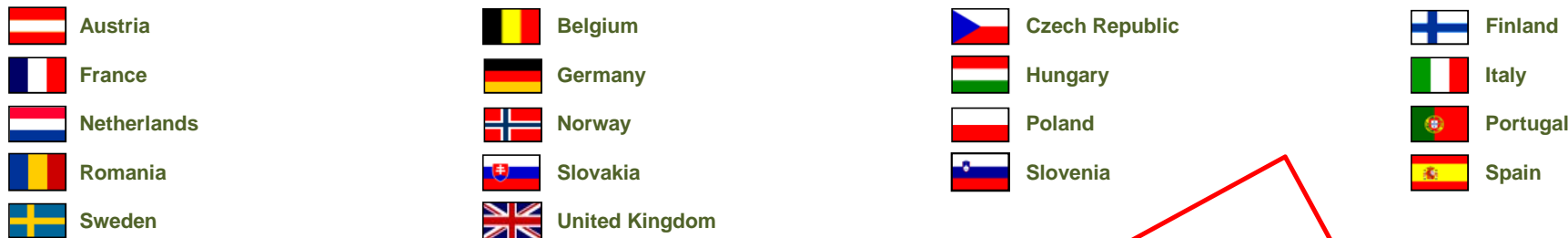


The Confederation of European Paper Industries

CEPI was founded in 1992 and historic statistics cover the period 1991 – 2016. CEPI represents 92% of the European pulp and paper industry in terms of production (Europe minus Russian Federation). The pulp and paper industry provides 177,000 jobs in Europe directly, has a turnover of 81 billion euros and adds 17 billion euros to the EU GDP.

The Confederation of European Paper Industries (CEPI) is a Brussels-based non-profit making organisation, which represents the European pulp and paper industry towards the European Institutions. Through its member associations, CEPI also represents approximately 495 pulp, paper and board producing companies across Europe, ranging from small and medium-sized enterprises, to multinationals (counting companies with a presence in more than one CEPI country only once).

Members of CEPI in 2016



Methodology and Consistency

The Statistics included in this report are a compilation of the data received annually from the National Authorities of CEPI members, under the control of the CEPI Statistics Network. In many cases, figures for previous years have been revised and therefore differ from those reported in previous editions. Some additional sources have been used when necessary and relevant, such as Eurostat, GTAP, etc. The figures of each new CEPI country are included in the series back to 1991, in order to ensure consistency of CEPI numbers. Notes and definitions related to the terms and sources used in this report can be found in the annexes.

Data Quality



Responsibility for the collection and the management of the data lies with the CEPI statistics department, which is constantly working to improve the quality of the data reported. In order to further increase the reliability of the data, CEPI has commissioned Deloitte to issue a limited assurance statement on the data quality rating that CEPI carried out on its core indicators in the statistics. The detailed data quality rating and the limited assurance statement is available on <http://www.cepi.org/members/statistics/annual-statistics>

More Information

For more information on statistics and the other CEPI reports, please contact:
 Eric Kilby – Statistics Manager – e.kilby@cepi.org
 Ariane Crèvecoeur – Statistics Officer – a.crevecoeur@cepi.org

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CEPI Pulp and Paper Industry*

	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Chge vs. 2000
Industry Structure																	
Number of Companies ¹																	
Number of Mills																	
Pulp Mills																	
Paper & Board Mills																	
Number of Machines																	
Employment ('000 employees)																	
Turnover ² (Million €)																	
Investments ² (Million €)																	
Added Value ² (Million €)																	
Total Pulp³ ('000 Tonnes)																	
Production Capacity																	
Operating Rate																	
Production																	
Consumption (Apparent)																	
Market Pulp ('000 Tonnes)																	
Production																	
Exports to outside CEPI																	
Imports from outside CEPI																	
Trade Balance ⁴																	
Consumption (Apparent)																	
Exports / Production																	
Imports / Consumption																	
Performance of CEPI Countries															Average % Chg per annum vs. 2000 vs. 1991		
Total Pulp Production																	
Total Pulp Consumption																	
Utilisation of PfR																	
Paper & Board Production																	
Paper & Board Consumption																	

CEPI Pulp and Paper Industry*

	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Chge vs. 2000
Paper & Board ('000 Tonnes)																	
Production Capacity																	
Operating Rate																	
Production																	
Exports to outside CEPI																	
Imports from outside CEPI																	
Trade Balance ⁴																	
Consumption (Apparent)																	
Exports / Production																	
Imports / Consumption																	
Wood ('000 m ³)																	
Consumption																	
Hardwood																	
Softwood																	
Imports / Consumption																	
Paper for Recycling ('000 Tonnes)																	
Collection																	
Utilisation																	
Exports to outside CEPI																	
Imports from outside CEPI																	
Trade Balance ⁴																	
Utilisation Rate																	
Exports / Collection																	
Imports / Utilisation																	
Recycling Rate in Europe⁵   																	
Recycling Rate																	

Introduction

CEPI Pulp and Paper Industry*

	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Chge vs. 2000
Non-Fibrous Materials ('000 Tonnes)																	
Consumption																	
																% Chge vs. 2014	% Chge vs. 2000
Energy and Environment ⁶																	
Fuels Consumption ('000 TJ)																	
Of which Biomass Use (%)																	
Total Primary Energy Consumption ('000 TJ)																	
Specific Primary Energy Consumption (TJ/kt)																	
Electricity Consumption ('000 GWh)																	
Specific Electricity Consumption (MWh/kt)																	
% of Electricity produced through CHP ⁷																	
CO2 Direct Emissions (Mega Tonnes)																	
Specific CO2 Emissions (kt Co2 / kt of product)																	

* See Definitions on pages 74 to 85

¹ 495 groups or corporations in 2016, when considering the entities established in one or several countries that are not bound together by legal and/or financial links.

² 2015 and 2016 figures have been estimated by CEPI based on several sources.

³ Total Pulp = Integrated Pulp + Market Pulp

⁴ Trade balance with countries outside CEPI.

⁵ EU-28 countries plus Norway and Switzerland

⁶ Hungary, Romania and Slovenia are not included in Energy data, except for CO₂ emissions.

⁷ CHP= Combined Heat & Power - Compared to total on-site electricity generation.

CEPI Population¹

Millions	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Share of Total
Austria																
Belgium																
Czech Republic																
Finland																
France																
Germany																
Hungary																
Italy																
Netherlands																
Norway																
Poland																
Portugal																
Romania																
Slovakia																
Slovenia																
Spain																
Sweden																
United Kingdom																
Total CEPI																
Total EU-28																

 **Source:** Eurostat

¹ Population on 1st January of reported year

CEPI Per Capita Paper & Board Consumption

kgs per capita	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Austria															
Belgium															
Czech Republic															
Finland															
France															
Germany															
Hungary															
Italy															
Netherlands															
Norway															
Poland															
Portugal															
Romania															
Slovakia															
Slovenia															
Spain															
Sweden															
United Kingdom															
Total CEPI															

 **Source:** CEPI and Eurostat

CEPI Gross Domestic Product¹

Billion Euros	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Share of Total
Austria																
Belgium																
Czech Republic																
Finland																
France																
Germany																
Hungary																
Italy																
Netherlands																
Norway																
Poland																
Portugal																
Romania																
Slovakia																
Slovenia																
Spain																
Sweden																
United Kingdom																
Total CEPI																
Total EU-28																

 **Source:** Eurostat

¹ Gross Domestic Product: current prices

CEPI Employment

'000 Employees	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Belgium																	
Czech Republic																	
Finland																	
France																	
Germany																	
Hungary																	
Italy																	
Netherlands																	
Norway																	
Poland ¹																	
Portugal																	
Romania																	
Slovakia																	
Slovenia																	
Spain																	
Sweden																	
United Kingdom																	
Total CEPI																	

n.a. : Figures have been estimated by CEPI and included in the "Total CEPI" numbers.

¹ **Poland** : Figures have been estimated by CEPI.

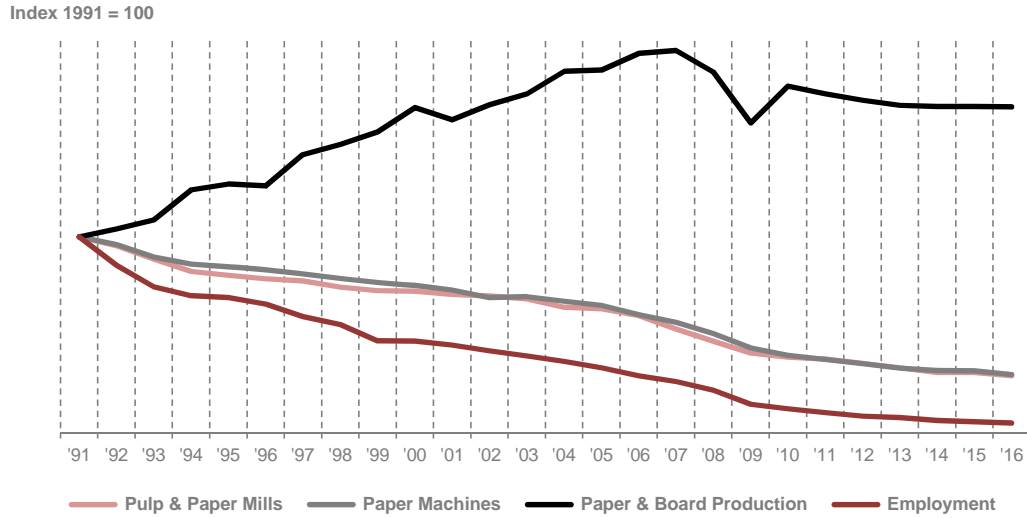
Number of CEPI Pulp Mills

	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Chge vs. 2015	% Share of Total
Austria																	
Belgium																	
Czech Republic																	
Finland																	
France																	
Germany																	
Hungary																	
Italy																	
Netherlands																	
Norway																	
Poland																	
Portugal																	
Romania																	
Slovak Republic																	
Slovenia																	
Spain																	
Sweden																	
United Kingdom																	
Total CEPI																	

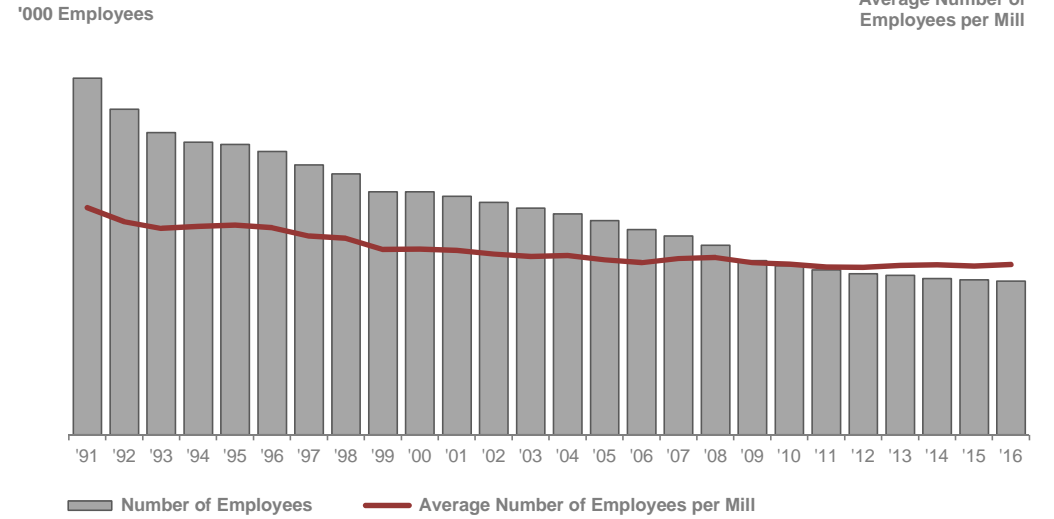
Number of CEPI Paper & Board Mills

	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Chge vs. 2015	% Share of Total
Austria																	
Belgium																	
Czech Republic																	
Finland																	
France																	
Germany																	
Hungary																	
Italy																	
Netherlands																	
Norway																	
Poland																	
Portugal																	
Romania																	
Slovak Republic																	
Slovenia																	
Spain																	
Sweden																	
United Kingdom																	
Total CEPI																	

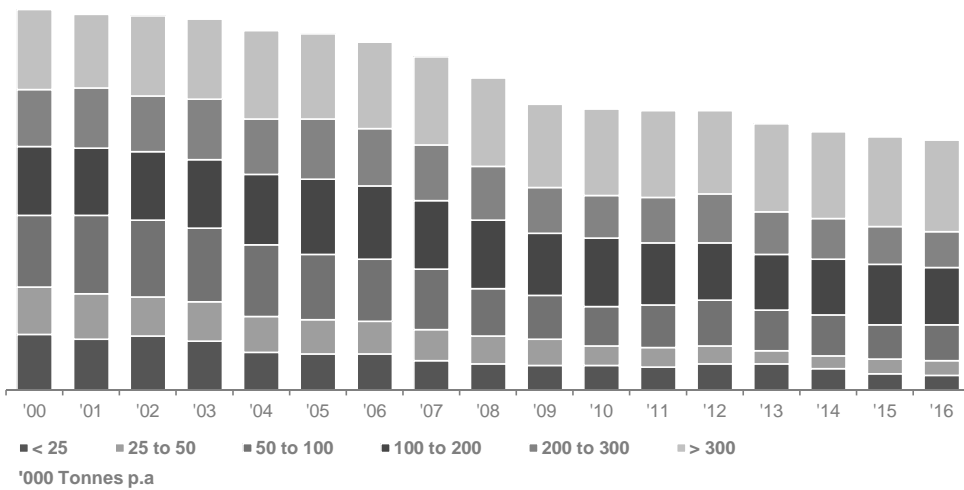
Indices of CEPI Pulp and Paper Industry



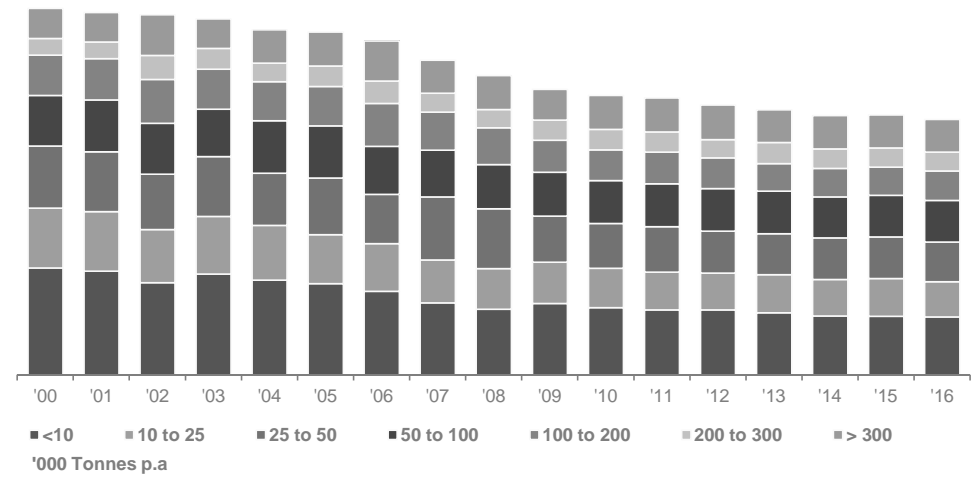
CEPI Employment



Number of Pulp Mills by Volume



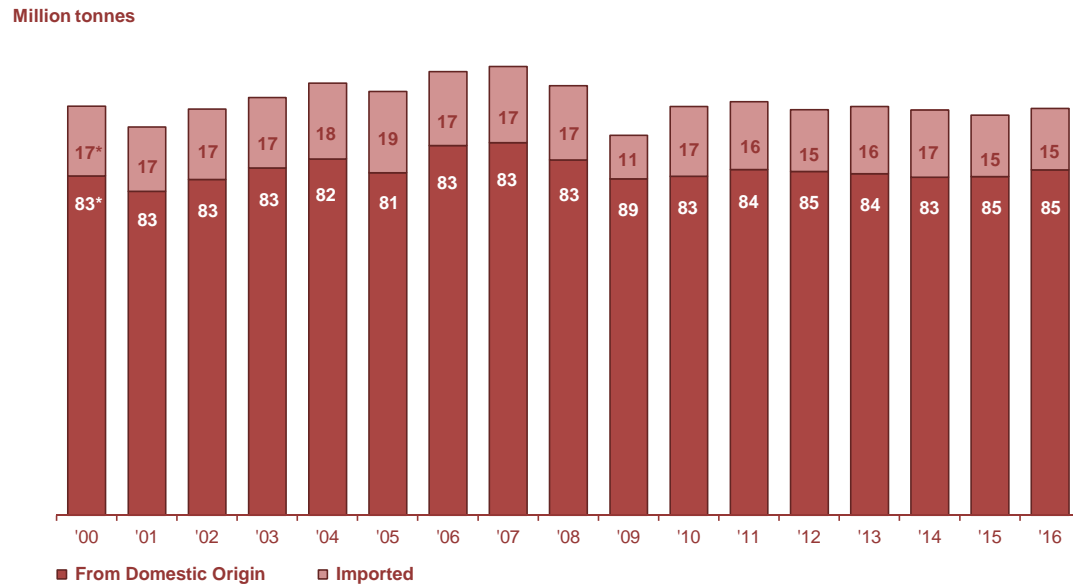
Number of Paper & Board Mills by Volume



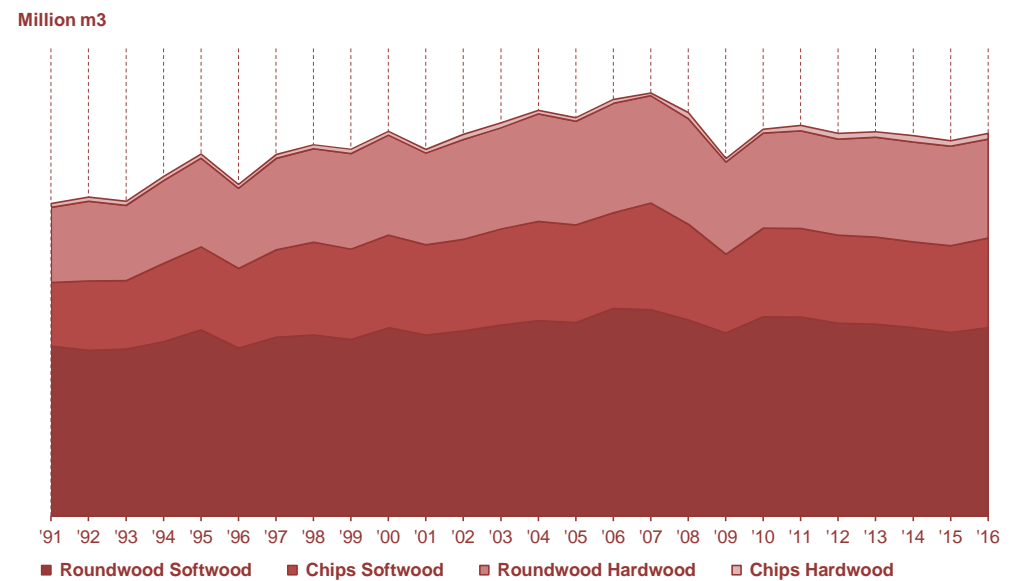
CEPI Wood Consumption

'000 m ³	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Total Softwood																	
Roundwood																	
Chips																	
Total Hardwood																	
Roundwood																	
Chips																	
Total Roundwood																	
Total Chips																	
Total Wood																	

