

Introduction

Welcome to the latest issue of CEPI's Annual Statistics, covering data for 2016.

CEPI was founded in 1992 and annual statistics cover the period 1991 – 2016. CEPI represents 92% of the European* pulp and paper industry in terms of production.

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

* Europe minus Russian Federation.

Members of CEPI in 2016

The National Associations of the 18 following countries are members of CEPI: Austria, Belgium, Czech Republic, Finland, France, Germany, Hungary, Italy, The Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain, Sweden, United Kingdom.

Data Collection

This report mainly aggregates data voluntarily provided by CEPI member National Associations and, where it is complemented by data obtained from other sources, the sources are clearly stated (in most cases this is Eurostat and other foreign paper industry organisations).

The data result from the answers to questionnaires sent by CEPI to its members. The national associations supply the data, which they collect from their member mills/companies plus official sources where appropriate.

Notes and definitions related to the terms and sources used in this report can be found on pages 83 to 95.

Data Quality



Responsibility for the collection and the management of the statistical 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 and credibility of the data reported, 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 report. The detailed data quality rating and the limited assurance statement will be available soon on <http://www.cepi.org/members/statistics/annual-statistics>

Definitions

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

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

More Information

For more information on statistics and the other CEPI reports, please contact:

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CEPI Pulp and Paper Mills Location 96



CEPI Pulp and Paper Industry*

	1991	2000	2005	2010	2015	2016	% Change 2016/2015	% Change 2016/2000
Industry Structure								
Number of Companies ¹								
Number of Mills								
Pulp								
Paper & Board								
Number of Paper Machines								
Employment								
Turnover ² (Million Euros)								
Investments ² (Million Euros)								
Added Value ² (Million Euros)								
Total Pulp³ ('000 Tonnes)								
Production Capacity								
Operating Rate								
Production								
Total Deliveries								
CEPI Internal Deliveries								
Consumption ⁸ (Apparent)								
Market Pulp ('000 Tonnes)								
Production								
Exports to Outside CEPI								
Imports from Outside CEPI								
Trade Balance with Outside CEPI								
Consumption ⁸ (Apparent)								
Exports/Production								
Imports/Consumption								
Paper & Board ('000 Tonnes)								
Production Capacity								
Operating Rate								
Production								
Total Deliveries ⁴								
CEPI Internal Deliveries								
Exports to Outside CEPI								
Imports from Outside CEPI								
Trade Balance with Outside CEPI								
Consumption ⁸ (Apparent)								
Exports/Production								
Imports/Consumption								

CEPI Pulp and Paper Industry*

	1991	2000	2005	2010	2015	2016	% Change 2016/2015	% Change 2016/2000
Wood ('000 m ³)								
Consumption								
Hardwood								
Softwood								
Imports/Consumption								
Domestic/Consumption								
Specific Wood Consumption (m ³ /t of product)								
Paper for Recycling ('000 Tonnes)								
Collection								
Utilisation								
Exports to Outside CEPI								
Imports from Outside CEPI								
Trade Balance with Outside CEPI								
Utilisation Rate								
Exports/Collection								
Imports/Utilisation								
Recycling Rate in Europe ⁵ 								
Recycling Rate								
Non-Fibrous Materials ('000 Tonnes)								
Consumption								
Energy and Environment ⁶								
Fuels Consumption (Tj)								
Biomass Use (%) of Total FC								
Electricity Consumption (GWh)								
% of Electricity produced through CHP ⁷								
CO ₂ Direct Emissions (Mega Tonnes)								
Specific CO ₂ Emissions (kt Co ₂ / kt of product)								

*See Definitions on Pages 83 to 95

¹ 495 groups or corporations in 2015, 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 are based on members' data, Eurostat and estimates for some countries.

³ Total Pulp = Market Pulp + Integrated Pulp

⁴ Total Deliveries are greater than production due to the use of difference sources and to transit in big harbors.

⁵ Europe means EU-28 countries plus Norway and Switzerland.

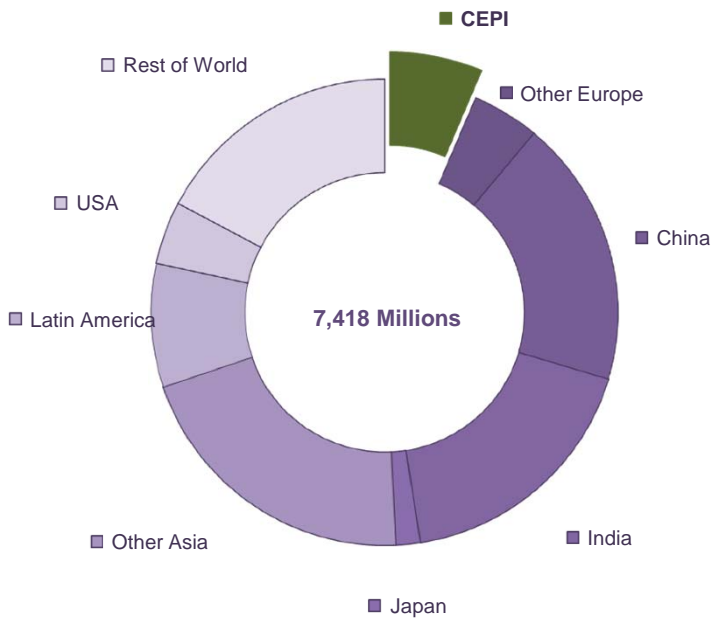
⁶ Hungary, Romania and Slovenia are not included in Energy data, except for CO₂ emissions.

⁷ CHP: combined heat and power (compared to total on-site electricity generation).

