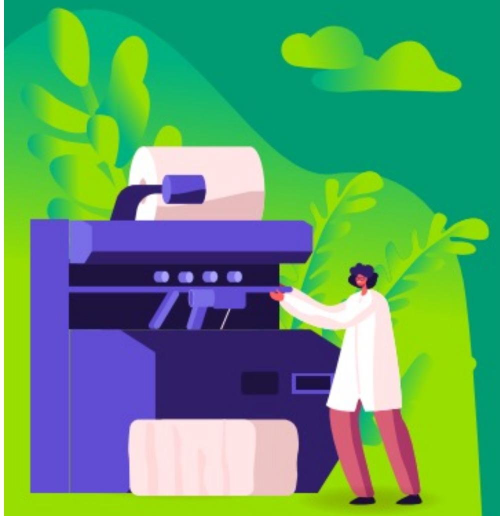
Cepi Energy Solutions Forum



4evergreen

https://4evergreenforum.eu/

A cross-industry alliance with the goal of optimizing fibre-based packaging circularity and climate performance

- Fibre-based packaging represents 38% of all packaging brought to EU market
- We want to contribute to a climate-neutral society by perfecting the circularity of our products
- We are accelerating the development of novel technologies to address targeted sorting or recycling challenges, specifically for barrier paper and board
- Our aim: to raise the overall recycling rate of fibre-based packaging to 90% by 2030

+

Industry adopts 4evergreen's **recyclability** evaluation protocol and its circularity by **design guidelines** for fibre-based packaging

Separate collection streams are available for all fibre-based packaging types, including for those used in household, out-of-home and on-the-go consumption

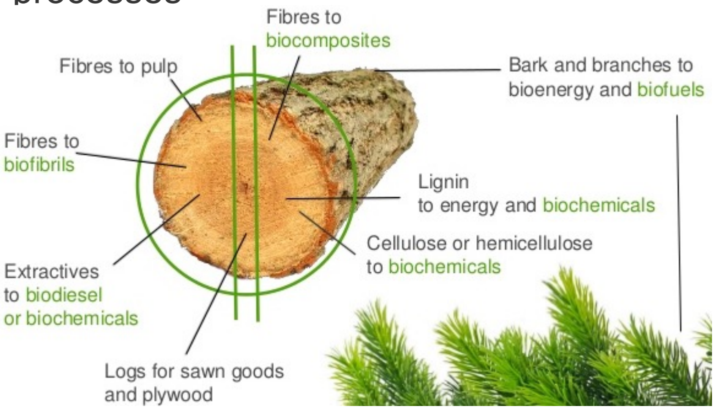
All Paper for Recycling is sorted according to the different paper and board categories specified in the EN643 standard

All collected fibre-based packaging, specifically from household, out-of-home and on-the-go consumption, is **recycled**

Biorefinery: the pulp & paper industry reinventing itself

Biorefinery: The simultaneous production of bioenergy, biomaterials and biochemicals takes place in biorefineries

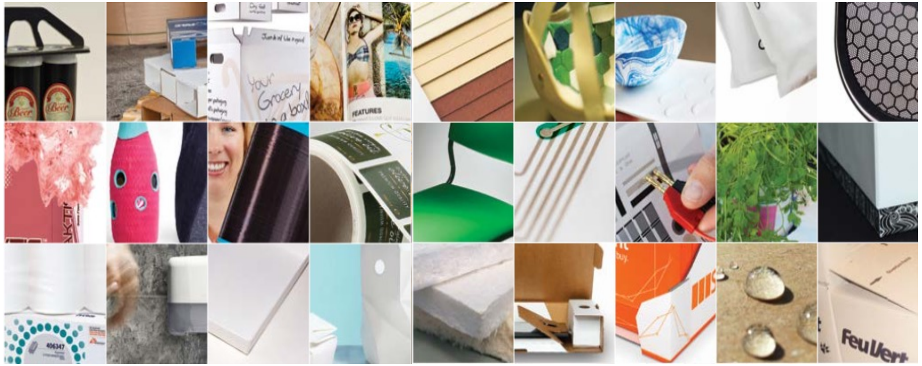
In a biorefinery, analogous to a petroleum refinery, biomass feedstocks are converted into energy, fuels or other products using a range of thermochemical and biochemical processes



- In a recent study, **139** biorefineries were identified. Most of them were based on chemical pulping (**84%**)
- The biggest number of the biorefineries are in Sweden, Finland, Germany, France and Austria
- **16%** of the planned biorefineries are new types of biorefineries (other than chemical pulping based or paper production based). This percentage is growing substantially
- The most common bio-based products are man-made fibres, biodiesel and bio-naphta, lignosulphonate and tall oil products
- The turnover generated by other bio-based products than pulp and paper is close to **€2.7 billion**, which corresponds to almost **3%** of European pulp and paper industry sector turnover as a whole
- Based on investment plans and R&D programs it is justified to expect the share of emerging bio-based products to be substantially larger in the future

Emerging bio-based products… much more than only pulp and paper!

They are classified as materials, chemicals, fuels, food/feed, pharmaceuticals and cosmetics



They can be used as either intermediates or as final products in the following sectors:

- Aviation
- Electronics
- Civil construction
- Pharmaceutical & medical
- Printing & publishing
- Furniture
- Packaging
- Chemicals
- Food
- Textile
- Automotive and batteries
- Energy
- Cosmetics & personal hygiene
- Various industries

The future of our industry

The current value of **new bio-based products** represents already almost **3%** of the total industry value, as represented by Cepi. This percentage is growing rapidly, becoming a major contributor to the sectors' 2050 target of **50%** more added value

Currently, the largest share of bio-based products is related to materials. Out of materials, **man-made fibres** are among the largest in the sector. The global textile market is over **100 million** tons with just **6%** being based on man-made cellulosic fibres. It is expected that man-made cellulosic fibres' share will increase during the vision 2050 time period. In order to realise this, more and more traditional kraft mills will be converted to produce dissolving pulp

Based on on-going R&D programs, we expect investments, in the **material sector** in particular, to grow. This sector concentrates most innovation programs, both in terms of the number and value of these programs

An EU industrial policy supporting a shift towards a low-carbon circular bio-economy

The pulp & paper industry has the ambition to become the **European hub for the bio-based economy**, integrating wood fibre, bio-based products and novel recycling

We need a **shared vision** in order to build a vibrant, low-carbon circular bioeconomy and accelerate industry transformation

The **EU Green Deal** and the 2050 climate neutrality target requires an ambitious shift

EU regulation can play an important role in transforming industry but must be aligned to allow the **appropriate conditions for investment**

A new **Forest Strategy** that covers the entire forest and forest-based sector is needed to strengthen it and ensure that it is considered of strategic importance

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