CEPI Wood Consumption by Origin



CEPI Wood Consumption by Assortment



Source: Eurostat

* Percentage of total wood consumption

CEPI Wood Consumption by Country

'000 m³	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Belgium ¹																	
Czech Republic																	
Finland																	
France ¹																	
Germany																	
Hungary																	
Italy																	
Netherlands																	
Norway																	
Poland																	
Portugal																	
Romania																	
Slovakia																	
Slovenia																	
Spain																	
Sweden																	
United Kingdom																	
Total CEPI																	

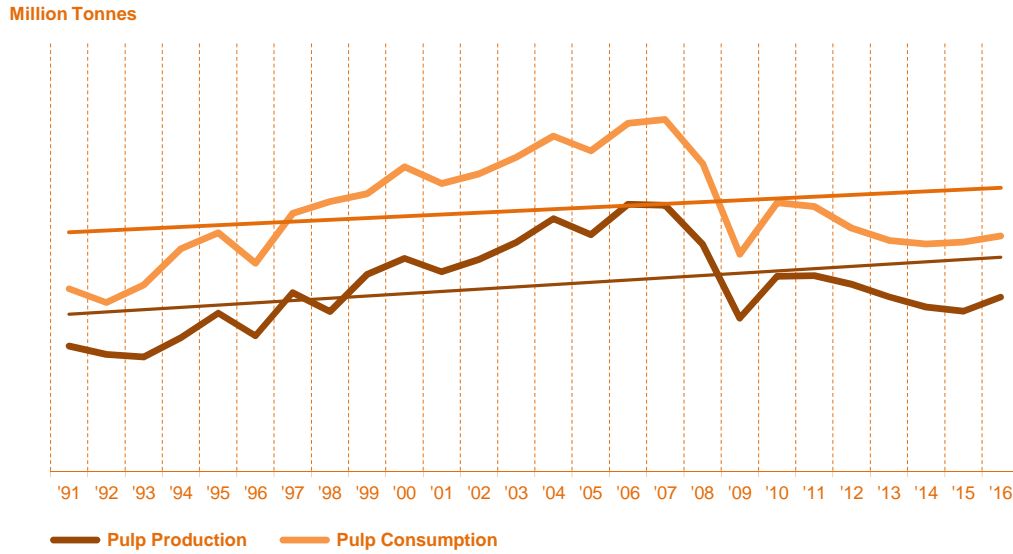


Some figures could be n.a. due to transparency issues

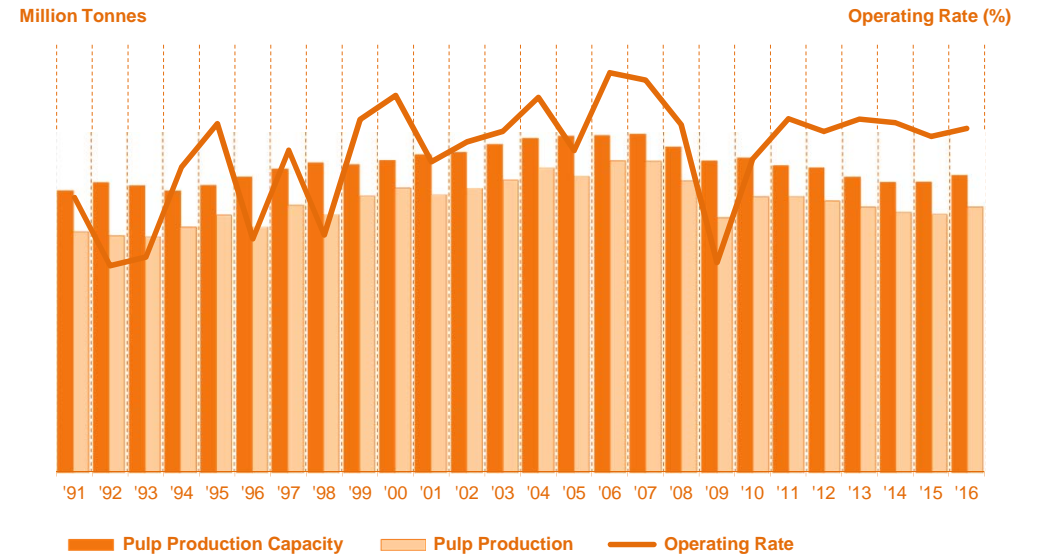
n.a. : Figures have been estimated by CEPI and included in the "Total CEPI" numbers.

¹ **Belgium & France:** Figures have been provided in Tonnes and converted in m³ by CEPI

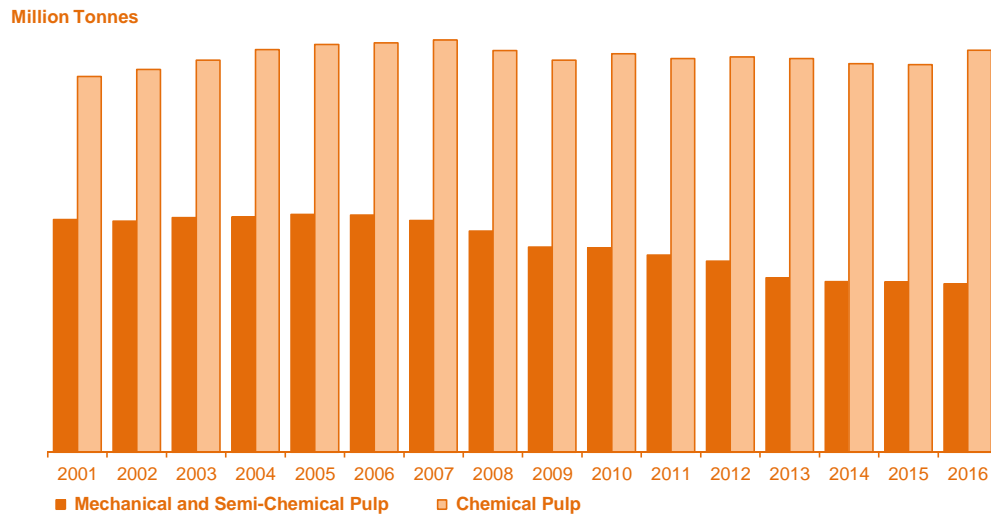
CEPI Total Pulp¹ Production and Consumption



CEPI Total Pulp¹ Production and Capacity

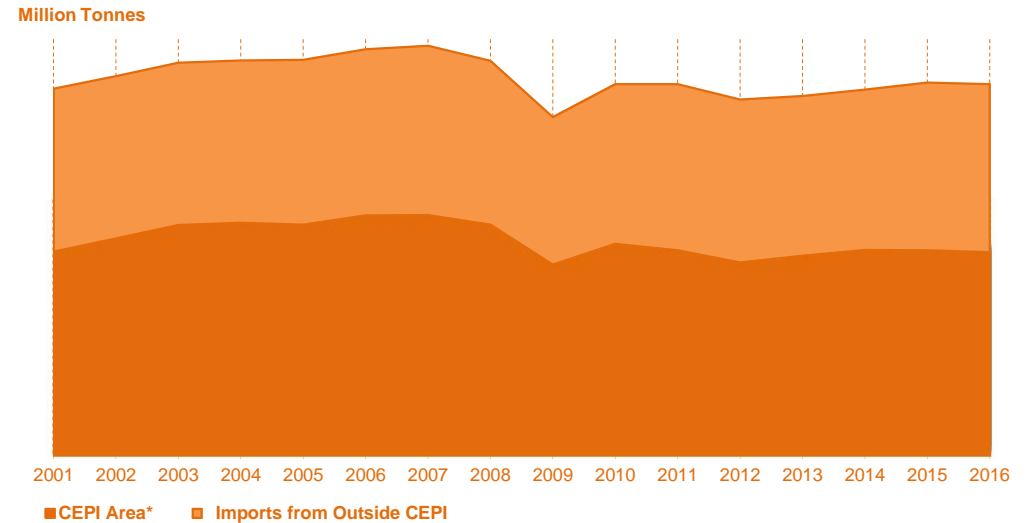


CEPI Total Pulp¹ Production Capacity by Grade



¹ Total Pulp = market pulp + integrated pulp

Origin of CEPI Market Pulp Consumption

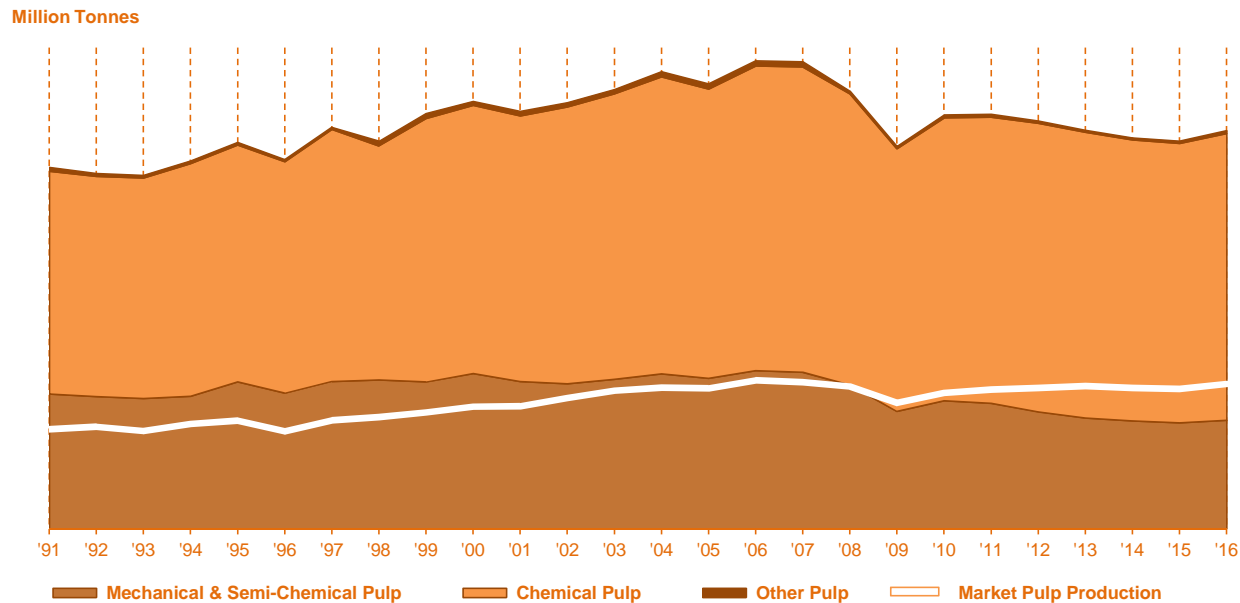


*CEPI Area = market pulp production - exports to outside CEPI

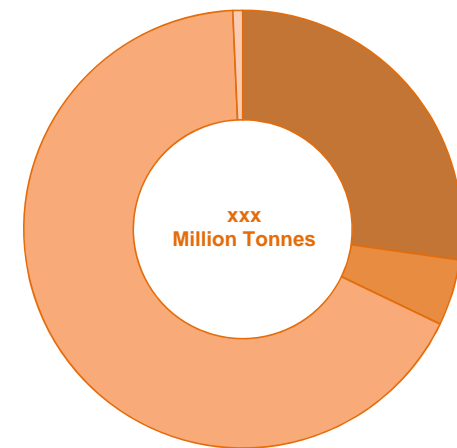
CEPI Total Pulp¹ Production by Grade

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Mechanical & Semi-Chemical Pulp																	
Sulphite Pulp																	
Sulphate Pulp																	
Chemical Pulp																	
Other Pulp																	
Total Pulp																	

CEPI Total Pulp¹ Production by Grade



CEPI Total Pulp¹ Production by Grade in 2016



¹ Total Pulp = market pulp + integrated pulp

CEPI Total Pulp¹ Production by Country

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Finland																	
France																	
Germany																	
Italy																	
Norway																	
Poland																	
Portugal																	
Romania																	
Spain																	
Sweden																	
Other CEPI Countries																	
Total CEPI																	



List of countries could be modified following transparency issues

.....of which Market Pulp

Total CEPI																	
-------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

¹ Total Pulp = market pulp + integrated pulp

CEPI Mechanical and Semi-Chemical Pulp Production

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Finland																	
Germany																	
Portugal																	
Romania																	
Sweden																	
Other CEPI Countries																	
Total CEPI																	



List of countries could be modified following transparency issues

CEPI Chemical Pulp Production

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Finland																	
Germany																	
Poland																	
Portugal																	
Romania																	
Spain																	
Sweden																	
Other CEPI Countries																	
Total CEPI																	

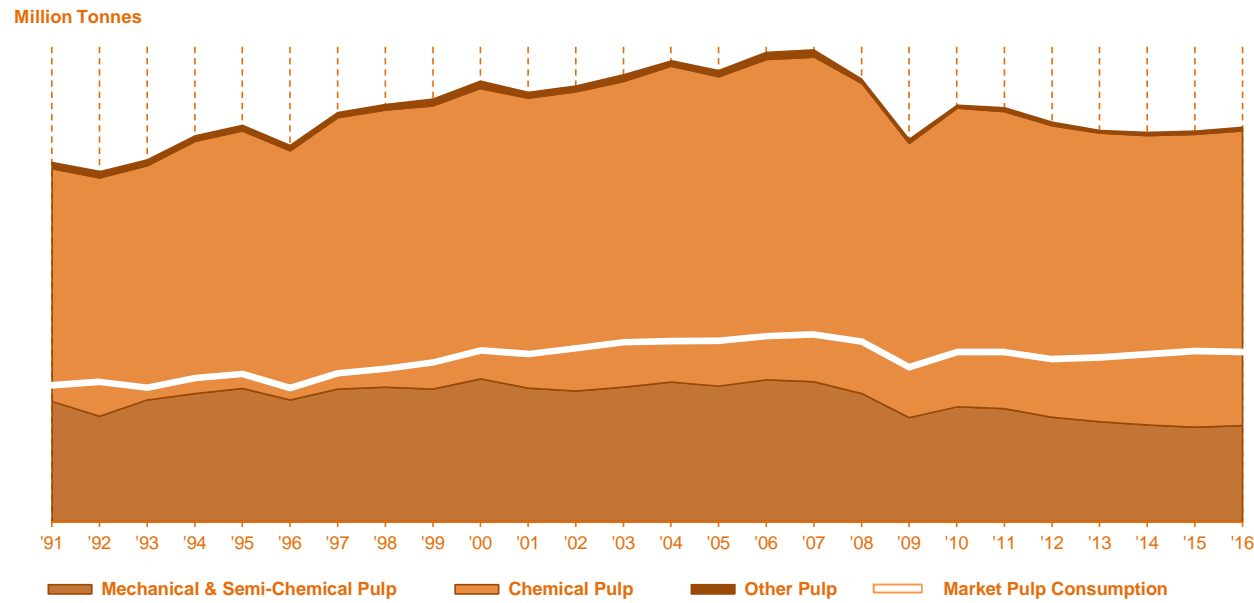


List of countries could be modified following transparency issues

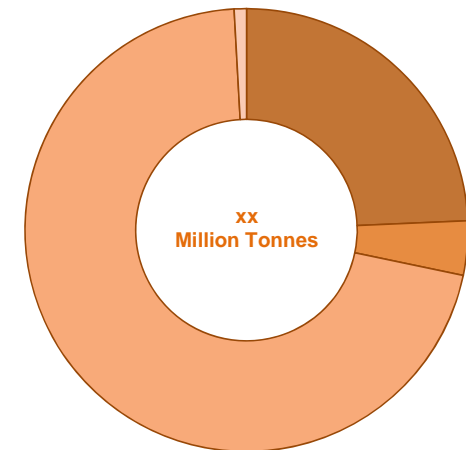
CEPI Total Pulp¹ Consumption² by Grade

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Mechanical & Semi-Chemical Pulp																	
Sulphite Pulp																	
Sulphate Pulp																	
Chemical Pulp																	
Other Pulp																	
Total Pulp																	

CEPI Total Pulp¹ Consumption by Grade



CEPI Total Pulp¹ Consumption by Grade in 2016



¹ Total Pulp = market pulp + integrated pulp

² Pulp Consumption = production + imports - exports

CEPI Total Pulp¹ Consumption² by Country

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Finland																	
France																	
Germany																	
Italy																	
Norway																	
Poland																	
Portugal																	
Romania																	
Spain																	
Sweden																	
Other CEPI Countries																	
Total CEPI³																	



List of countries could be modified following transparency issues

.....of which Market Pulp

Total CEPI

¹ **Total Pulp** = market pulp + integrated pulp

² **Pulp Consumption** = production + imports - exports

³ **Pulp Consumption** for total CEPI is calculated with total exports to outside CEPI and total imports from outside CEPI.

CEPI Mechanical and Semi-Chemical Pulp Consumption

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Finland																	
Germany																	
Portugal																	
Romania																	
Sweden																	
Other CEPI Countries																	
Total CEPI¹																	

 List of countries could be modified following transparency issues

CEPI Chemical Pulp Consumption

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Finland																	
Germany																	
Poland																	
Portugal																	
Romania																	
Spain																	
Sweden																	
Other CEPI Countries																	
Total CEPI¹																	

 List of countries could be modified following transparency issues

¹ Pulp Consumption for total CEPI is calculated with total exports to outside CEPI and total imports from outside CEPI.