⁸ CEPI Apparent Consumption = production - exports to outside CEPI + imports from outside CEPI

Population

World Population in 2016



CEPI Population in 2016¹

	Millions	% Chg 2016/2015
Austria		
Belgium		
Czech Republic		
Finland		
France		
Germany		
Hungary		
Italy		
Netherlands		
Norway		
Poland		
Portugal		
Romania		
Slovak Republic		
Slovenia		
Spain		
Sweden		
United Kingdom		
Total CEPI		
Total EU-28		

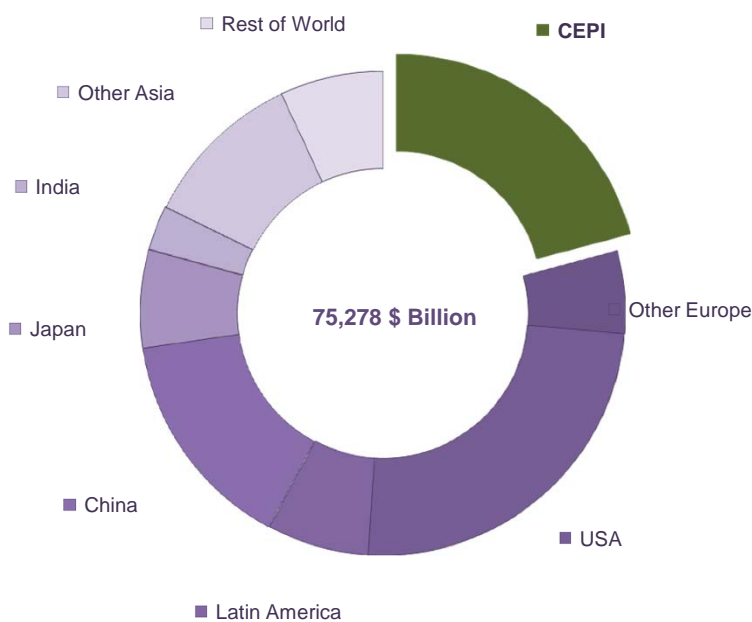
Source: Eurostat - PRB

³ Other Europe: see nomenclature on page 95.

¹ Population on 1st January 2016

Gross Domestic Product

World Gross Domestic Product in 2016



CEPI Gross Domestic Product in 2016

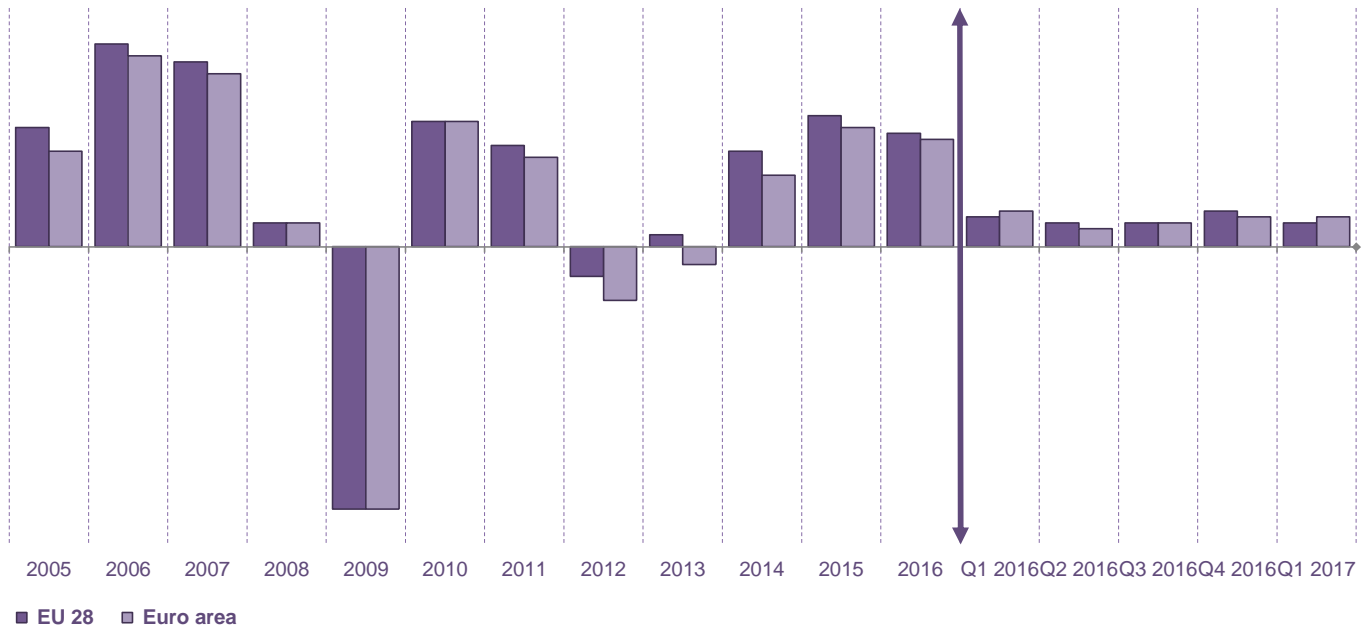
	Billion Euros	% Chg 2016/2015
Austria		
Belgium		
Czech Republic		
Finland		
France		
Germany		
Hungary		
Italy		
Netherlands		
Norway		
Poland		
Portugal		
Romania		
Slovak Republic		
Slovenia		
Spain		
Sweden		
United Kingdom		
Total CEPI		
Total EU-28		

Source: Eurostat - IMF

³ Other Europe: see nomenclature on page 95.

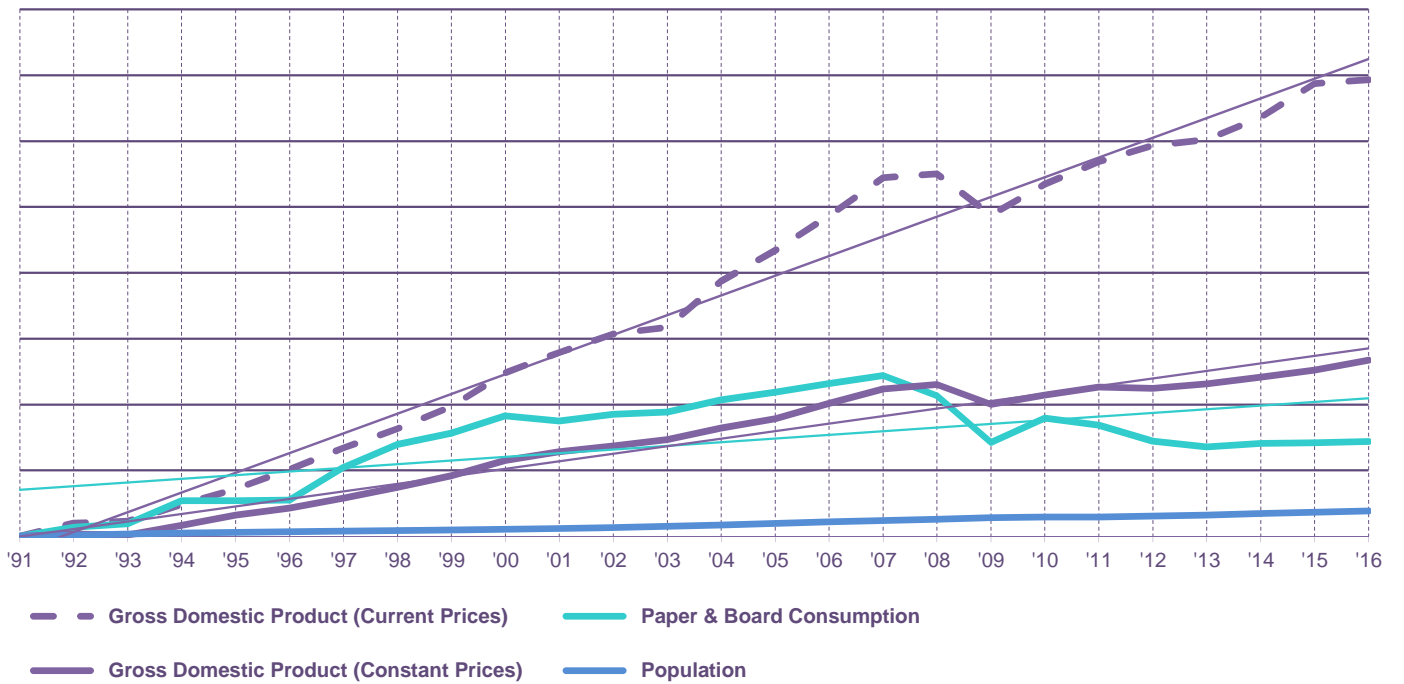
Gross Domestic Product at Constant Prices in Europe

% chg on previous period



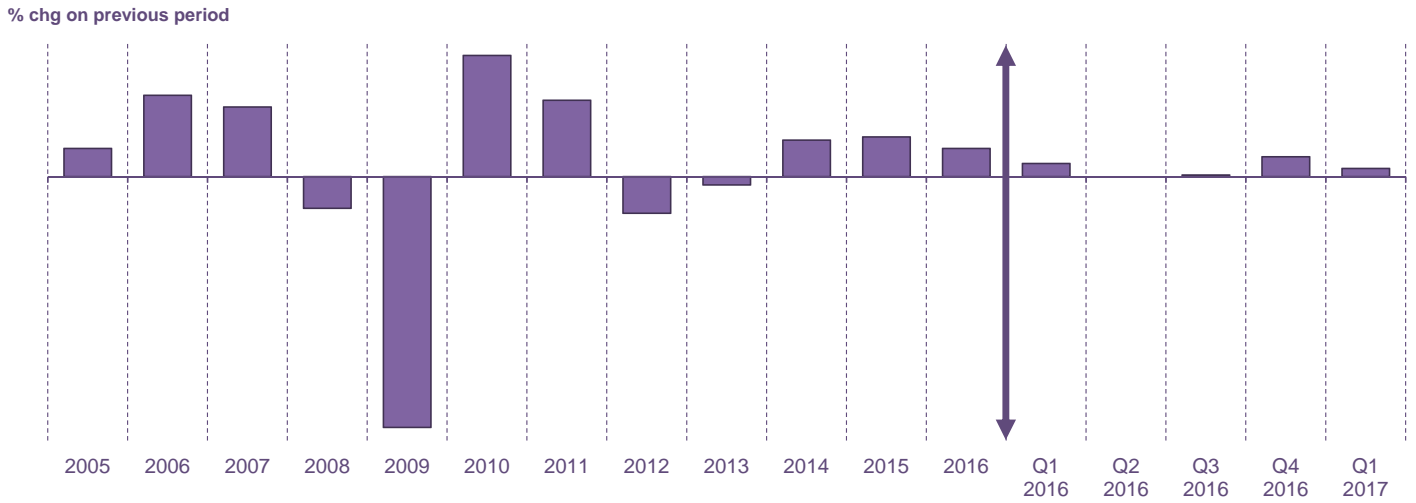
CEPI Gross Domestic Product and Paper & Board Consumption

Index (1991:100)