CEPI Market Pulp Exports by Region

'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Other Europe															
EU Non-CEPI Countries															
Russian Federation															
Switzerland															
Turkey															
Others															
North America															
United States of America															
Canada															
Latin America															
Brazil															
Other Latin America															
Asia															
China															
Japan															
Other Asia															
Others															
Africa															
Oceania															
Others															
Total Exports															

CEPI Market Pulp Exports by Grade

'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Mechanical & Semi-Chemical Pulp															
Sulphite Pulp															
Sulphate Pulp															
Chemical Pulp															
Other Pulp															
Total Pulp															

CEPI Market Pulp Exports¹ by Country

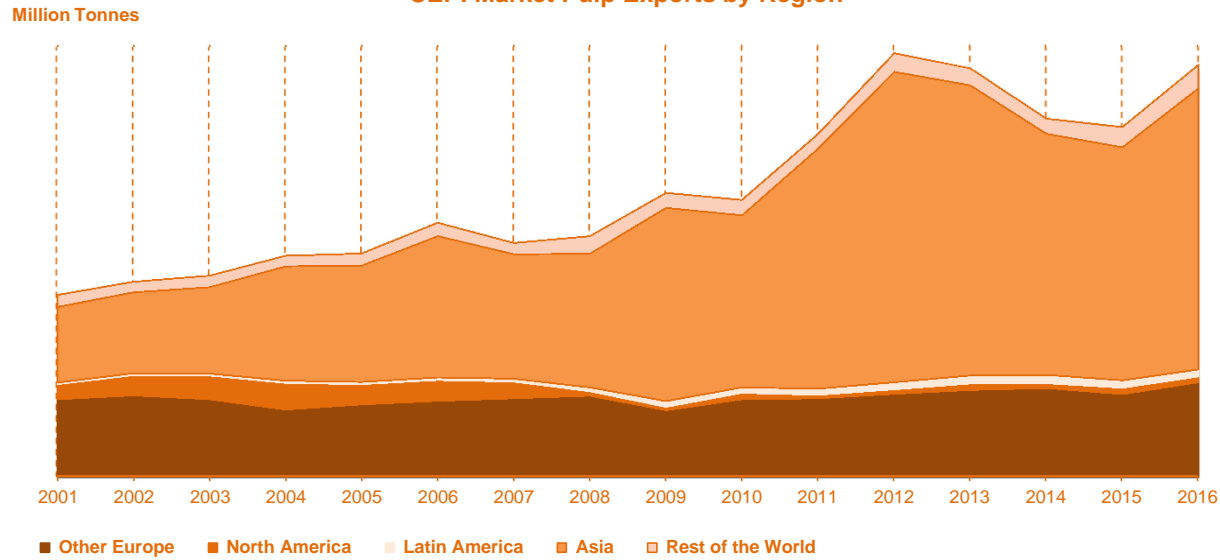
'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria															
Finland															
France															
Germany															
Italy															
Norway															
Poland															
Portugal															
Romania															
Spain															
Sweden															
Other CEPI Countries															
Total CEPI															



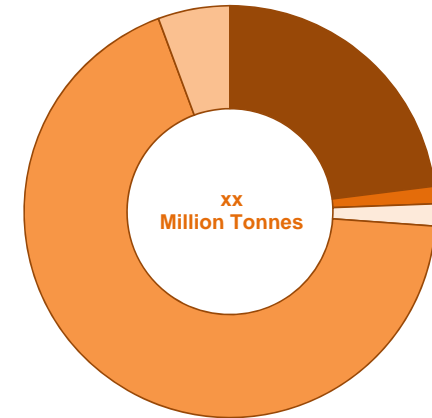
List of countries could be modified following transparency issues

¹ Include exports to other CEPI countries

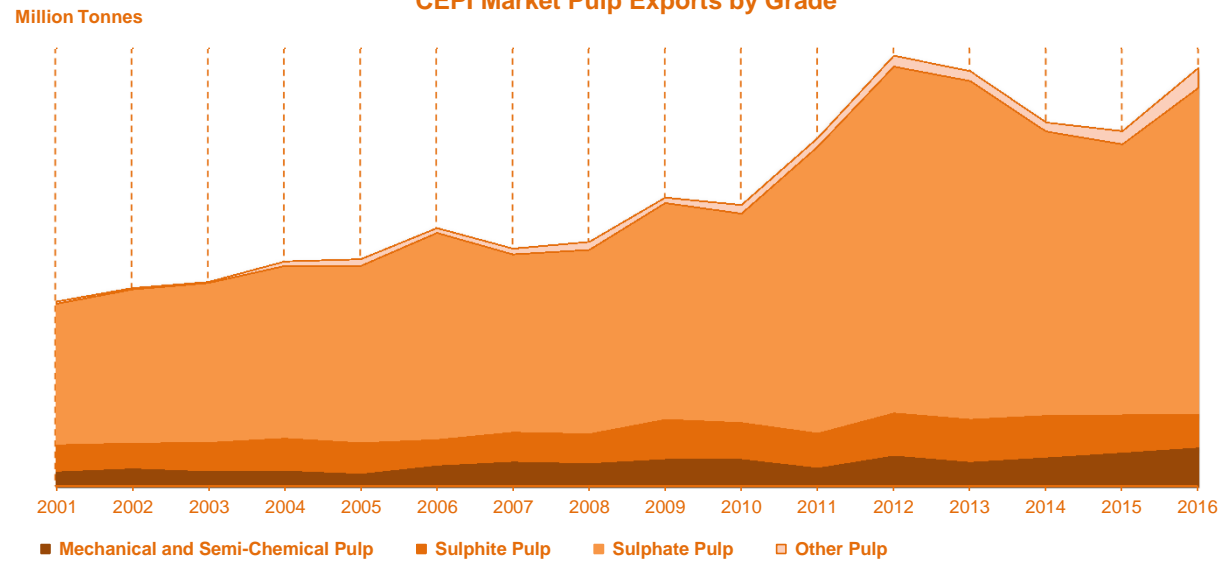
CEPI Market Pulp Exports by Region



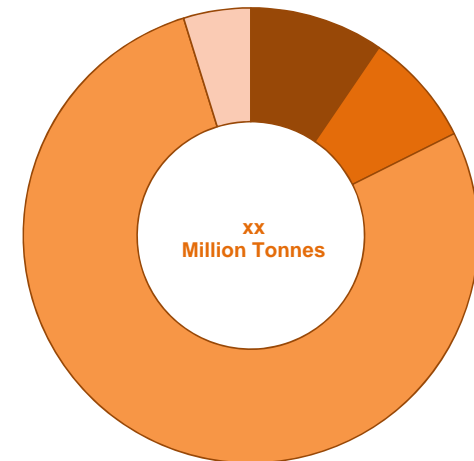
CEPI Market Pulp Exports by Region in 2016



CEPI Market Pulp Exports by Grade



CEPI Market Pulp Exports by Grade in 2016



CEPI Market Pulp Imports by Region

'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Other Europe															
EU Non-CEPI Countries															
Russian Federation															
Switzerland															
Turkey															
Others															
North America															
United States of America															
Canada															
Latin America															
Brazil															
Other Latin America															
Asia															
China															
Japan															
Other Asia															
Others															
Africa															
Oceania															
Others															
Total Imports															

CEPI Market Pulp Imports by Grade

'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Mechanical & Semi-Chemical Pulp															
Sulphite Pulp															
Sulphate Pulp															
Chemical Pulp															
Other Pulp															
Total Pulp															

CEPI Market Pulp Imports¹ by Country

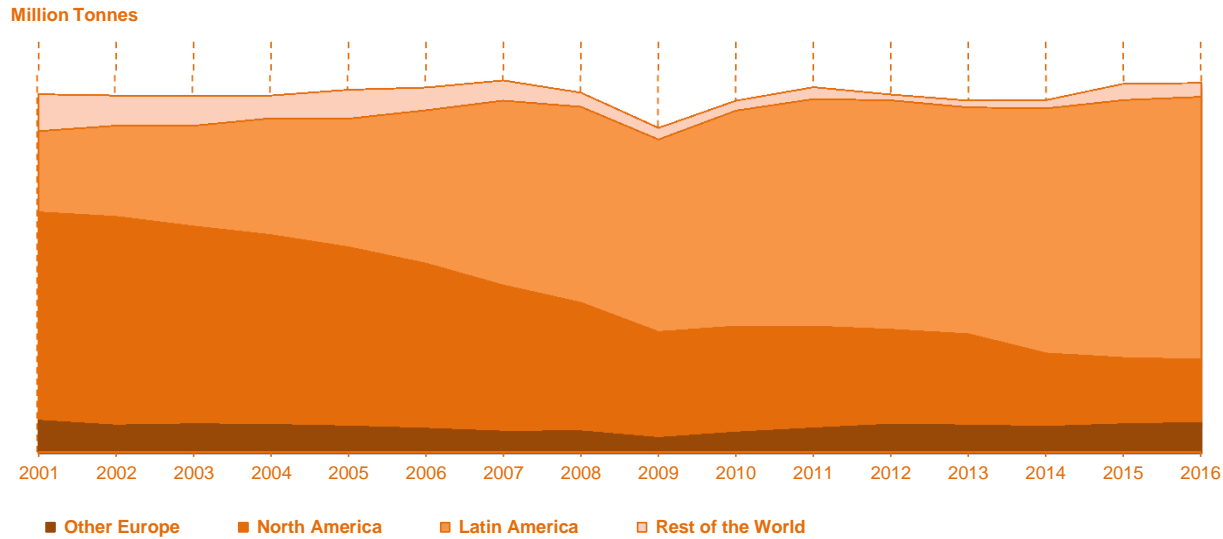
'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria															
Finland															
France															
Germany															
Italy															
Norway															
Poland															
Portugal															
Romania															
Spain															
Sweden															
Other CEPI Countries															
Total CEPI															



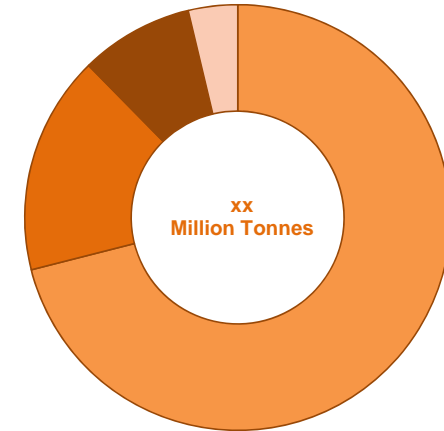
List of countries could be modified following transparency issues

¹ Include imports from other CEPI countries

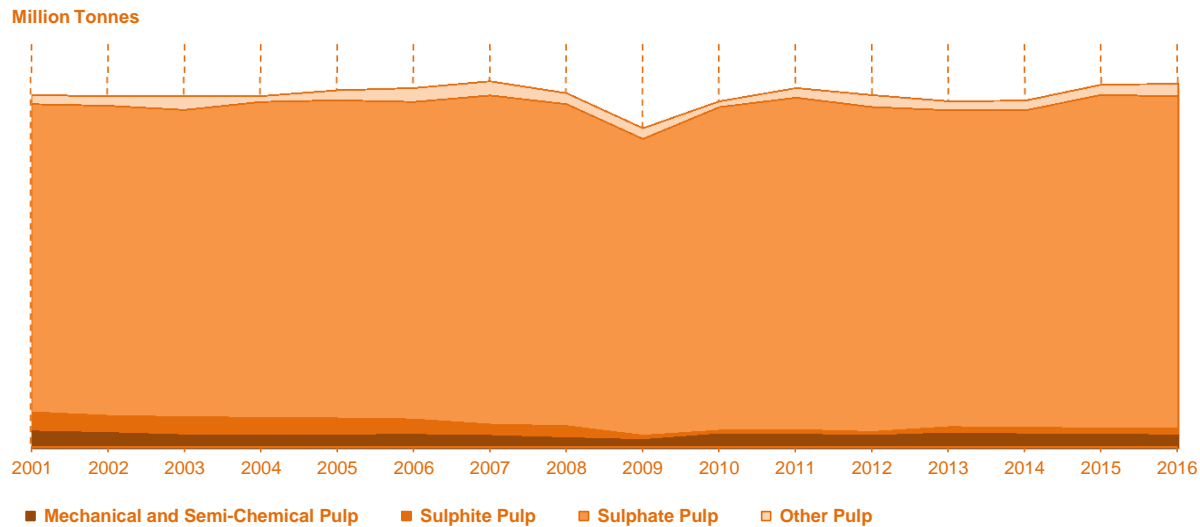
CEPI Market Pulp Imports by Region



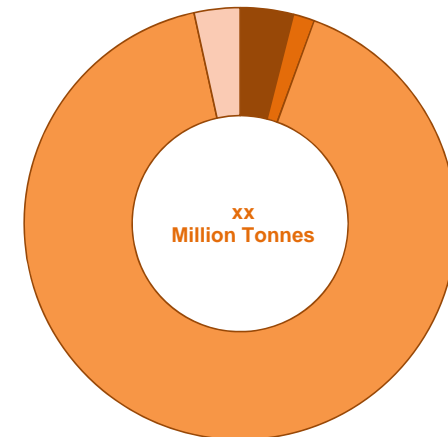
CEPI Market Pulp Imports by Region in 2016



CEPI Market Pulp Imports by Grade



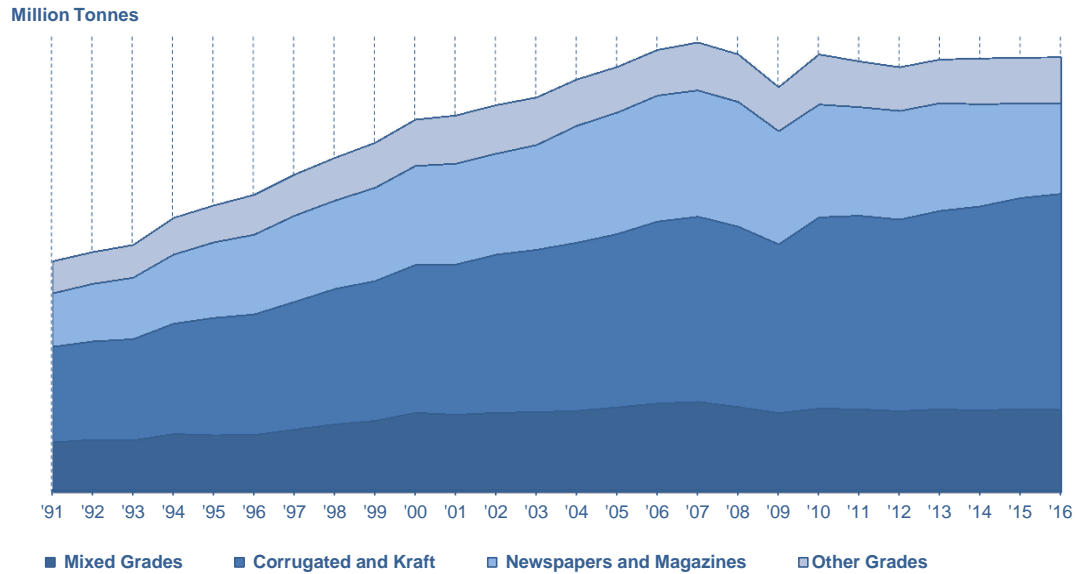
CEPI Market Pulp Imports by Grade in 2016



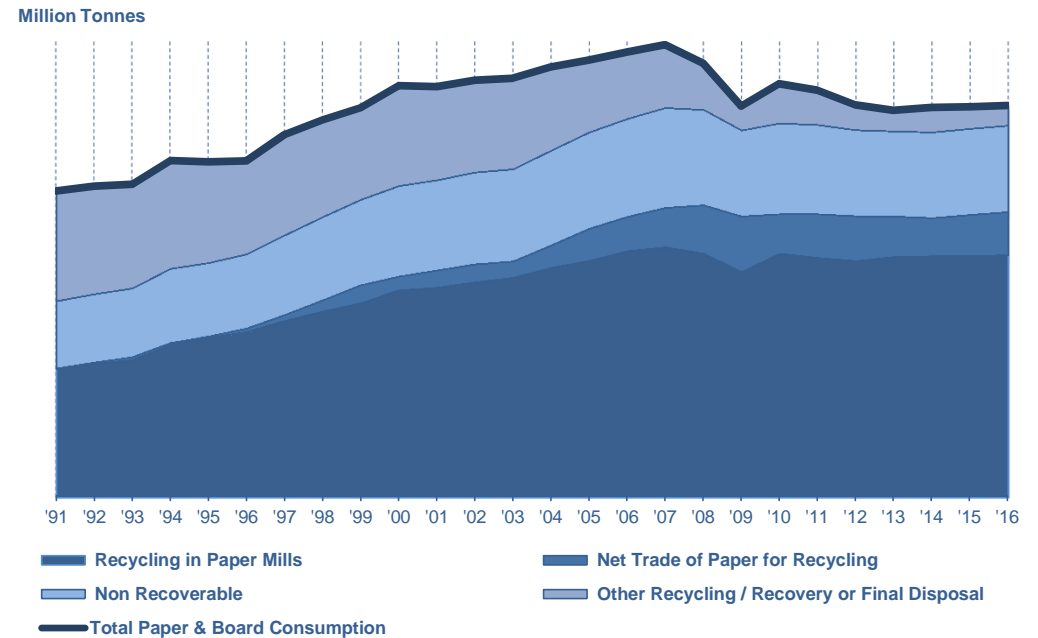
CEPI Utilisation of Paper for Recycling by Grade

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015
Mixed Grades																
Corrugated and Kraft																
Newsp. and Magazines																
Other Grades																
Total Paper for Recycling																