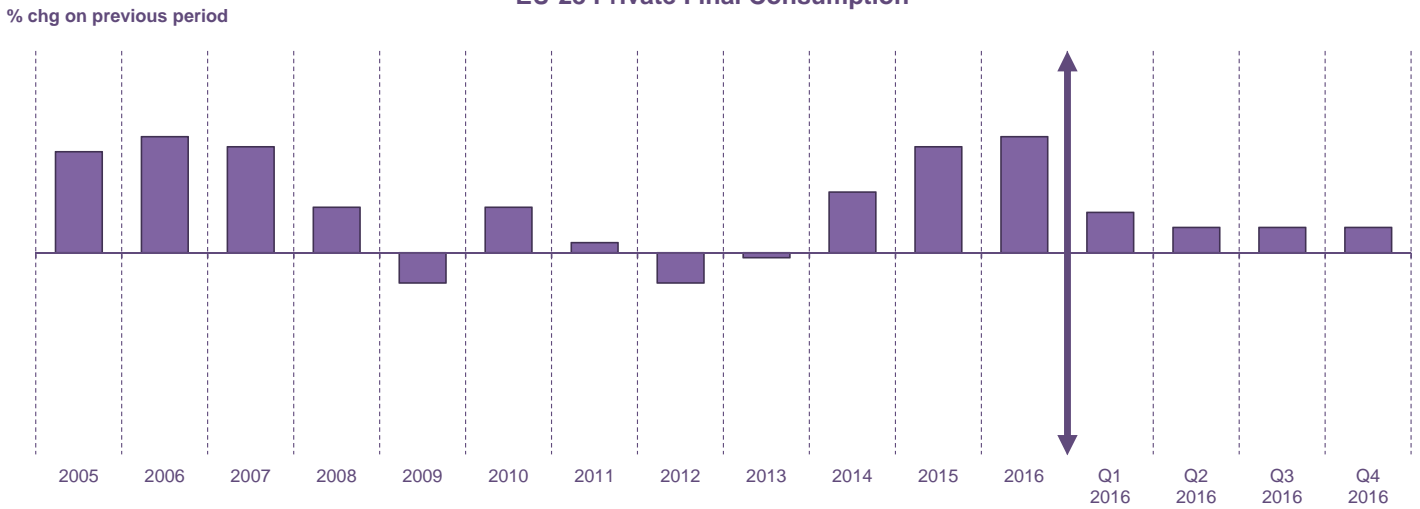


Source: CEPI - Eurostat - IMF

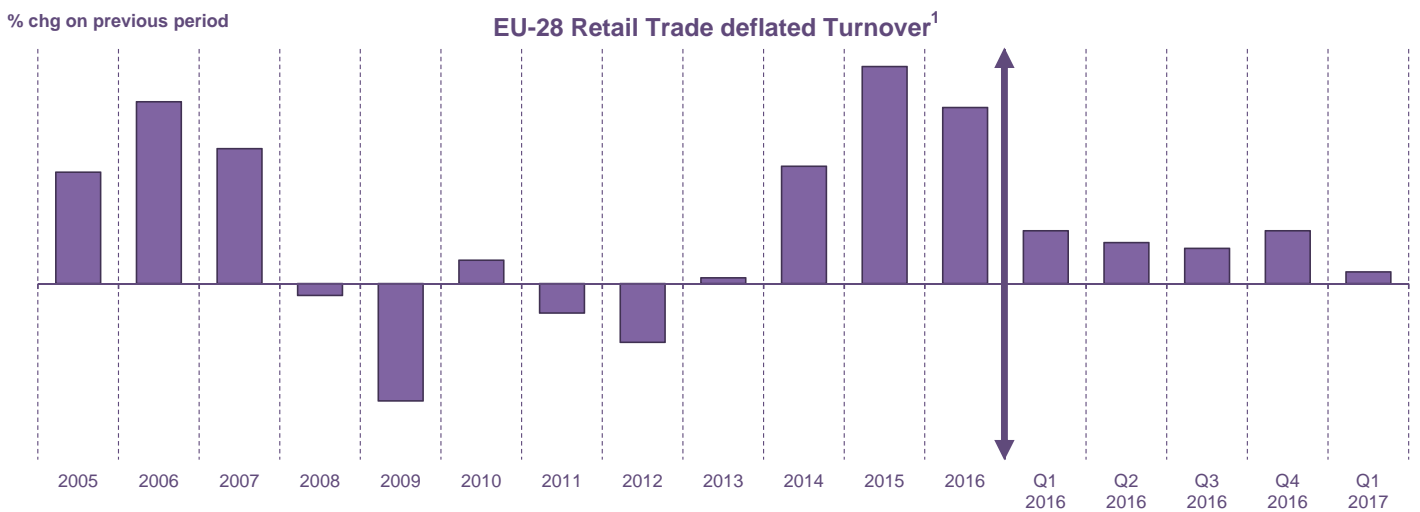
EU-28 Industrial Production (Manufacturing)



EU-28 Private Final Consumption¹



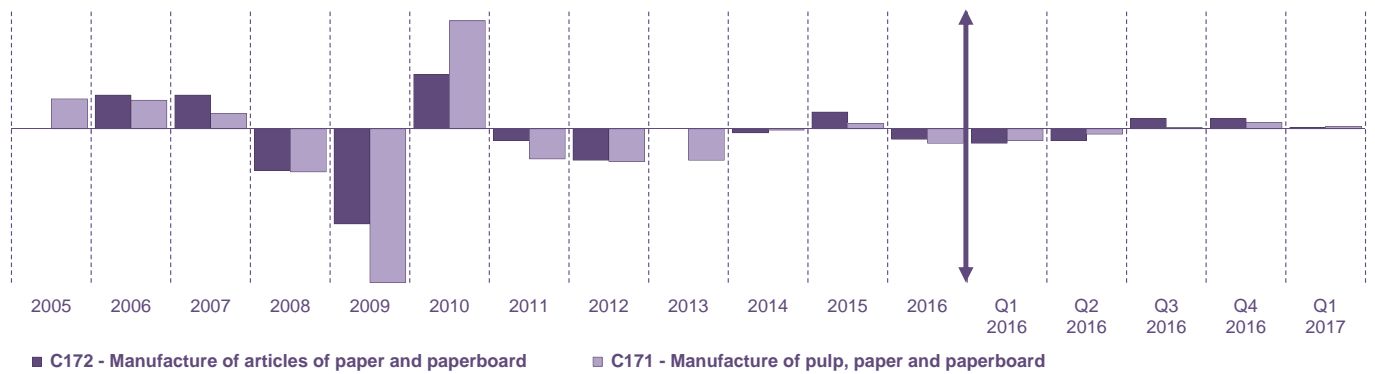
EU-28 Retail Trade deflated Turnover¹



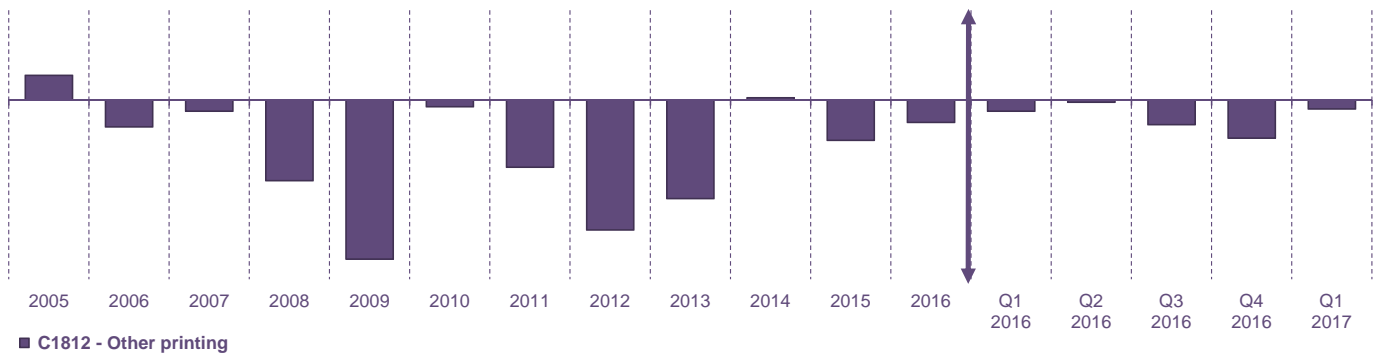
Source: Eurostat - % change on previous year / quarter (seasonally adjusted)

¹ See Definitions on page 86.

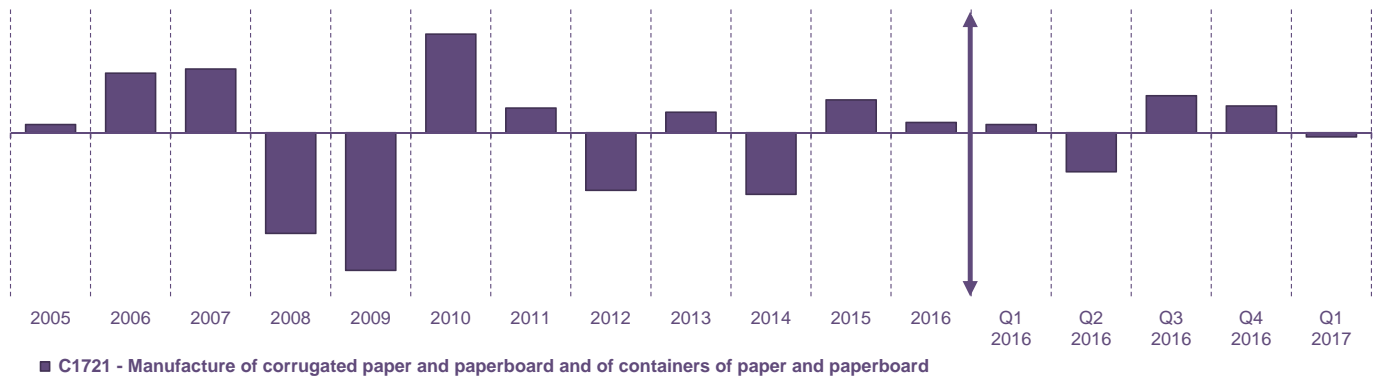
EU-28 Manufacture of Pulp, Paper and Paperboard and Articles of Paper and Paperboard



EU-28 Graphic Paper Customers



EU-28 Packaging Paper and Board Customers



EU-28 Sanitary and Household Paper Customers



Source: Eurostat - EU-28 Volume index of production, % change on previous year / quarter (seasonally adjusted)

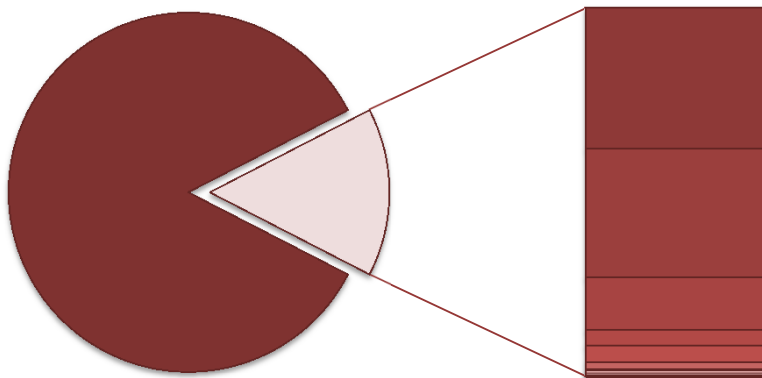
CEPI Imports of Wood by Region and by Country of Origin

'000 Tonnes	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Other Europe ¹							
Latin America							
North America							
Asia							
Rest of the World							
Total							

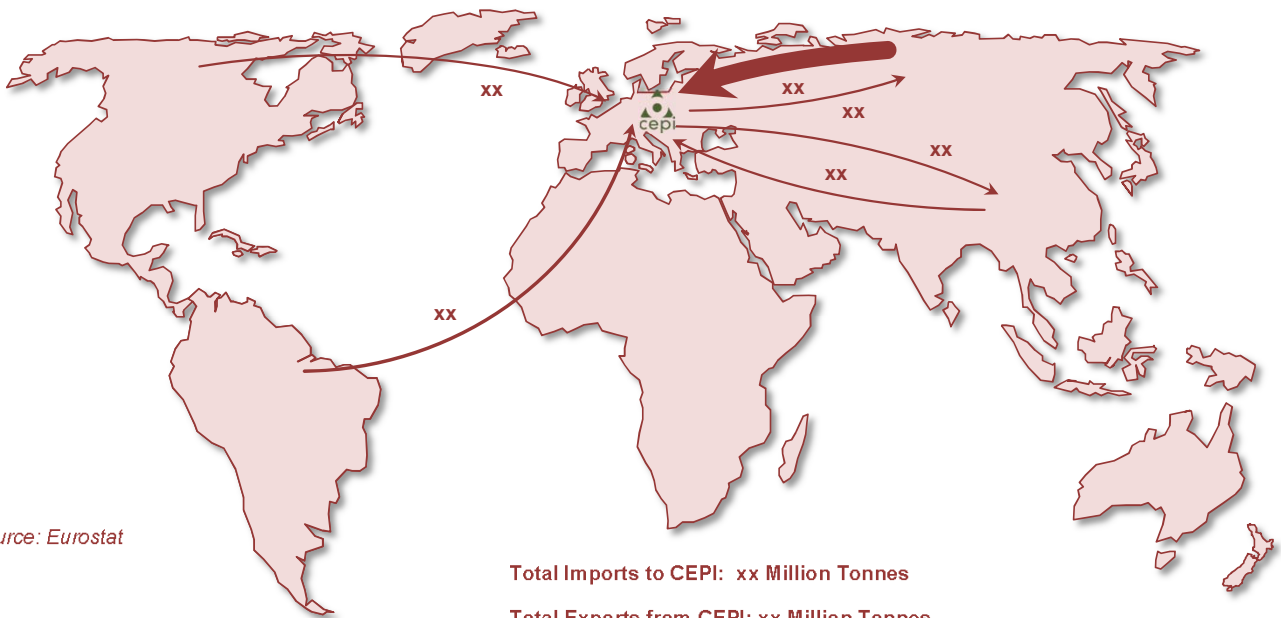
¹ Other Europe: see nomenclature on page 95.