CEPI Utilisation of Paper for Recycling by Grade

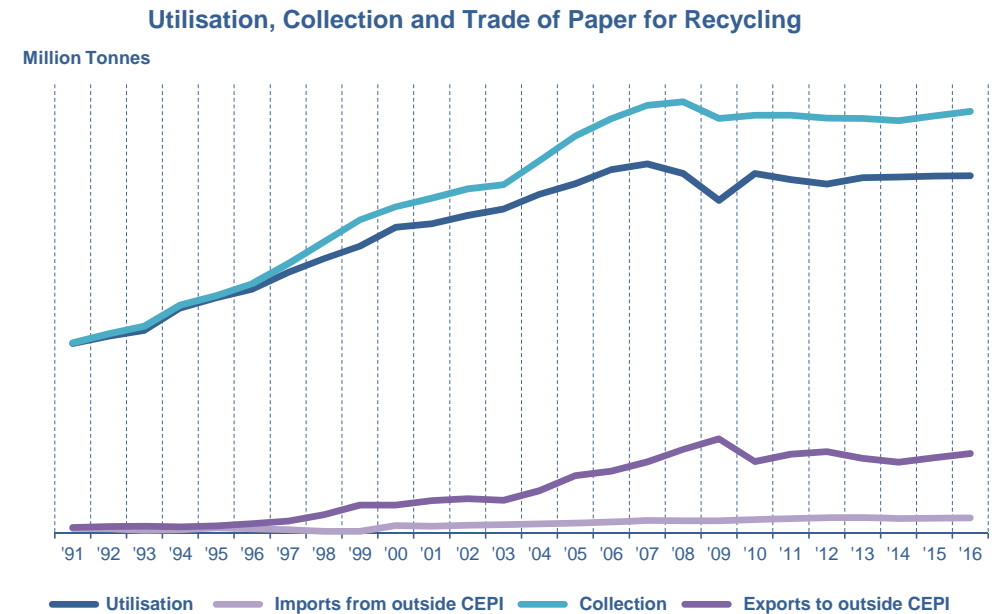
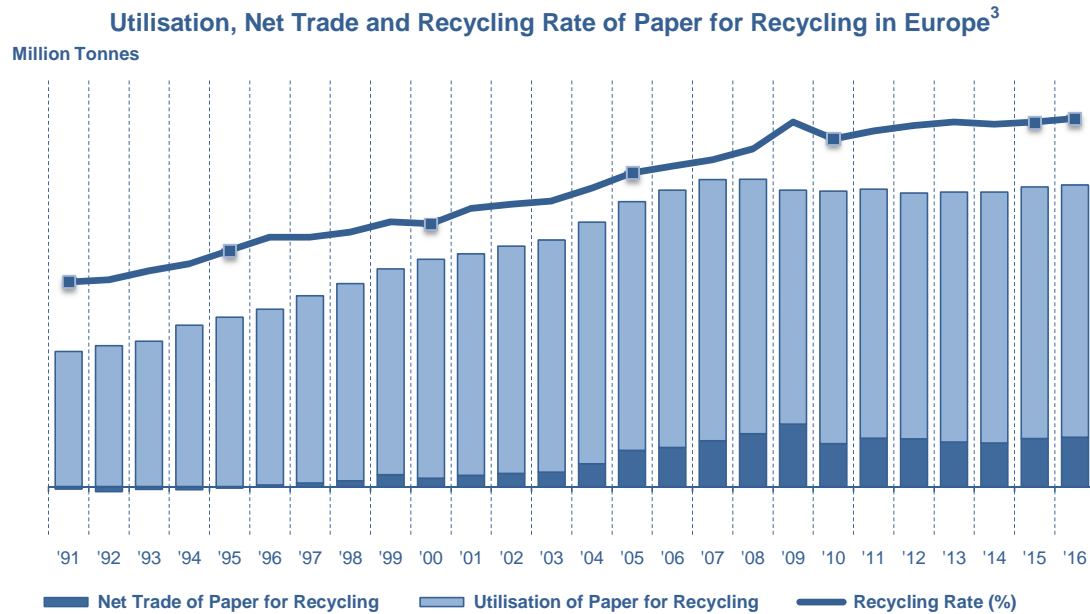


CEPI Paper & Board Consumption and Recycling



CEPI Collection and Rates of Paper for Recycling

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015
Utilisation																
Exports to outside CEPI																
Imports from outside CEPI																
Net Trade																
Collection																
Utilisation Rate ¹																
Recycling Rate ²																
Recycling Rate in Europe ³																

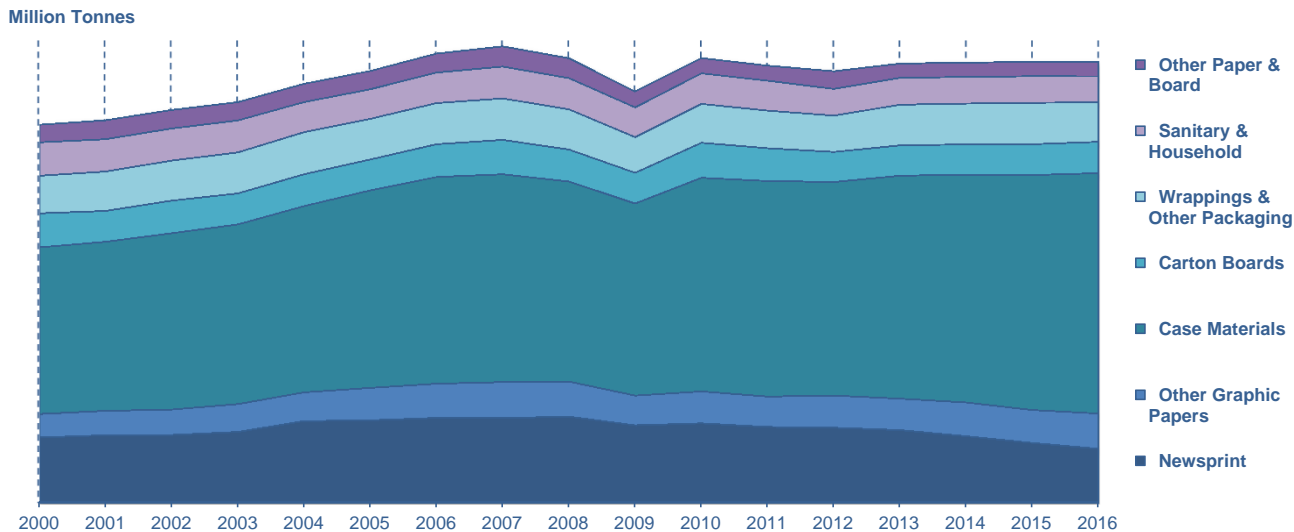


¹ **Utilisation Rate:** Percentage of paper for recycling utilisation compared to the total paper & board production.
² **Recycling Rate:** "Utilisation of paper for recycling + net trade of paper for recycling", compared to paper & board consumption.
³ **Europe:** EU-28 countries plus Norway and Switzerland

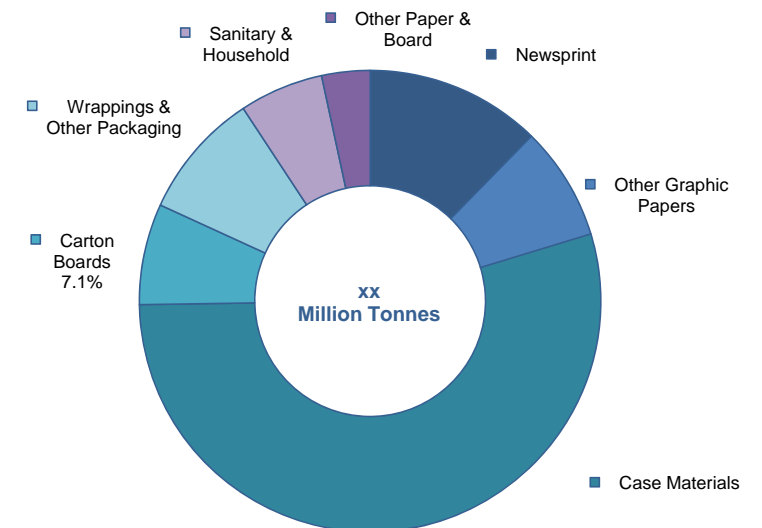
CEPI Utilisation of Paper for Recycling by Sector

'000 Tonnes	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Newsprint															
Other Graphic Papers															
Total Graphic Papers															
Case Materials															
Carton Boards															
Wrappings & Other Packaging															
Total Packaging Papers															
Sanitary & Household															
Other Paper & Board															
Total Paper and Board															
De-inked Market Pulp															

CEPI Utilisation of Paper for Recycling by Sector



CEPI Utilisation of Paper for Recycling by Sector in 2016

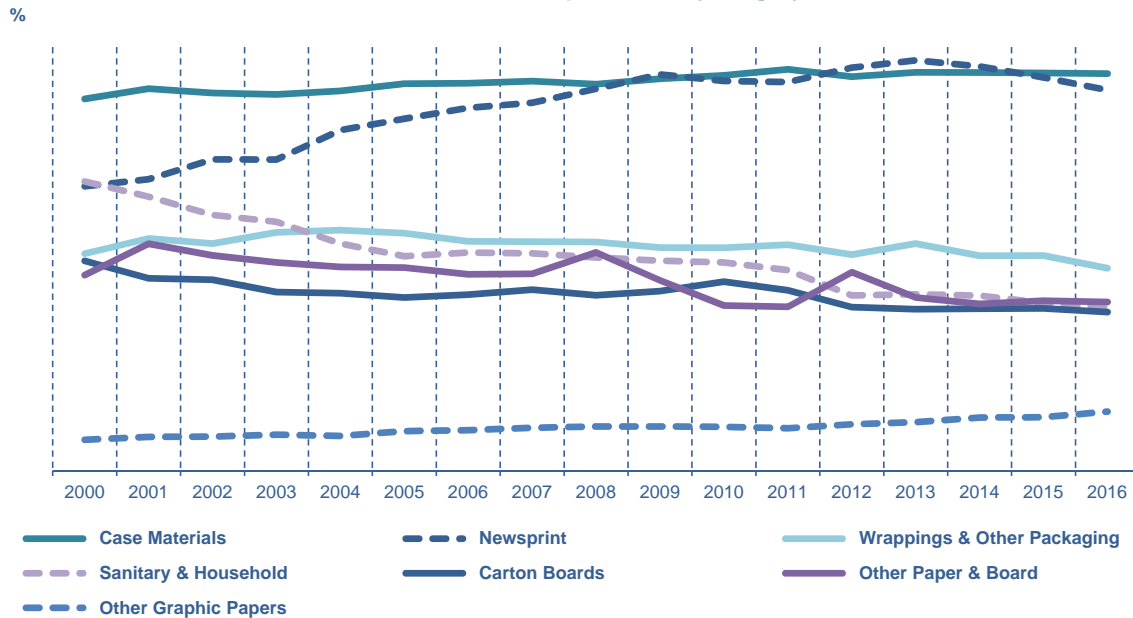


CEPI Utilisation Rate of Paper for Recycling by Sector

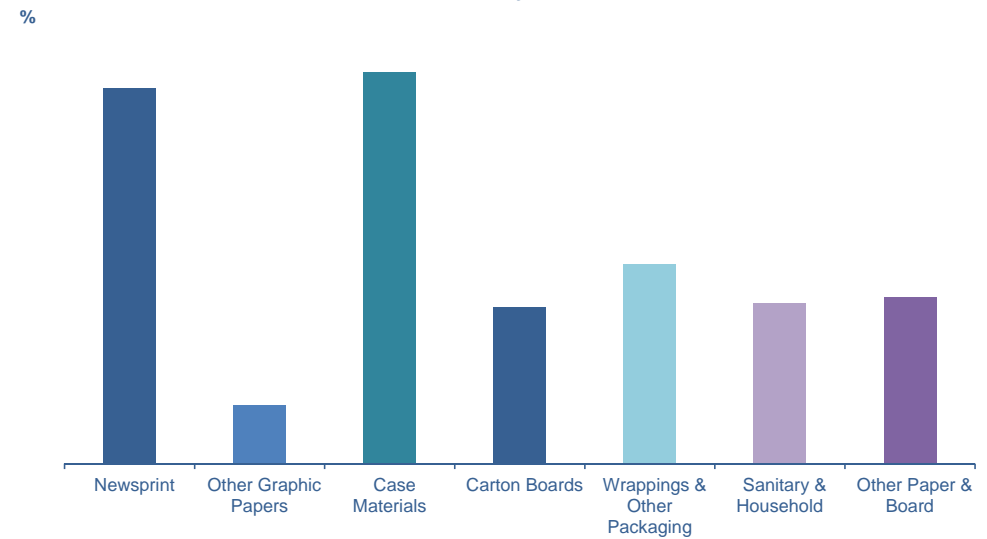
%	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Chge vs. 2015
Newsprint														
Other Graphic Papers														
Total Graphic Papers														
Case Materials														
Carton Boards														
Wrappings & Other Packaging														
Total Packaging Papers														
Sanitary & Household														
Other Paper & Board														
Total Paper and Board*														

* Includes De-inked market Pulp

CEPI Utilisation Rate of Paper for Recycling by Sector



CEPI Utilisation Rate by Sector in 2016



CEPI Utilisation of Paper for Recycling by Country

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Belgium																	
Czech Republic																	
Finland																	
France																	
Germany																	
Hungary																	
Italy																	
Netherlands																	
Norway																	
Poland																	
Portugal																	
Romania																	
Slovakia																	
Slovenia																	
Spain																	
Sweden																	
United Kingdom																	
Total CEPI																	

Ratio of CEPI Imports and Utilisation of Paper for Recycling

%	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015
Austria																
Belgium																
Czech Republic																
Finland																
France																
Germany																
Hungary																
Italy																
Netherlands																
Norway																
Poland																
Portugal																
Romania																
Slovakia																
Slovenia																
Spain																
Sweden																
United Kingdom																
Total CEPI¹																

¹ The ratio for "total CEPI" is calculated with imports from outside CEPI

CEPI Collection¹ of Paper for Recycling by Country

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Belgium																	
Czech Republic																	
Finland																	
France																	
Germany																	
Hungary																	
Italy																	
Netherlands																	
Norway																	
Poland																	
Portugal																	
Romania																	
Slovakia																	
Slovenia																	
Spain																	
Sweden																	
United Kingdom																	
Total CEPI²																	

¹ **Collection of Paper for Recycling** = Utilisation + Exports - Imports. Collection figures for Finland, France, Netherlands and Sweden have been adjusted by the National Associations.

² **Collection of Paper for Recycling for total CEPI** is calculated with total exports to outside CEPI and total imports from outside CEPI.

Ratio¹ of CEPI Exports and Collection of Paper for Recycling

%	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015
Austria																
Belgium																
Czech Republic																
Finland																
France																
Germany																
Hungary																
Italy																
Netherlands																
Norway																
Poland																
Portugal																
Romania																
Slovakia																
Slovenia																
Spain																
Sweden																
United Kingdom																
Total CEPI¹																

¹ The ratio for "total CEPI" is calculated with exports outside CEPI

CEPI Exports of Paper for Recycling by Region

'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Other Europe															
EU Non-CEPI Countries															
Russian Federation															
Switzerland															
Turkey															
Others															
North America															
United States of America															
Canada															
Latin America															
Brazil															
Other Latin America															
Asia															
China															
Japan															
Other Asia															
Others															
Africa															
Oceania															
Others															
Total Exports															

CEPI Exports of Paper for Recycling by Grade¹

'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Mixed Grades															
Corrugated and Kraft															
Newspapers and Magazines															
Other Grades															
Total Paper for Recycling															

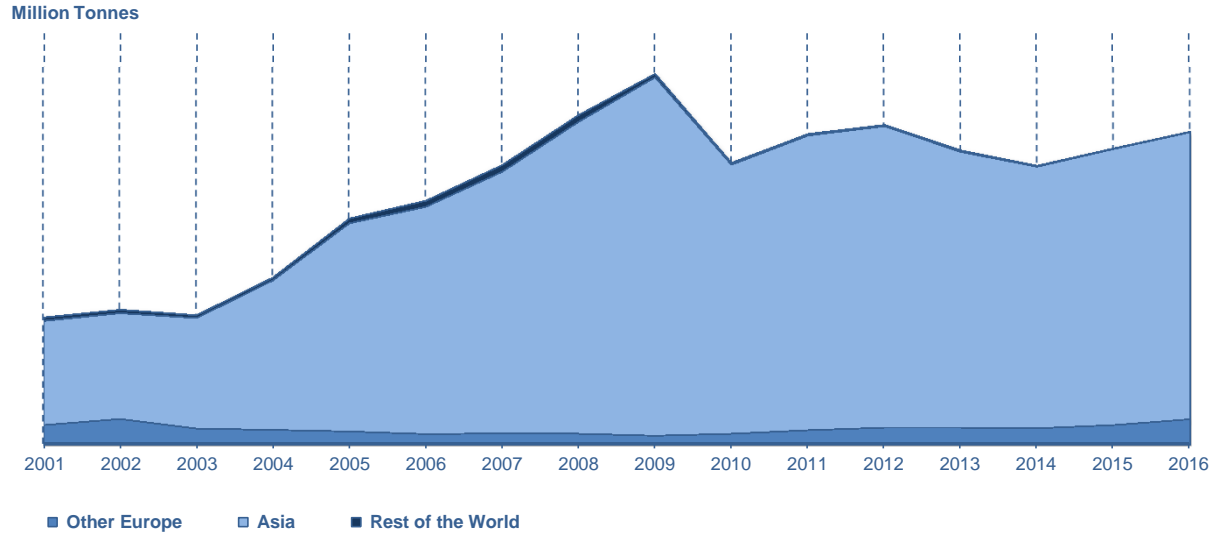
¹ See Definitions of Paper for Recycling Grades on page 85

CEPI Exports¹ of Paper for Recycling by Country

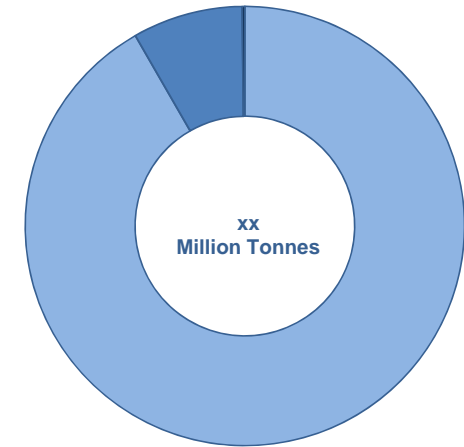
'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria															
Belgium															
Czech Republic															
Finland															
France															
Germany															
Hungary															
Italy															
Netherlands															
Norway															
Poland															
Portugal															
Romania															
Slovakia															
Slovenia															
Spain															
Sweden															
United Kingdom															
Total CEPI															