'000 Tonnes	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Russia							
Latvia							
Estonia							
Belarus							
Ukraine							
Uruguay							
Rest of the World							
Total							

CEPI Wood Consumption Origin in 2016



CEPI Trade Flows of Wood in 2016 (Million Tonnes)

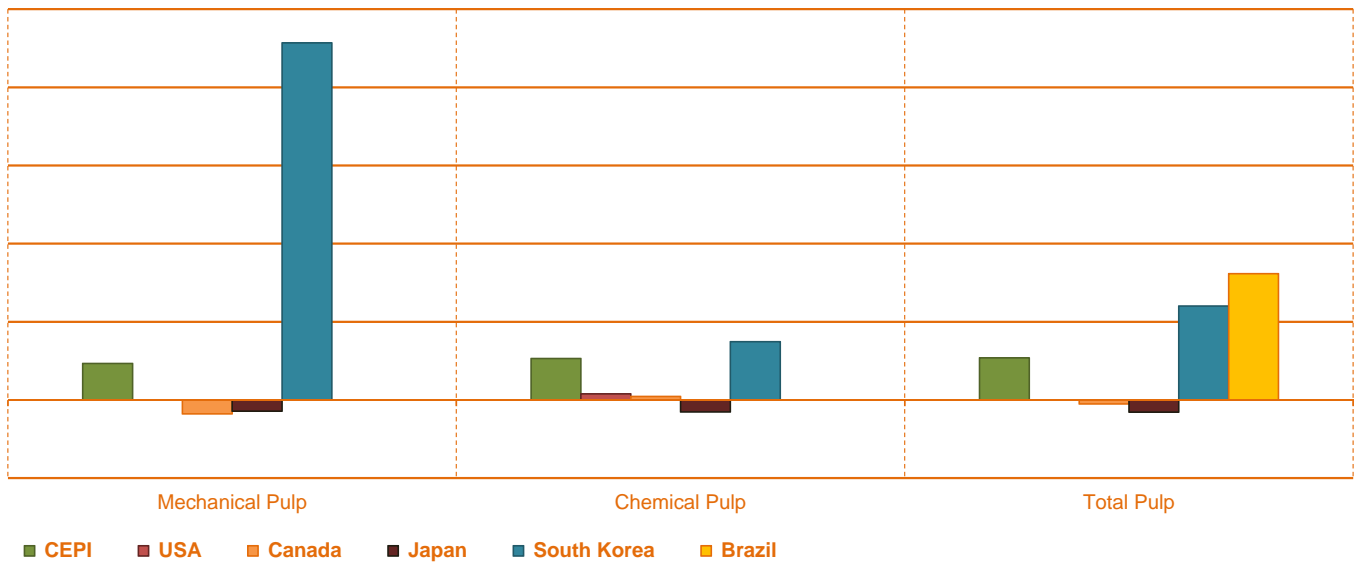


Source: Eurostat

Change in Total Pulp Production by Grade and by Country

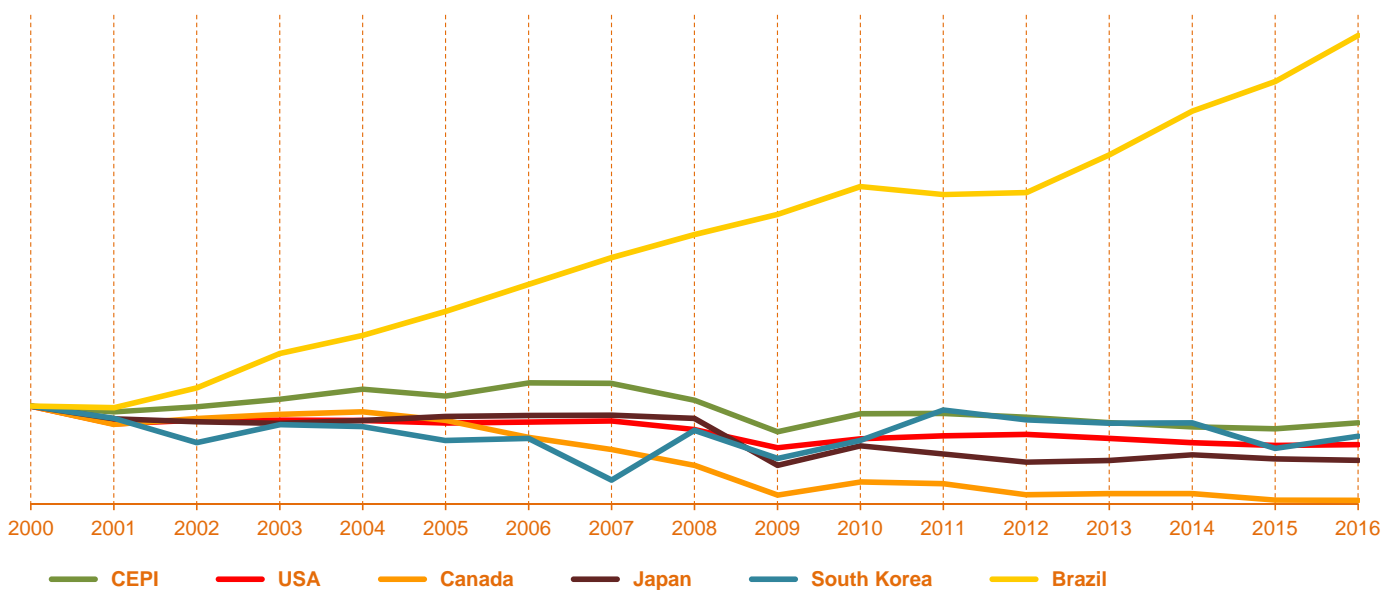
% change 2016/2015	CEPI	USA (AF&PA ¹)	Canada (PPPC ¹)	Japan (JPA ¹)	South Korea (KPMA ¹)	Brazil (IBA ¹)
Mechanical Pulp & Semi-Chemical Pulp						
Chemical Pulp						
Total Pulp						

% Change 2016/2015



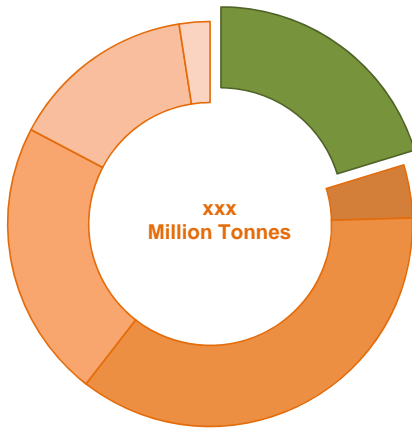
Indexed Growth in Total Pulp Production

Index (2000 = 100)

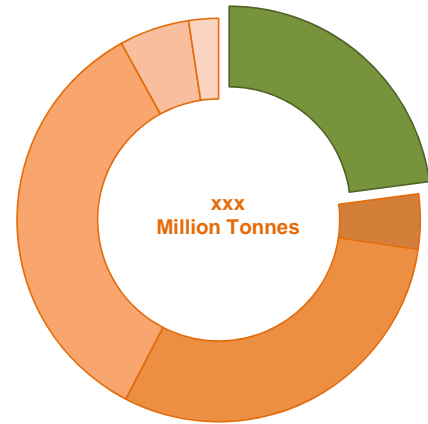


¹ See Glossary on page 83.