¹ Include exports to other CEPI countries

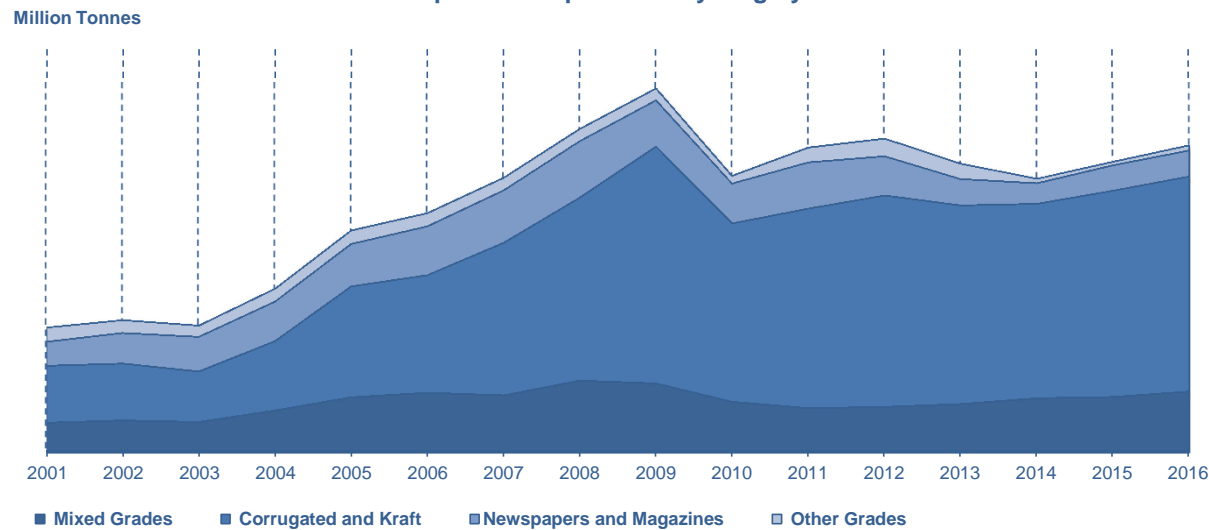
CEPI Exports of Paper for Recycling by Region



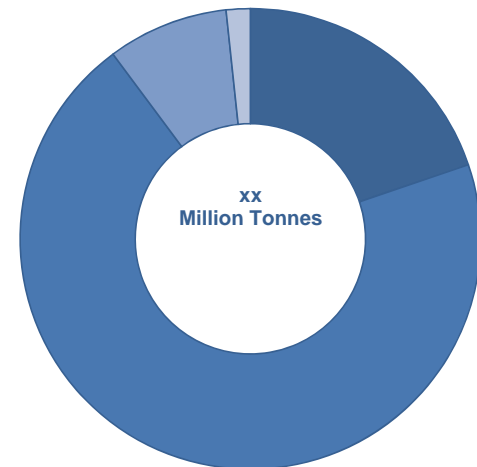
CEPI Exports of Paper for Recycling by Region in 2016



CEPI Exports of Paper for Recycling by Grade¹



CEPI Exports of Paper for Recycling by Grade¹ in 2016



¹ See Definitions of Paper for Recycling Grades on page 85

CEPI Imports of Paper for Recycling by Region

'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Other Europe															
EU Non-CEPI Countries															
Russian Federation															
Switzerland															
Turkey															
Others															
North America															
United States of America															
Canada															
Latin America															
Brazil															
Other Latin America															
Asia															
China															
Japan															
Other Asia															
Others															
Africa															
Oceania															
Others															
Total Outside CEPI															

CEPI Imports of Paper for Recycling by Grade¹

	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Mixed Grades															
Corrugated and Kraft															
Newspapers and Magazines															
Other Grades															
Total Paper for Recycling															

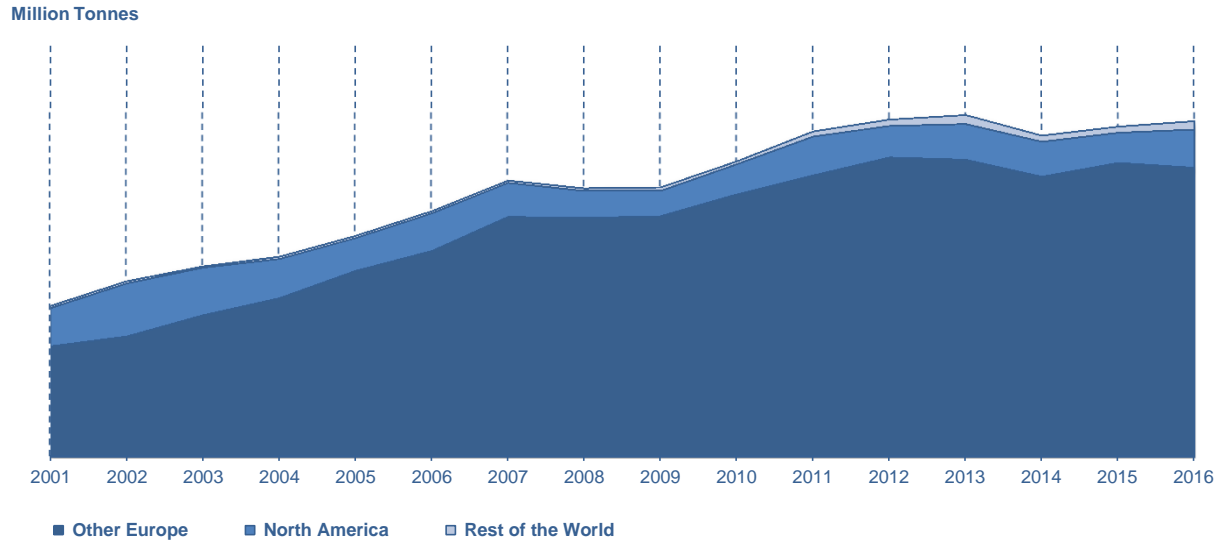
¹ See Definitions of Paper for Recycling Grades on page 85

CEPI Imports¹ of Paper for Recycling by Country

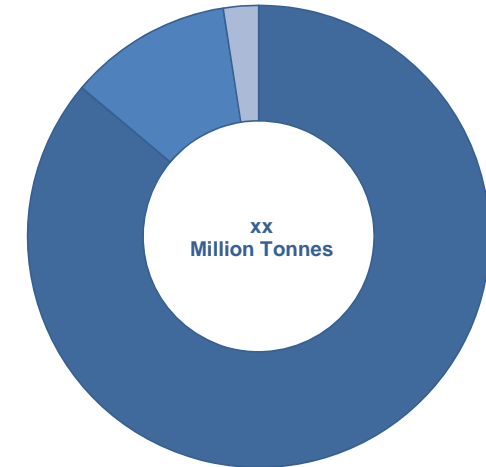
'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria															
Belgium															
Czech Republic															
Finland															
France															
Germany															
Hungary															
Italy															
Netherlands															
Norway															
Poland															
Portugal															
Romania															
Slovakia															
Slovenia															
Spain															
Sweden															
United Kingdom															
Total CEPI															

¹ Include imports from other CEPI countries

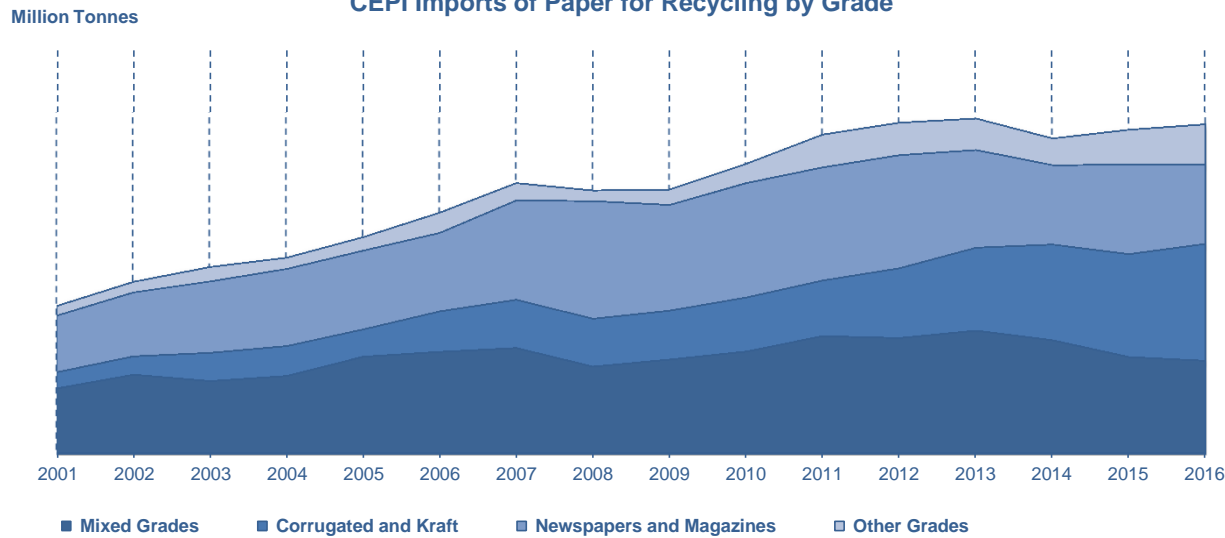
CEPI Imports of Paper for Recycling by Region



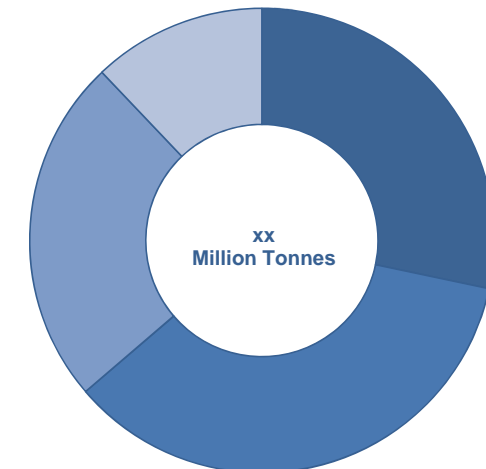
CEPI Imports of Paper for Recycling by Region in 2016



CEPI Imports of Paper for Recycling by Grade¹



CEPI Imports of Paper for Recycling by Grade¹ in 2016



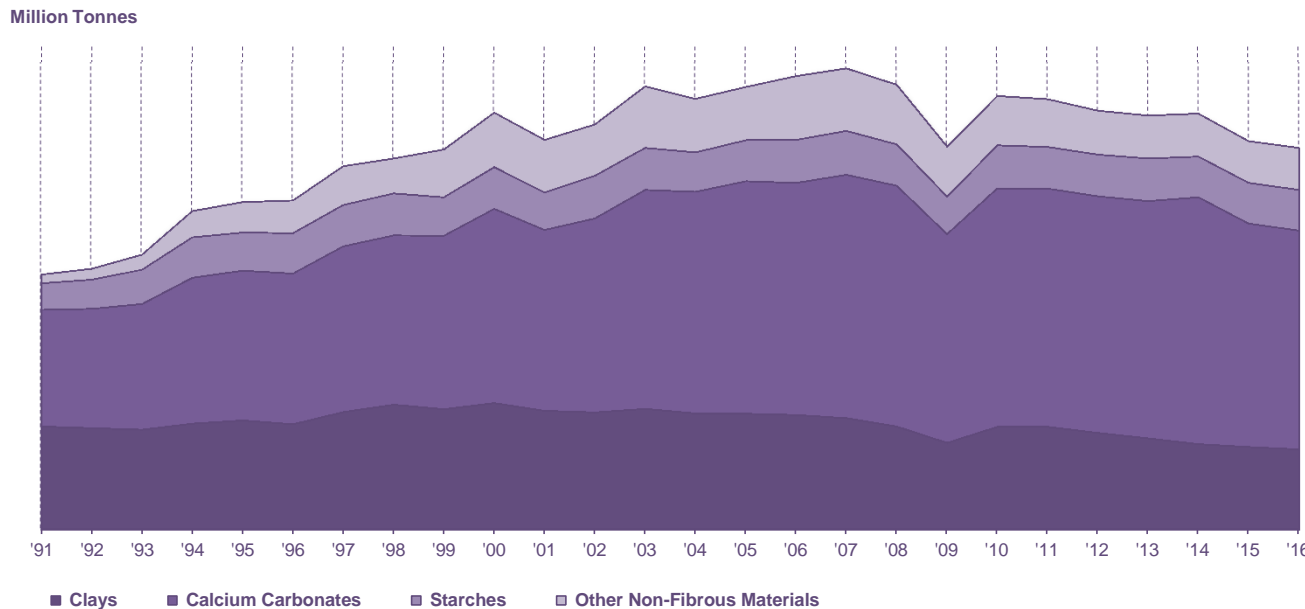
¹ See Definitions of Paper for Recycling Grades on page 85

CEPI Non-Fibrous Materials Consumption

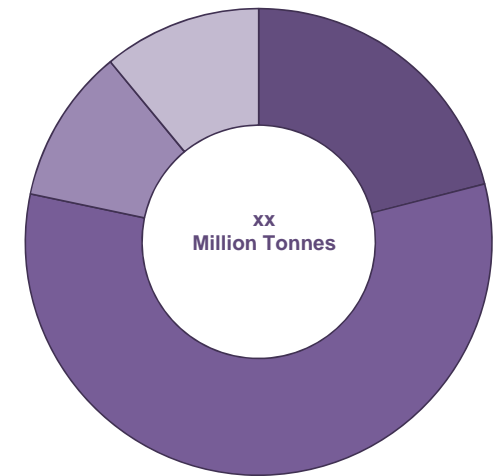
'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Clays (coating and filler)																	
Calcium Carbonates (coating and filler)																	
Starches (native and modified)																	
Other Non-Fibrous Materials																	
Total CEPI¹																	

¹ Some figures have been estimated by CEPI in order to keep consistency in "Total CEPI" numbers


CEPI Non-Fibrous Materials Consumption



CEPI Non-Fibrous Materials Consumption in 2016



CEPI Non-Fibrous Materials Consumption by Country

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Belgium																	
Czech Republic																	
Finland ¹																	
France																	
Germany																	
Hungary																	
Italy	<div style="border: 2px solid red; padding: 5px; display: inline-block;">  Some figures could be n.a. due to transparency issues </div>																
Netherlands																	
Norway																	
Poland																	
Portugal																	
Romania																	
Slovakia																	
Slovenia																	
Spain																	
Sweden																	
United Kingdom																	
Total CEPI																	

n.a.: Figures have been estimated by CEPI and included in the "Total CEPI" numbers.

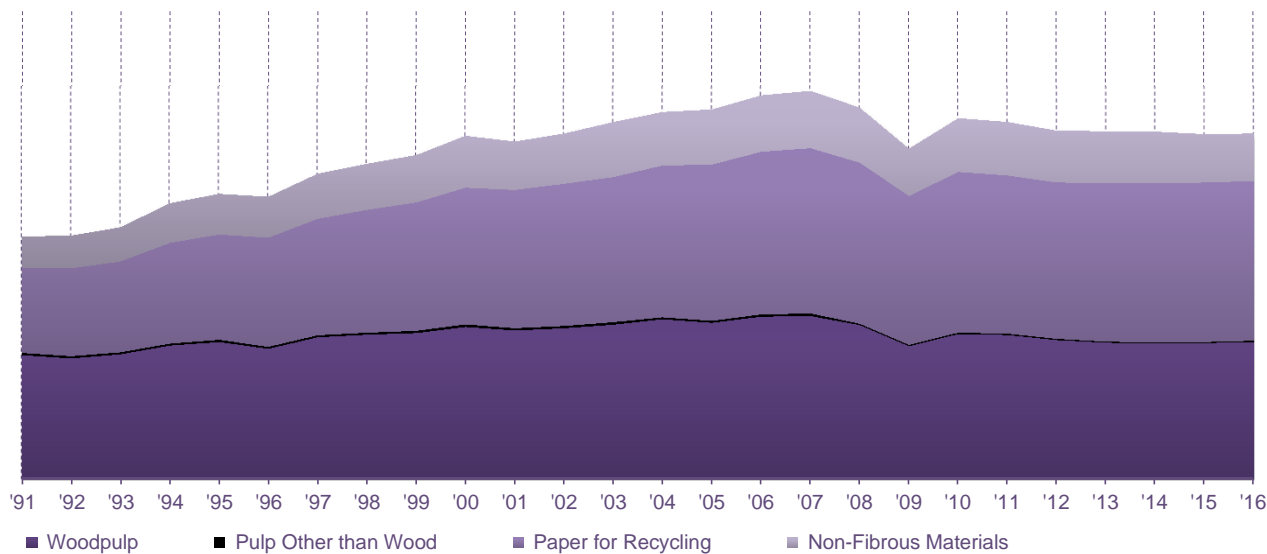
¹ Finland: 2004-2016 figures include only filling and coating pigments

CEPI Raw Materials Consumption

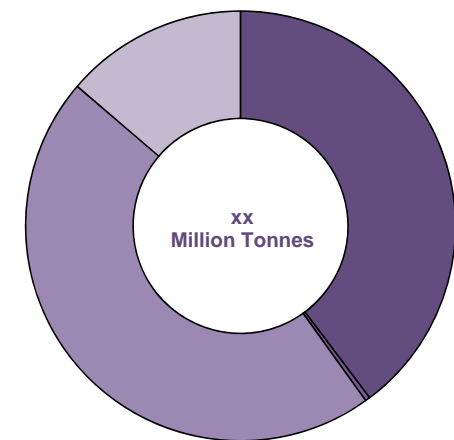
'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Woodpulp																	
Pulp Other than Wood																	
Paper for Recycling																	
Non-Fibrous Materials																	
Total Raw Materials																	