World Total Pulp¹ Production by Region in 2015

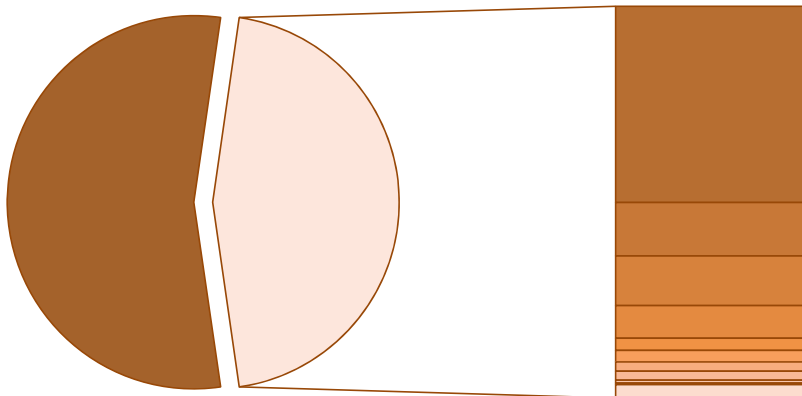


World Total Pulp¹ Consumption by Region in 2015



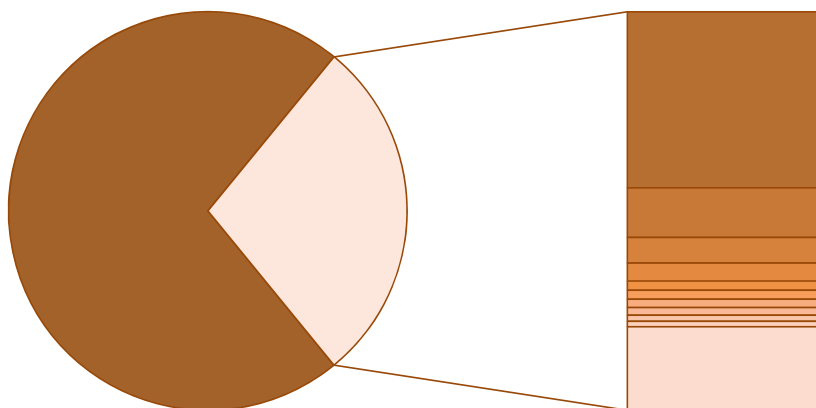
Sources: CEPI, RISI - 2016 figures will be available in December 2017

Origin of CEPI Market Pulp Consumption in 2016



CEPI Market Pulp Consumption: 17.8 Million Tonnes

Destination of CEPI Market Pulp Production in 2016



CEPI Market Pulp Production: 13.6 Million Tonnes

¹Total Pulp = Integrated Pulp + Market Pulp

²Other Europe: see nomenclature on page 95.

³CEPI Area = production - exports to outside CEPI

CEPI Exports of Market Pulp to Other Regions

'000 Tonnes	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Other Europe ¹							
North America							
Latin America							
Asia							
Rest of the World							
Total							

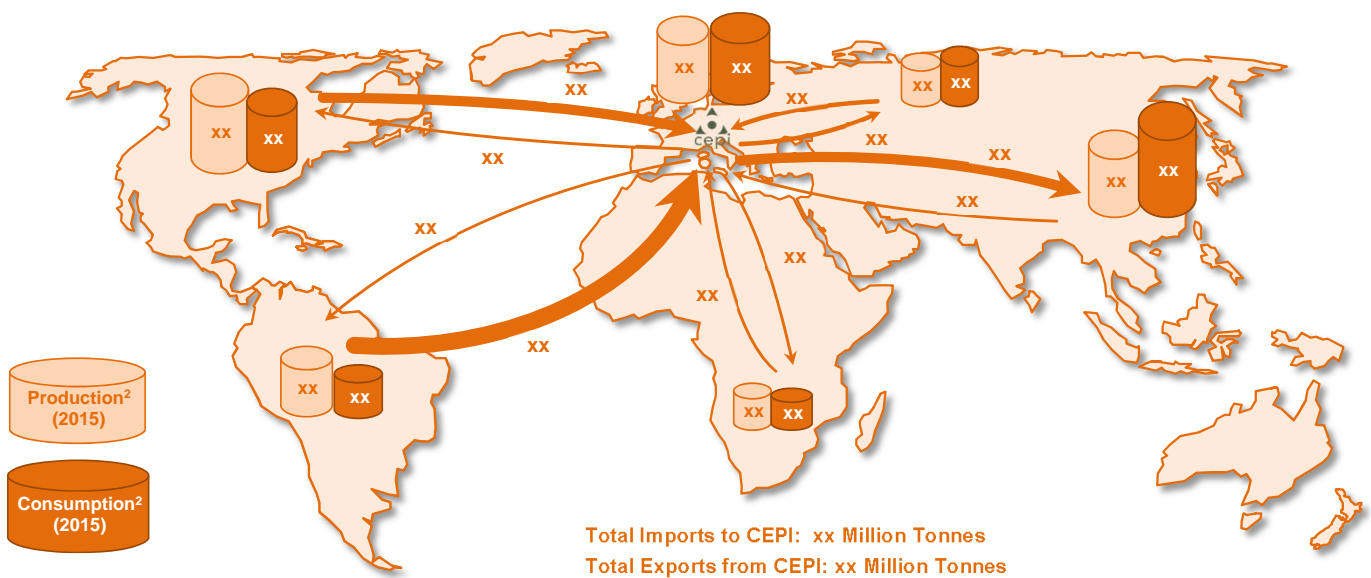
CEPI Imports of Market Pulp from Other Regions