CEPI Raw Materials Consumption

Million Tonnes



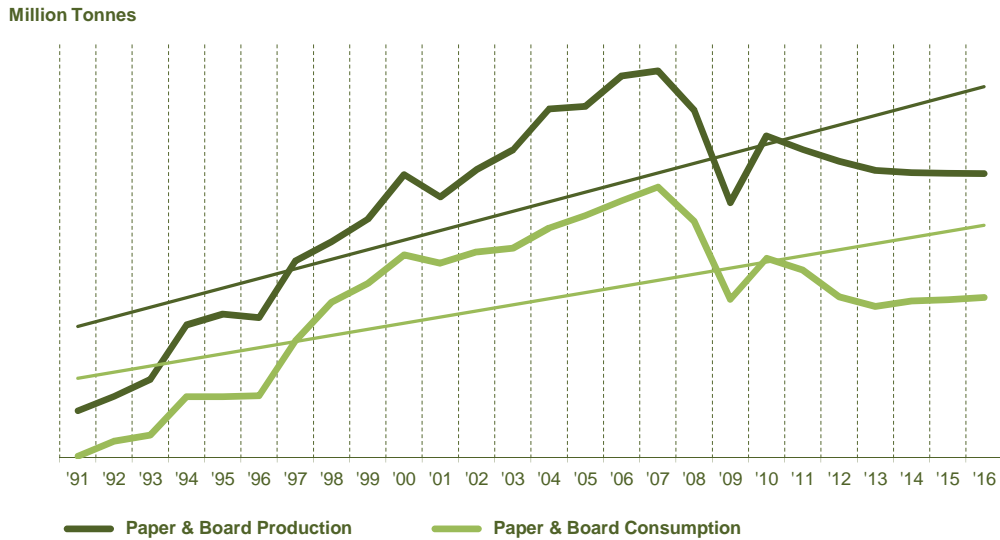
CEPI Raw Materials Consumption in 2016



CEPI Raw Materials Consumption by Country

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Belgium																	
Czech Republic																	
Finland																	
France																	
Germany																	
Hungary																	
Italy																	
Netherlands																	
Norway																	
Poland																	
Portugal																	
Romania																	
Slovakia																	
Slovenia																	
Spain																	
Sweden																	
United Kingdom																	
Total CEPI																	

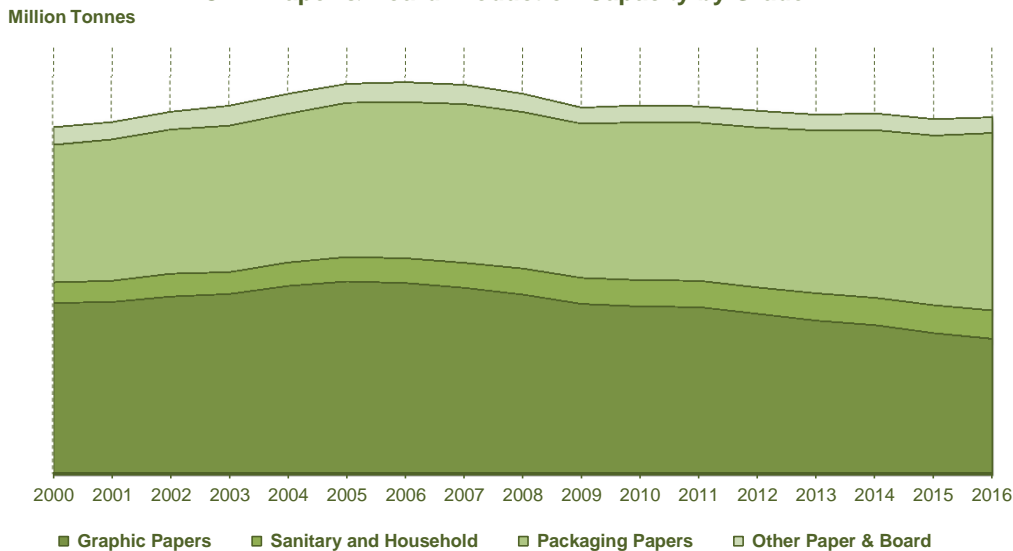
CEPI Paper & Board Production and Consumption



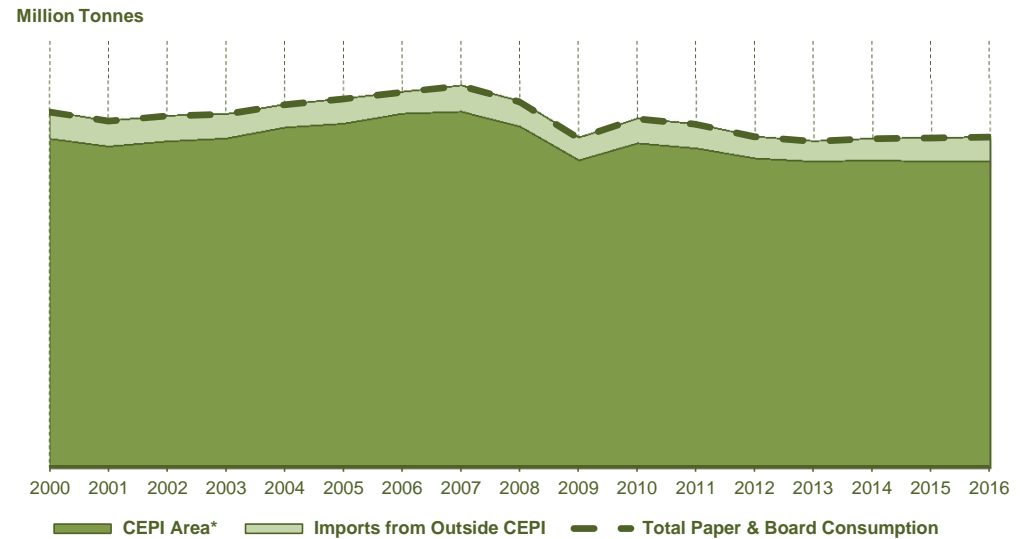
CEPI Paper & Board Production and Capacity



CEPI Paper & Board Production Capacity by Grade



Origin of CEPI Paper & Board Consumption

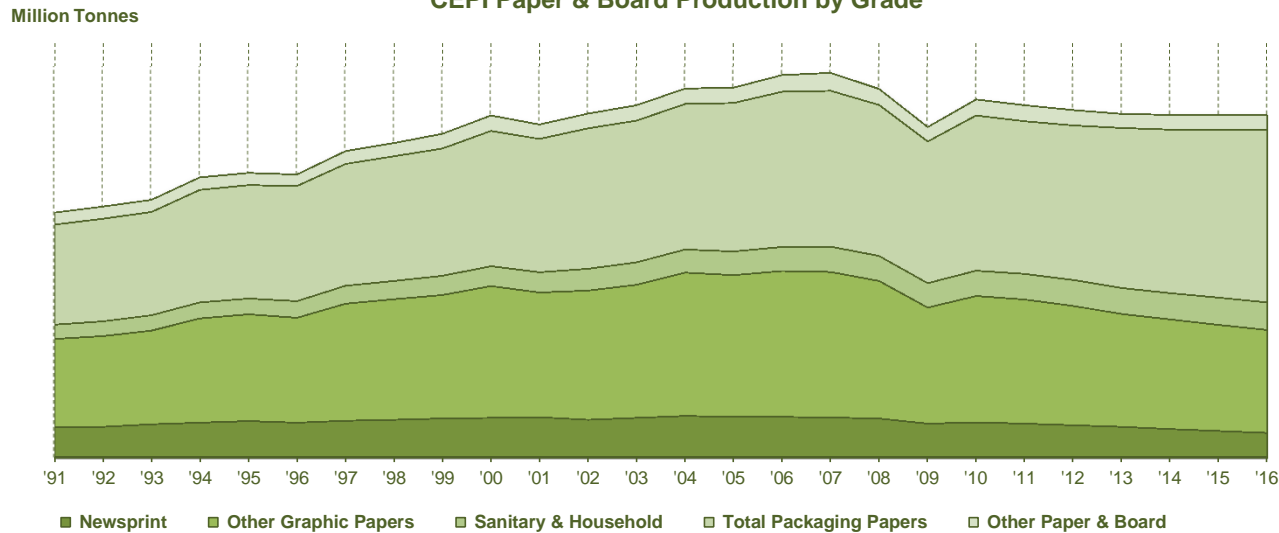


*CEPI Area = production - exports to outside CEPI

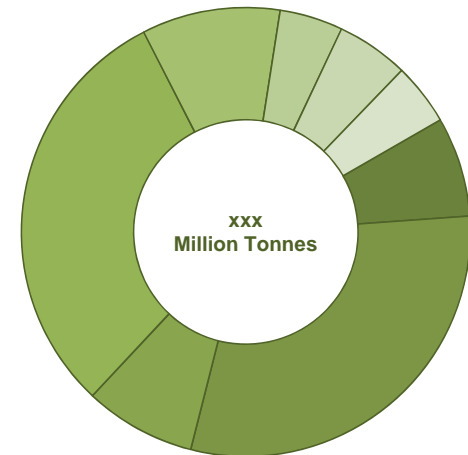
CEPI Paper & Board Production by Grade

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Newsprint																	
Uncoated Mechanical																	
Coated Mechanical																	
Uncoated Woodfree																	
Coated Woodfree																	
Other Graphic Papers																	
Total Graphic Papers																	
Sanitary and Household																	
Case Materials																	
Carton Board																	
Wrappings																	
Other Paper for Packaging																	
Total Packaging Papers																	
Other Paper & Board																	
Total Paper & Board																	

CEPI Paper & Board Production by Grade



CEPI Paper & Board Production by Grade in 2016



CEPI Paper & Board Production by Country

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Belgium																	
Czech Republic																	
Finland																	
France																	
Germany																	
Hungary																	
Italy																	
Netherlands																	
Norway																	
Poland																	
Portugal																	
Romania																	
Slovakia																	
Slovenia																	
Spain																	
Sweden																	
United Kingdom																	
Total CEPI																	

CEPI Production - Total Graphic Papers

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Belgium																	
Czech Republic																	
Finland																	
France																	
Germany																	
Italy																	
Netherlands																	
Poland																	
Portugal																	
Romania																	
Slovenia																	
Spain																	
Sweden																	
United Kingdom																	
Other CEPI Countries																	
Total CEPI																	

 List of countries could be modified following transparency issues



List of countries could be modified following transparency issues

CEPI Production - Newsprint

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Germany																	
Portugal																	
Romania																	
Sweden																	
Other CEPI Countries																	
Total CEPI																	

CEPI Production - Uncoated Mechanical

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Germany																	
Netherlands																	
Portugal																	
Romania																	
Spain																	
Other CEPI Countries																	
Total CEPI																	



List of countries could be modified following transparency issues

CEPI Production - Coated Mechanical

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Germany																	
Italy																	
Netherlands																	
Portugal																	
Romania																	
Spain																	
Other CEPI Countries																	
Total CEPI																	

CEPI Production - Uncoated Woodfree

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Czech Republic																	
Germany																	
Italy																	
Netherlands																	
Poland																	
Portugal																	
Romania																	
Other CEPI Countries																	
Total CEPI																	



List of countries could be modified following transparency issues


CEPI Production - Coated Woodfree

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Germany																	
Italy																	
Poland																	
Portugal																	
Romania																	
Other CEPI Countries																	
Total CEPI																	

CEPI Production - Sanitary and Household

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
France																	
Germany																	
Italy																	
Netherlands																	
Poland																	
Portugal																	
Romania																	
Slovakia																	
Spain																	
United Kingdom																	
Other CEPI Countries																	
Total CEPI																	

CEPI Production - Total Packaging Papers

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Czech Republic																	
Finland																	
France																	
Germany																	
Italy	<div style="border: 2px solid red; padding: 5px; display: inline-block;">  List of countries could be modified following transparency issues </div>																
Netherlands																	
Poland																	
Portugal																	
Romania																	
Slovenia																	
Spain																	
Sweden																	
United Kingdom																	
Other CEPI Countries																	
Total CEPI																	



List of countries could be modified following transparency issues

CEPI Production - Case Materials

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
France																	
Germany																	
Italy																	
Netherlands																	
Poland																	
Romania																	
Spain																	
United Kingdom																	
Other CEPI Countries																	
Total CEPI																	

CEPI Production - Carton Board and Other Paper & Board for Packaging

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
France																	
Germany																	
Italy																	
Poland																	
Other CEPI Countries																	
Total CEPI																	



List of countries could be modified following transparency issues

CEPI Production - Wrappings

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Czech Republic																	
France																	
Germany																	
Italy																	
Poland																	
Other CEPI Countries																	
Total CEPI																	

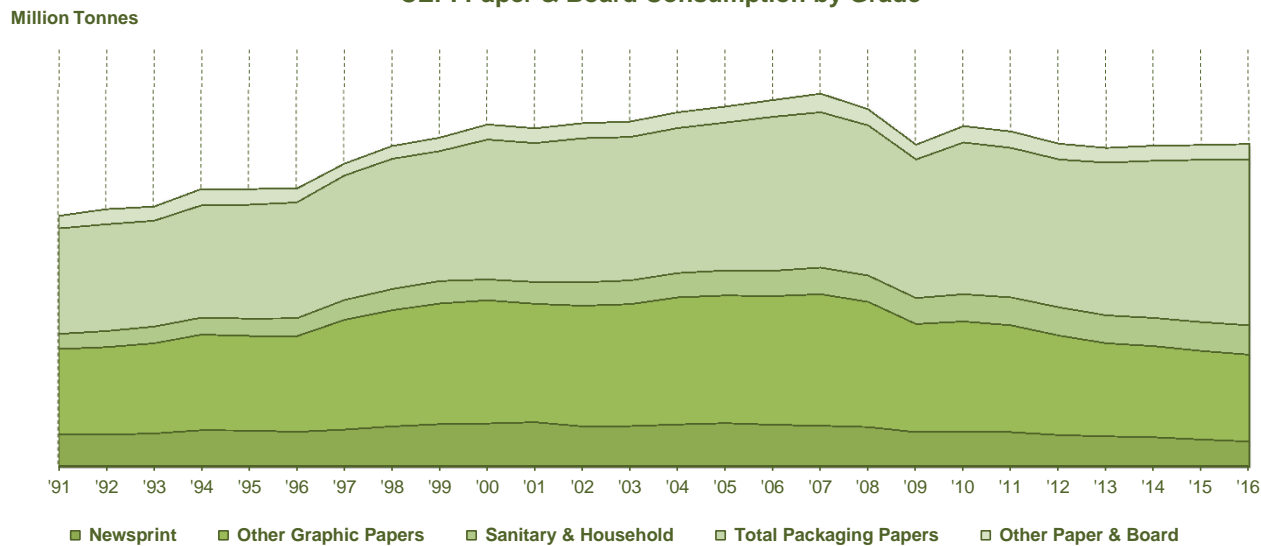
CEPI Production - Other Paper & Board

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
France																	
Germany																	
Italy																	
Netherlands																	
Poland																	
Portugal																	
Romania																	
Spain																	
United Kingdom																	
Other CEPI Countries																	
Total CEPI																	

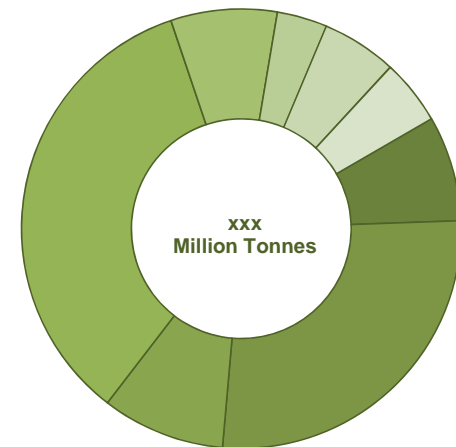
CEPI Paper & Board Consumption by Grade

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Newsprint																	
Uncoated Mechanical																	
Coated Mechanical																	
Uncoated Woodfree																	
Coated Woodfree																	
Other Graphic Papers																	
Total Graphic Papers																	
Sanitary and Household																	
Case Materials																	
Carton Board																	
Wrappings																	
Other Paper for Packaging																	
Total Packaging Papers																	
Other Paper & Board																	
Total Paper & Board																	

CEPI Paper & Board Consumption by Grade



CEPI Paper & Board Consumption by Grade in 2016



CEPI Paper & Board Apparent Consumption¹ by Country

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Belgium ²																	
Czech Republic																	
Finland ²																	
France																	
Germany																	
Hungary																	
Italy																	
Netherlands																	
Norway																	
Poland																	
Portugal																	
Romania																	
Slovakia																	
Slovenia																	
Spain																	
Sweden ²																	
United Kingdom ²																	
Total CEPI³																	

¹ Paper & Boards Apparent Consumption = Production + Imports - Exports² The adjusted figures on paper & board consumption for Belgium, Finland, Sweden and United Kingdom are reported on page 73.³ Paper & Board Consumption for total CEPI is calculated with total exports to outside CEPI and total imports from outside CEPI.

CEPI Consumption - Total Graphic Papers

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Belgium																	
Czech Republic																	
Finland																	
France																	
Germany																	
Italy	<div style="border: 2px solid red; padding: 5px; display: inline-block;">  List of countries could be modified following transparency issues </div>																
Netherlands																	
Poland																	
Portugal																	
Romania																	
Spain																	
Sweden																	
United Kingdom																	
Other CEPI Countries																	
Total CEPI¹																	

¹ Paper & Board Consumption for total CEPI is calculated with total exports to outside CEPI and total imports from outside CEPI.

CEPI Consumption - Total Packaging Papers

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria																	
Czech Republic																	
Finland																	
France																	
Germany																	
Italy																	
Netherlands																	
Poland																	
Portugal																	
Romania																	
Spain																	
Sweden																	
United Kingdom																	
Other CEPI Countries																	
Total CEPI¹																	



List of countries could be modified following transparency issues

¹ Paper & Board Consumption for total CEPI is calculated with total exports to outside CEPI and total imports from outside CEPI.

CEPI Exports of Paper & Board by Region

'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Other Europe															
EU Non-CEPI Countries															
Russian Federation															
Switzerland															
Turkey															
Others															
North America															
United States of America															
Canada															
Latin America															
Brazil															
Other Latin America															
Asia															
China															
Japan															
Other Asia															
Others															
Africa															
Oceania															
Others															
Total Outside CEPI															

CEPI Exports of Paper & Board by Grade

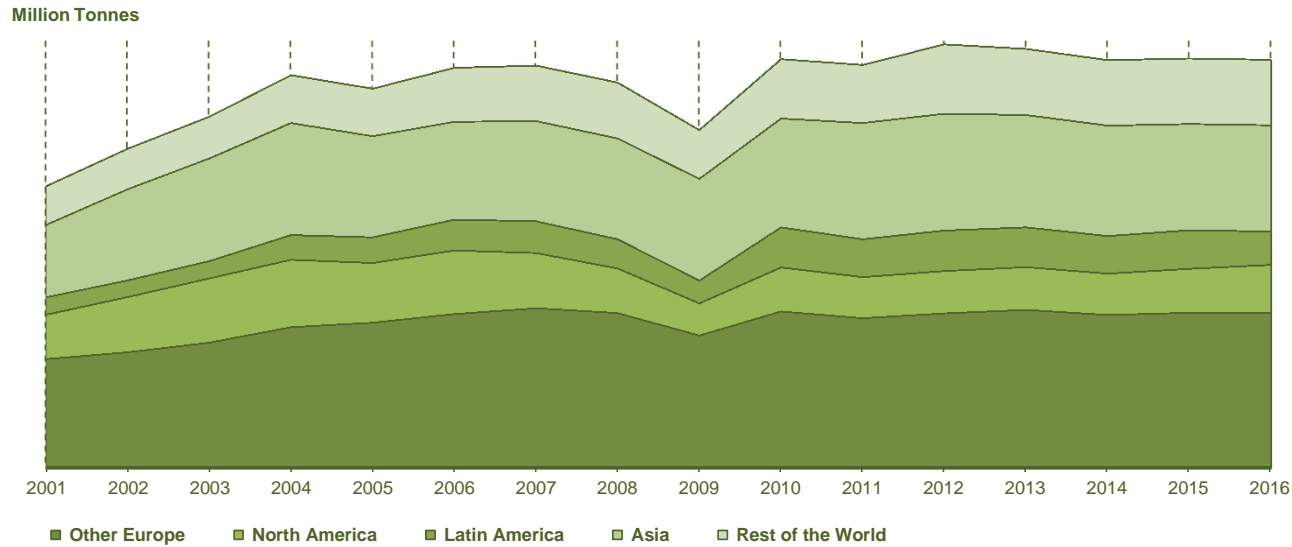
'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Newsprint															
Uncoated Mechanical															
Coated Mechanical															
Uncoated Woodfree															
Coated Woodfree															
Other Graphic Papers															
Total Graphic Papers															
Sanitary and Household															
Case Materials															
Carton Board															
Wrappings															
Other Paper & Board for Packaging															
Total Packaging Papers															
Other Paper & Board															
Total Paper & Board															

CEPI Exports¹ of Paper and Board by Country

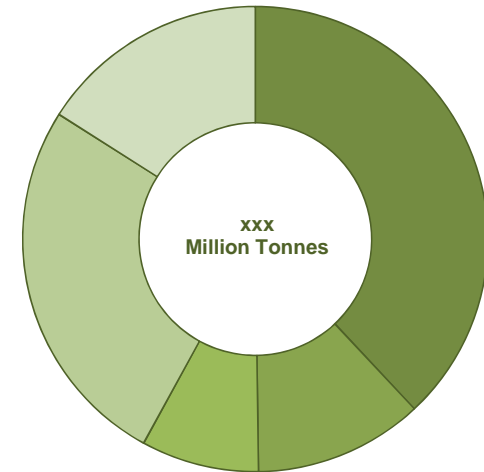
'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria															
Belgium															
Czech Republic															
Finland															
France															
Germany															
Hungary															
Italy															
Netherlands															
Norway															
Poland															
Portugal															
Romania															
Slovakia															
Slovenia															
Spain															
Sweden															
United Kingdom															
Total CEPI															

¹ Include exports to other CEPI countries

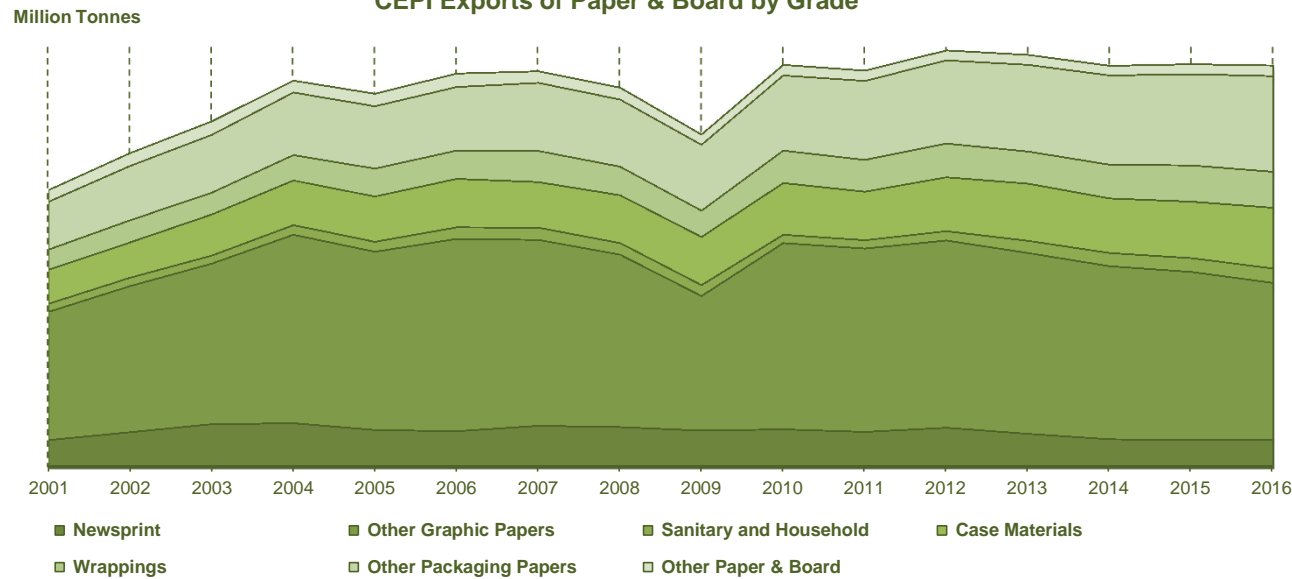
CEPI Exports of Paper & Board by Region



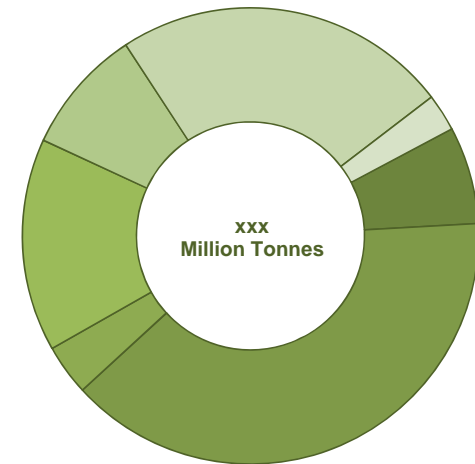
CEPI Exports of Paper & Board by Region in 2016



CEPI Exports of Paper & Board by Grade



CEPI Exports of Paper & Board by Grade in 2016



CEPI Imports of Paper & Board by Region

'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Other Europe															
EU Non-CEPI Countries															
Russian Federation															
Switzerland															
Turkey															
Others															
North America															
United States of America															
Canada															
Latin America															
Brazil															
Other Latin America															
Asia															
China															
Japan															
Other Asia															
Others															
Africa															
Oceania															
Others															
Total Outside CEPI															

CEPI Imports of Paper & Board by Grade

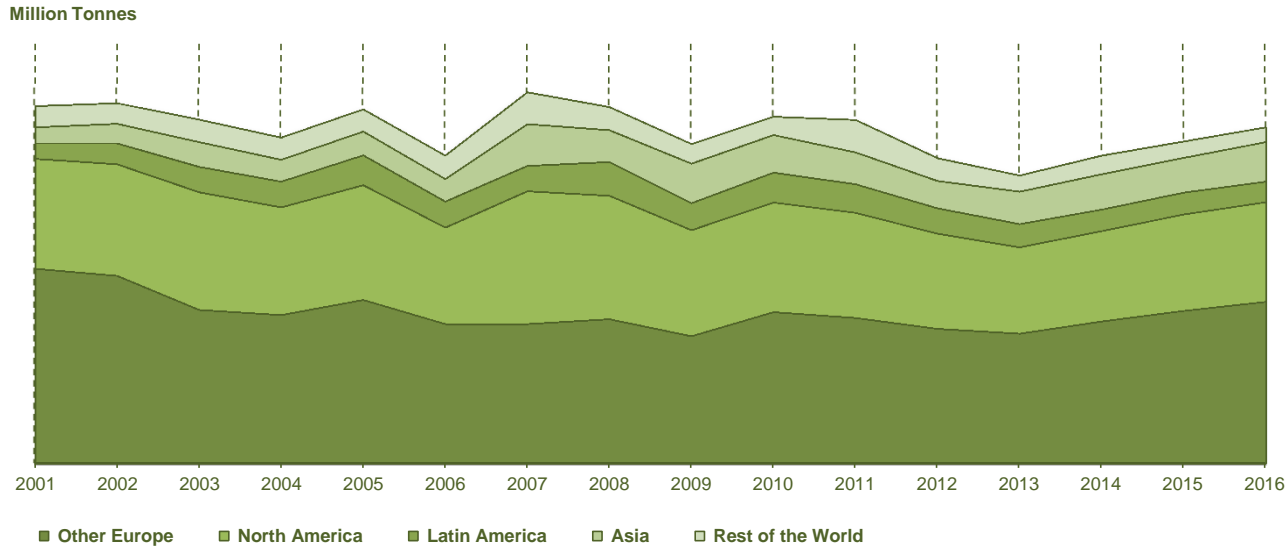
'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Newsprint															
Uncoated Mechanical															
Coated Mechanical															
Uncoated Woodfree															
Coated Woodfree															
Other Graphic Papers															
Total Graphic Papers															
Sanitary and Household															
Case Materials															
Carton Board															
Wrappings															
Other Paper & Board for Packaging															
Total Packaging Papers															
Other Paper & Board															
Total Paper & Board															

CEPI Imports¹ of Paper and Board by Country

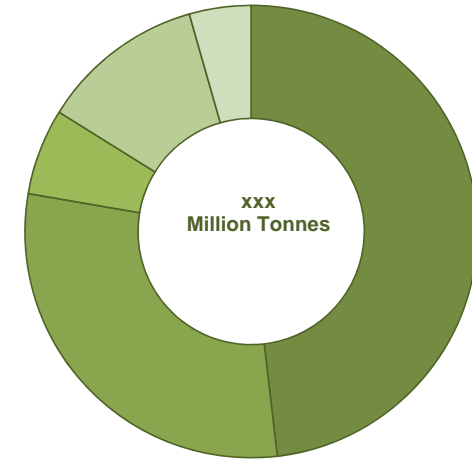
'000 Tonnes	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Chge vs. 2015	% Share of Total
Austria															
Belgium															
Czech Republic															
Finland															
France															
Germany															
Hungary															
Italy															
Netherlands															
Norway															
Poland															
Portugal															
Romania															
Slovakia															
Slovenia															
Spain															
Sweden															
United Kingdom															
Total CEPI															

¹ Include Imports from other CEPI countries

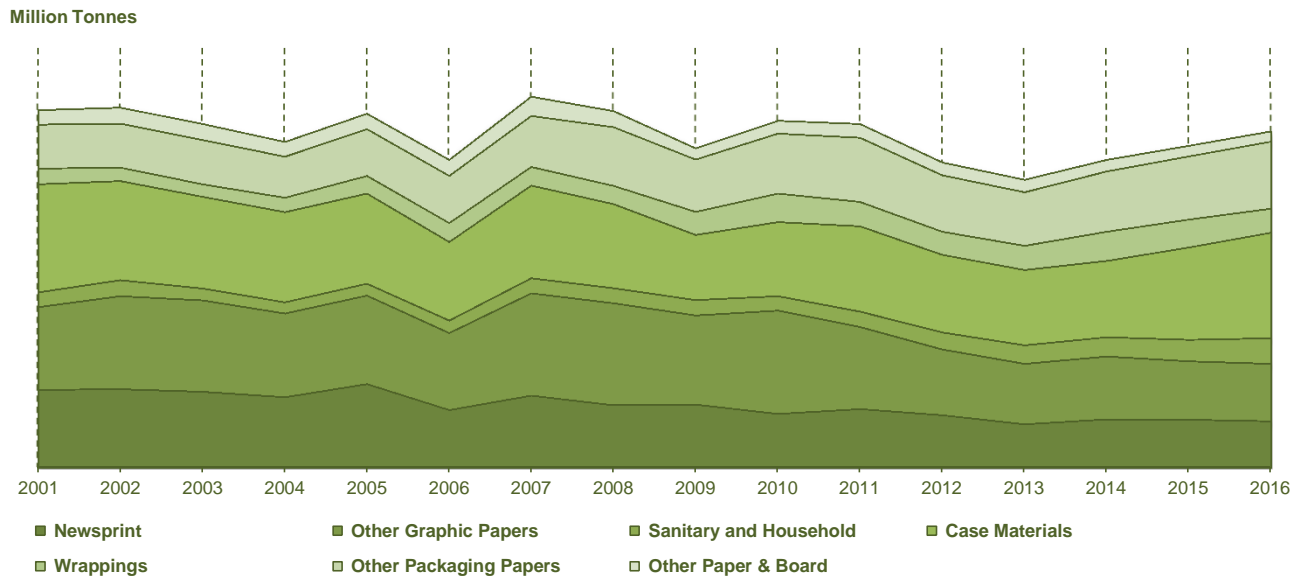
CEPI Imports of Paper & Board by Region



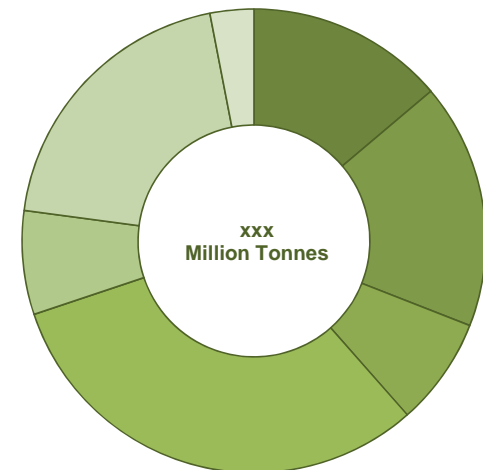
CEPI Imports of Paper & Board by Region in 2016



CEPI Imports of Paper & Board by Grade



CEPI Imports of Paper & Board by Grade in 2016



Paper & Board Consumption: figures adjusted by the National Associations¹

'000 Tonnes	1991	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Belgium ²															
Finland															
Sweden															
United Kingdom															

¹ Adjustments have been made by the countries above to paper & board consumption, to take into account the volumes of converted and printed products traded and/or the distorting impact of ports' activity.

These adjusted figures have been used to calculate the recycling rate.

² Belgium has revised its consumption figures for 2010 to 2016 only. The decrease between 2009 and 2010 cannot therefore be considered as reality.

General Notes

Unless another source is indicated, all the figures are taken from returns to CEPI by member associations.

In view of problems in the official intra-EU statistics, where these are known to be deficient and respondents could provide more truly representative data, they were asked to do so.

The term "paper" covers paper and board of all grammages.

Where figures are not available "n.a." is indicated.

Some totals may not add up due to rounding.

In many cases, 2015 figures have been revised and therefore differ from those reported in the previous edition.

Graphs

All graphs represent total CEPI unless otherwise indicated.

Because of small percentages represented some pie charts may not add up to 100%.

Please note that for clearer representation purposes, for some graphs the vertical axis does not start at zero.

Glossary

CEPI: Confederation of European Paper Industries

FAO: Food and Agriculture Organization of the United Nations

IMF: International Monetary Fund

AF&PA: The American Forest & Paper Association

PPPC: Pulp and Paper Products Council

JPA: Japan Paper Association

KPMA: Korea Paper Manufacturers' Association

IBA: Indústria Brasileira de Árvores

RISI: Resource Information Systems Inc

Country Coding:

Austria: AT - Belgium: BE - Czech Republic: CZ - Finland: FI - France: FR - Germany: DE - Hungary: HU - Italy: IT

The Netherlands: NL - Norway: NO - Poland: PL - Portugal: PT - Romania: RO - Slovakia: SK - Slovenia: SI - Spain: ES

Sweden: SE - United Kingdom: UK

Definitions

More information and details related to the definitions and descriptions of terms and categories used in the European Paper Industry can be found in the new CEPI booklet "Pulp and Paper Industry - Definitions and Concepts".

<http://www.cepi.org/topics/statistics>

Gross Domestic Product

A measure of economic activity, namely the value of an economy's total output of goods and services, less intermediate consumption, plus net taxes on products and imports, in a specified period. GDP can be broken down by output, expenditure or income components. The main expenditure aggregates that make up GDP are household final consumption, government final consumption, gross fixed capital formation, changes in inventories, and imports and exports of goods and services (including intra-eu trade). (Source: European Central Bank)

Number of Companies

Pulp and paper manufacturing companies or firms formed in accordance with the law of a CEPI member country. Company means a separate legal unit (limited, GmbH, S.A., AB, A/S, etc.) even if it is part of a bigger group, holding, etc.

The figure for the number of pulp and papermaking companies in all CEPI countries is an aggregate of all the companies from each individual country. If those companies with operations in more than one country are only counted once then it is estimated that the number of companies operating in the pulp and papermaking industry in CEPI countries is approximately 515 (Group or Corporation).

Number of Mills (Pulp and Paper & Board)

The number of mills producing pulp and/or paper as recorded by CEPI member associations as being in production during the year concerned (includes mills which have ceased/commenced production during the year).

Number of Paper Machines

The number of machines producing paper as recorded by CEPI member associations as being in production during the year concerned (includes machines which have ceased/commenced production during the year).

Capacity

Capacity is defined as the practical maximum tonnage of pulp, paper or paperboard of normal commercial quality that can be produced each year with full use of equipment and adequate supplies of raw materials and labour, and assuming full demand. No allowance is made for losses due to unscheduled shut downs, strikes, temporary loss of power, etc. Allowance is made for new mills or machines, normally phasing the additional capacity over the first few years of operation, and for facilities which have been closed down with no intention of resuming production. Where a paper machine produces more than one grade, the capacity is apportioned between the grades according to production plans for future operation. (Source: FAO)

Average size of mills (Pulp or Paper & Board)

Total production divided by the total number of mills.

Operating Rate (Pulp or Paper & Board)

The amount of pulp or paper produced annually compared to the amount of capacity available to produce pulp or paper.

Employment

The number of employees concerned with the manufacture of pulp and/or paper as recorded by CEPI member associations at a specific point during the year concerned. Includes all full-time and part-time employees in what might be classed as blue-collar and white-collar occupations.

Turnover

Turnover comprises the totals invoiced by the observation unit during the reference period, and this corresponds to market sales of goods or services supplied to third parties. Turnover includes all duties and taxes on the goods or services invoiced by the unit with the exception of the VAT invoiced by the unit vis-à-vis its customer and other similar deductible taxes directly linked to turnover. It also includes all other charges (transport, packaging, etc.) passed on to the customer, even if these charges are listed separately in the invoice. Reduction in prices, rebates and discounts as well as the value of returned packing must be deducted. Income classified as other operating income, financial income and extra-ordinary income in company accounts is excluded from turnover. Operating subsidies received from public authorities or the institutions of the European Union are also excluded. (Source: Eurostat).

Investments

Investments made during the reference period in all tangible goods. Included are new and existing tangible capital goods, whether bought from third parties or produced for own use (i.e. Capitalised production of tangible capital goods), having a useful life of more than one year including non-produced tangible goods such as land. The threshold for the useful life of a good that can be capitalised may be increased according to company accounting practices where these practices require a greater expected useful life than the 1 year threshold indicated above. All investments are valued prior to (i.e. gross of) value adjustments, and before the deduction of income from disposals. Purchased goods are valued at purchase price, i.e. transport and installation charges, fees, taxes and other costs of ownership transfer are included. Own produced tangible goods are valued at production cost. Goods acquired through restructurings (such as mergers, take-overs, break-ups, split-off) are excluded. Purchases of small tools which are not capitalised are included under current expenditure. Also included are all additions, alterations, improvements and renovations which prolong the service life or increase the productive capacity of capital goods. (Source: Eurostat)

Added Value

Added value at factor cost is the gross income from operating activities after adjusting for operating subsidies and indirect taxes. It can be calculated from turnover, plus capitalised production, plus other operating income, plus or minus the changes in stocks, minus the purchases of goods and services, minus other taxes on products which are linked to turnover but not deductible, minus the duties and taxes linked to production. Alternatively it can be calculated from gross operating surplus by adding personnel costs. Income and expenditure classified as financial or extra-ordinary in company accounts is excluded from value added. Value added at factor costs is calculated "gross" as value adjustments (such as depreciation) are not subtracted. (Source: Eurostat)

Wood

Wood Consumption

Use of wood from domestic origin + imports.
Volumes of wood entering the mill gates.

Roundwood: Logs and branches

Chips: Logs and branches which have been processed into chips (particles of wood).

Hardwood: The wood from non-coniferous (broadleaved) trees (trees that do not have needles or cones).

Softwood: The wood from coniferous trees.

Wood - Solid Under Bark: The volume of wood excluding the bark

Pulp

This report includes statistics on pulp production, trade and consumption within the CEPI countries. The report shows figures for total pulp production, i.e. both integrated pulp and market pulp.

Integrated Pulp Production

Integrated pulp is produced for use as raw material in the production of paper at the same mill, or for shipment by a producing mill to other mills, which it owns, controls or with which it is affiliated within the same country and therefore not sold on the open market.

Market Pulp Production

Market pulp is pulp that is sold in open competition with that of other producers. All pulp exported from the producing country is considered to be market pulp.

Pulp Consumption

Production + Imports from other CEPI Countries + Imports from outside CEPI – Exports to other CEPI Countries – Exports to outside CEPI

Pulp Grades

Pulp grades are classified according to their production process.

Mechanical Pulps

Stone groundwood: pulp produced by grinding wood into relatively short fibres. This pulp is used mainly in newsprint and wood-containing papers, like LWC (light-weight coated) and SC papers. CEPI Harmonised Code is 923 000 000.

Thermo-mechanical (TMP): pulp produced in a thermo-mechanical process where wood particles are softened by steam before entering a pressurised refiner. TMP has mainly the same end-uses as stone groundwood. Variants of the above two processes produce pressurised stone groundwood pulp and refiner mechanical pulp. CEPI Harmonised Code is 923 400 000.

Semi-Chemical Pulps

Semi-chemical: pulp produced in a two-stage process which involves partial digestion with chemicals, followed by mechanical treatment in a disc refiner. This pulp is mainly used in the production of fluting medium for corrugated board. CEPI Harmonised Code is 921 000 000.

Chemi-thermomechanical (CTMP): pulp produced in a similar way to TMP, but the wood particles are chemically treated before entering the refiner. This pulp has properties suited to tissue manufacture. Some CTMP is used in printing and writing grades. CTMP is classified under semi-chemical pulps in the Harmonised System of the Customs Co-operation Council. In the FAO, as well as in other industry statistics, such chemi-thermomechanical pulps are grouped with mechanical pulp.

Chemical Pulps

Sulphite: pulp produced by cooking wood chips in a pressure vessel in the presence of bisulphite liquor. End-uses range from newsprint, printing and writing papers, tissue and sanitary papers. Sulphite can be either bleached or unbleached. CEPI Harmonised Code is 922 200 000.

Sulphate (or kraft): pulp produced by cooking wood chips in pressure vessels in the presence of a sodium hydroxide (soda) liquor. The pulp may be unbleached or bleached. End-uses are widespread, with bleached pulp particularly used for graphic papers, tissue and carton boards. Unbleached pulp is commonly used in liner for corrugated board, wrappings, sack and bag papers, envelopes and other unbleached speciality papers. CEPI Harmonised Code is 922 100 000.

Other Pulps

Pulp produced from fibres other than wood, such as sugar cane bagasse, wheat straw, kenaf, cotton rags and hemp.

Deinked Pulps

Pulp made from recovered paper from which inks and other contaminants have been removed.

Non-Fibrous Materials

Certain non-cellulose items are added to the paper stock during the papermaking process in order to impart special characteristics to the final product. The main types of materials used can be mainly grouped by purpose:

Materials for sizing (both internal and surface sizing)

These are used in papermaking to control the absorbency of paper with regards to liquids such as water or ink. Rosin, alum, starch and gelatine are the most commonly used materials for this purpose.

Materials for loading and filling

These are used to improve the optical and physical properties of the final product such as opacity, brightness, smoothness, and ink receptivity. Filler materials include china clay (kaolin - used by papermakers to obtain finish and consistency and also for coating art and chromo paper), calcium carbonate, barium sulphate (barites), talc, and titanium dioxide.

Materials for colouring

Pigments and dyestuffs used to impart colour to the paper and usually added to the pulp whilst in the beater.

Additives used to impart special paper characteristics

In particular the use of starch as a binder to increase the strength of the final paper.

Energy

Specific CO2 Emissions

CO2 emissions remitted for the productions of specific quantity of the final output (paper & board + market pulp).

CHP – Combined heat and power installation

CHP represents simultaneous production of heat and electrical energy from one fuel source more which is far more efficient than normal fuel burning.

Paper for Recycling

Utilisation

Use of paper for recycling as raw material.
Volumes entering the mill gates. Mill broke are not included.

Recovery

Principle of waste management policy including reuse, material recycling, composting and energy recovery as well as exports for similar purposes.

Recycling

Reprocessing of paper for recycling in a production process for the original purpose or for other purposes, including composting but excluding energy recovery.

Collection

separate collection of paper and paper products from industrial and commercial outlets, from households and offices for recovery. (Collection includes transport to the sorting or recycling plant/paper mill.)
Collection = utilisation plus exports minus imports of paper for recycling.

Utilisation Rate

Percentage of paper for recycling utilisation compared to the total paper production.

Important Note: Paper for recycling is composed of fibres but also unusable materials - non-paper components as well as paper and board detrimental to production. The share of unusable materials depends on the actual sorting and collection of used paper. It varies according to recovered paper grades and countries. The volume of recycled fibres actually used to produce new paper is therefore lower than the volume of recovered paper considered. The utilisation rate compares paper for recycling utilisation to paper production.

Recycling Rate

Percentage of paper for recycling "utilisation + net trade" compared to total paper consumption.

Utilisation by Sector

Total utilisation of paper for recycling in a sector as percentage of the overall recovered paper use.

Paper for Recycling Classes

Class I - Mixed Grades

Waste and scrap of paper or paperboard, including unsorted waste and scrap.

Class II - Corrugated and Kraft

Unbleached kraft paper or paperboard or corrugated paper or paperboard.

Class III - Newspapers and Magazines

Paper or paperboard made mainly of mechanical pulp (for example, newspapers, journals and similar printed matter). Including old and unsold newspapers and magazines, telephone directories, brochures and printed advertising material.

Class IV - Other Grades

Other paper or paperboard made mainly of bleached chemical pulp, not coloured in the mass.

Paper & Board

Paper & Board Consumption

Production + Imports from other CEPI Countries + Imports from outside CEPI – Exports to other CEPI Countries – Exports to outside CEPI

Per Capita Consumption

Per capita consumption of paper and board here is a calculation taking the amount of paper and board consumed in each country (for this report the amount of paper and board delivered domestically by paper manufacturers plus imports) divided by the number of the population in that country. It cannot be assumed to be the average amount of finished paper and board or articles of paper and board used by an individual. Consumption by companies, and more broadly the whole economy, is included.

Paper & Board Grades

Graphic Papers

Newsprint: paper mainly used for printing newspapers. It is made largely from mechanical pulp and/or recovered paper, with or without a small amount of filler. Weights usually range from 40 to 52g/m² but can be as high as 65g/m². Newsprint is machine-finished or slightly calendered, white or slightly coloured and is used in reels for letterpress, offset or flexo-printing.

The CEPI Harmonised Code for Newsprint is 100 000 000.

Uncoated mechanical: paper suitable for printing or other graphic purposes where less than 90% of the fibre furnish consists of chemical pulp fibres. This grade is also known as groundwood or wood-containing paper and magazine paper, such as heavily filled super-calendered paper for consumer magazines printed by the rotogravure and offset methods.

The CEPI Harmonised Code for Uncoated Mechanical is 211 000 000.

Uncoated woodfree: paper suitable for printing or other graphic purposes, where at least 90% of the fibre furnish consists of chemical pulp fibres. Uncoated woodfree paper can be made from a variety of furnishes, with variable levels of mineral filler and a range of finishing processes such as sizing, calendering, machine-glazing and watermarking. This grade includes most office papers, such as business forms, copier, computer, stationery and book papers. Pigmented and size press “coated” papers (coating less than 5g per side) are covered by this heading. The CEPI Harmonised Code for Uncoated Woodfree is 231 000 000.

Coated papers: all paper suitable for printing or other graphic purposes and coated on one or both sides with minerals such as china clay (kaolin), calcium carbonate, etc. Coating may be by a variety of methods, both on-machine and off-machine, and may be supplemented by super-calendering. Coated Mechanical papers are made of fibres produced mainly (90%) by a mechanical pulping process and are also known as coated groundwood. Coated Woodfree papers are made of fibres produced mainly (90%) by a chemical pulping process and are also known as coated freesheet.

The CEPI Harmonised Code for Coated Mechanical is 212 000 000 and for Coated Woodfree is 232 000 000.

Sanitary and Household

This covers a wide range of tissue and other hygienic papers for use in households or commercial and industrial premises. Examples are toilet paper and facial tissues, kitchen towels, hand towels and industrial wipes. Some tissue is also used in the manufacture of baby nappies, sanitary towels, etc. The parent reel stock is made from virgin pulp or recovered fibre or mixtures of these. It is reported in the production statistics at parent reel weight before conversion to finished products. Import and export statistics however take into account trade in both parent reels and finished products.

The CEPI Harmonised Code for Sanitary and Household is 700 000 000.

Packaging Papers

Case materials: papers and boards mainly used in the manufacture of corrugated board. They are made from any combination of virgin and recovered fibres and can be bleached, unbleached or mottled. Fluting is the middle ply with outer layers called the liners. Included are kraftliner, testliner, semi-chemical fluting, and recovered paper-based fluting (Wellenstoff). Main uses include corrugated boxes, transport packaging, storage and product display. Also known as containerboard, corrugated case materials, cardboard, linerboard or corrugating medium. The CEPI Harmonised Code for Case Materials is 300 000 000.

Cartonboard (can also be written as Carton Board): may be single or multiply, coated or uncoated. It is made from virgin and/or recovered fibres, and has good folding properties, stiffness and scoring ability. It is mainly used in cartons for consumer products such as frozen food, cosmetics and for liquid containers. Also known as solid board, folding box board, boxboard or carrier board. The CEPI Harmonised Code for Cartonboard is 400 000 000.

Wrappings (up to 150 g/m²): papers whose main use is wrapping or packaging made from any combination of virgin or recovered fibres, bleached or unbleached. They may be subject to various finishing and/or marking processes. Included are sack kraft, other wrapping krafts, sulphite and grease-proof papers. The CEPI Harmonised Code for Wrappings is 500 000 000.

Other paper & board for packaging: this category embraces all paper and board mainly for packaging purposes other than those listed above. Most are produced from recovered fibres, e.g. greyboards, and go for conversion, which in some cases may be for end-uses other than packaging including book covers and games. Also known as greyboard or unlined chip. The CEPI Harmonised Code for Other Packaging is 600 000 000.

Other Paper & Board

Other paper and board for industrial and special purposes: This wide ranging category includes cigarette papers and filter papers, as well as gypsum liners and special papers for waxing, insulating, roofing, asphaltting, and other specific applications or treatments. The CEPI Harmonised Code for Special Paper and Board is 800 000 000.

CEPI Harmonised Codes

More information about the CEPI Harmonised Code Structure and CEPI Harmonised Grade List is available on the CEPI website (www.cepi.org)

Paper & Board

100 000 000 - Newsprint: All Grades
 211 000 000 - Uncoated Mechanical Graphics: All Grades
 231 000 000 - Uncoated Woodfree Graphics: All Grades
 212 000 000 - Coated Mechanical Graphics: All Grades
 232 000 000 - Coated Woodfree Graphics: All Grades
 300 000 000 - Corrugated Case Materials: All Grades
 400 000 000 - Carton Board: All Grades
 500 000 000 - Wrappings < 125gsm: All Grades
 600 000 000 - Other Paper and Board for Packaging: All Grades
 700 000 000 - Sanitary and Household Papers: All Grades
 800 000 000 - Special Paper and Board: All Grades

Pulp

923 000 000 - Mechanical Pulp
 922 000 000 - Chemical Pulp
 922 200 000 - Sulphite Pulp
 922 100 000 - Sulphate Pulp
 930 000 000 - Other Pulp

Groups of Paper for Recycling Grades

According to the EN 643 "European List of Standard Grades of Paper for Recycling and Board", the following is the official paper for recycling grade listing:

Mixed Grades: 1.01.00, 1.02.00, 1.03.00, 5.01.00, 5.02.00, 5.03.00, 5.03.01, 5.05.00, 5.05.01, 5.05.02, 5.11.00

Corrugated and Kraft: 1.04.00, 1.04.01, 1.04.02, 1.05.00, 1.05.01, 4.01.00, 4.01.01, 4.02.00, 4.03.00, 4.04.00, 4.05.00, 4.06.00, 4.07.00, 4.08.00, 5.04.00, 5.08.00, 5.12.00, 5.12.01, 5.13.00, 5.13.01

Newspapers and Magazines: 1.06.00, 1.06.01, 1.06.02, 1.07.00, 1.09.00, 1.11.00, 2.01.00, 2.02.00, 2.02.01

Other Grades: 2.03.00, 2.03.01, 2.04.00, 2.04.01, 2.05.00, 2.05.01, 2.06.00, 2.06.01, 2.07.00, 2.07.01, 2.08.00, 2.10.00, 2.11.00, 2.12.00, 2.13.00, 2.14.00, 2.14.01, 3.01.00, 3.02.00, 3.03.00, 3.03.01, 3.04.00, 3.05.00, 3.05.01, 3.06.00, 3.08.00, 3.09.00, 3.10.00, 3.10.01, 3.11.00, 3.11.01, 3.12.00, 3.13.00, 3.14.00, 3.15.00, 3.15.01, 3.16.00, 3.16.01, 3.17.00, 3.18.00, 3.18.01, 3.18.02, 3.19.00, 3.20.00, 3.20.01, 5.05.03, 5.06.00, 5.06.01, 5.07.00, 5.07.01, 5.09.00, 5.10.00, 5.10.01, 5.14.00, 5.14.01

Grades of Paper for Recycling

470710 - Waste And Scrap Of Unbleached Kraft Paper Or Paperboard Or Of Corrugated Paper Or Paperboard

470720 - Recovered (Waste And Scrap) Paper Or Paperboard, Made Mainly Of Bleached Chemical Pulp, Not Colored In The Mass

470730 - Recovered (Waste And Scrap) Paper Or Paperboard, Made Mainly Of Mechanical Pulp (For Example, Newspapers, Journals And Similar Printed Matter)

470790 - Waste And Scrap Of Paper Or Paperboard, Nesoi, Including Unsorted Waste And Scrap

European Classifications

Pulp and Paper Industry Activities are classified under these NACE 2 Headings:

C17 Manufacture of paper and paper products

C17.1 Manufacture of pulp, paper and paperboard

C17.1.1 Manufacture of pulp

C17.1.2 Manufacture of paper and paperboard

C17.2 Manufacture of articles of paper and paperboard

C17.2.1 Manufacture of corrugated paper and paperboard and of containers of paper and paperboard

C17.2.2 Manufacture of household and sanitary goods and of toilet requisites

C17.2.3 Manufacture of paper stationery

C17.2.4 Manufacture of wallpaper

C17.2.9 Manufacture of other articles of paper and paperboard

In general data reported to CEPI would be classified under:

C17 Manufacture of paper and paper products

C17.1 Manufacture of pulp, paper and paperboard

C17.1.1 Manufacture of pulp

C17.1.2 Manufacture of paper and paperboard

External Trade activities

External Trade activities relating to the pulp and paper industries are classified under Chapters 47 and 48 of the Combined Nomenclature.

For further details of the Combined Nomenclature see: http://ec.europa.eu/taxation_customs/customs/customs_duties/tariff_aspects/combined_nomenclature/index_en.htm