'000 Tonnes	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Other Europe ¹							
North America							
Latin America							
Asia							
Rest of the World							
Total							

CEPI Market Pulp Trade Balance with Other Regions

'000 Tonnes	2000	2005	2010	2015	2016
Other Europe ¹					
North America					
Latin America					
Asia					
Rest of the World					
Total					

CEPI Trade Flows of Market Pulp in 2016 (Million Tonnes)



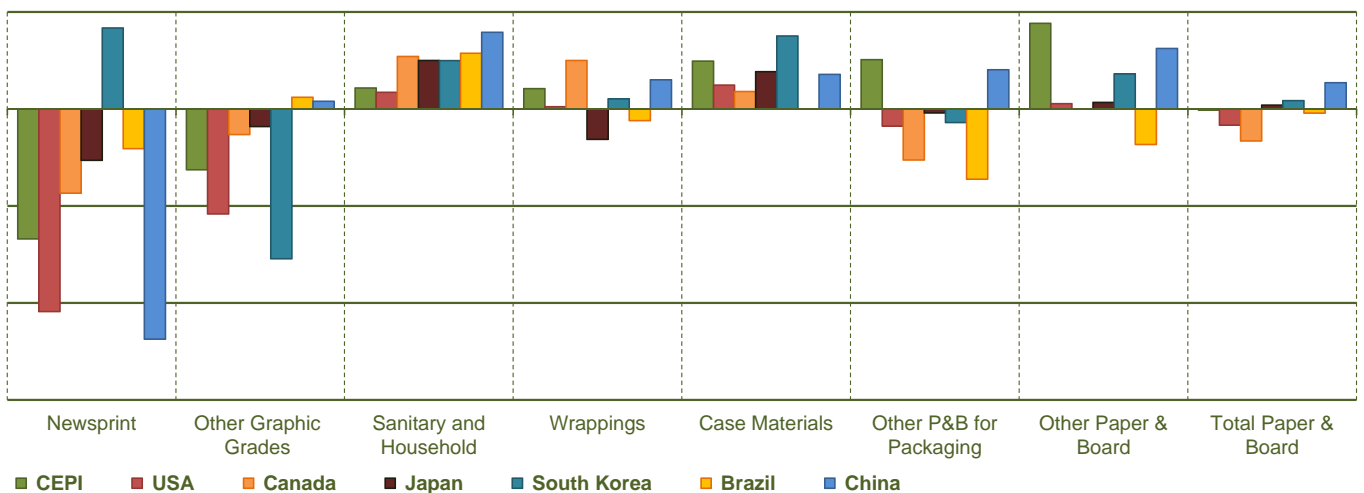
¹ Other Europe: see nomenclature on page 95.

² Production and consumption of total pulp (market and integrated)

Change in Production by Grade and by Country

% change 2016/2015	CEPI	USA ¹ (AF&PA ³)	Canada ¹ (PPPC ³)	Japan (JPA ³)	South Korea (KPMA ³)	Brazil (IBA ³)	China (CPA ³)
Newsprint²							
Uncoated Mechanical							
Uncoated Woodfree							
Coated Papers							
Other Graphic Grades							
Total Graphic Papers							
Sanitary and Household							
Wrappings							
Case Materials							
Other P&B for Packaging							
Total Packaging Papers							
Other Paper & Board							
Total Paper & Board							

% Change 2016/2015



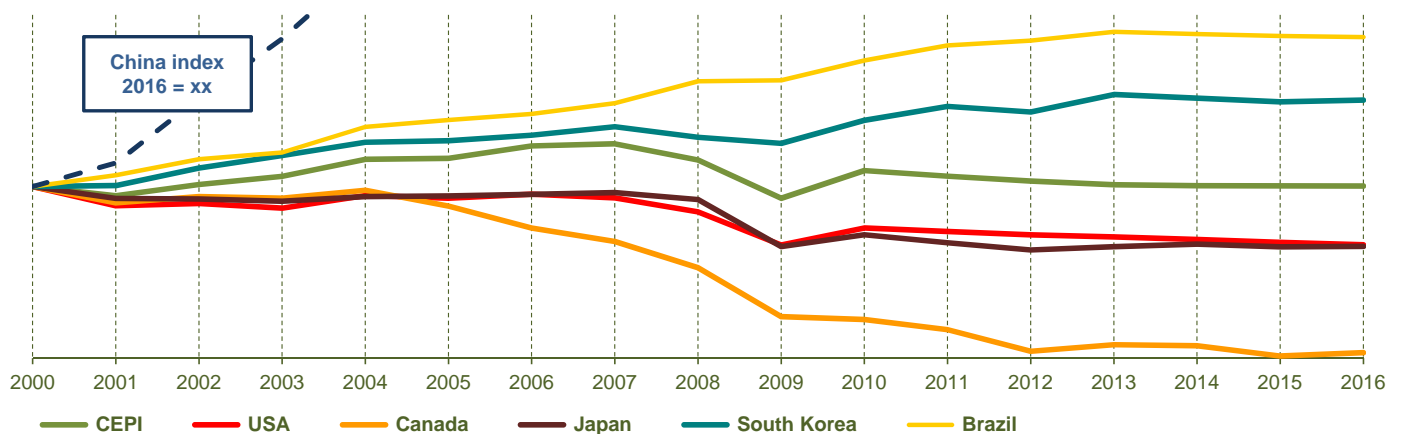
¹ The sub-divisions of Printing & Writing papers in USA and Canada are indicating shipments.

² USA Newsprint data are compiled by Pulp and Paper Products Council (PPPC)

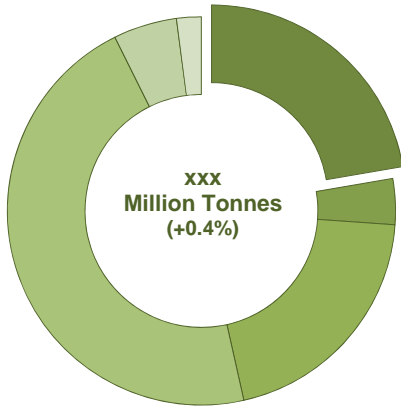
³ See Glossary on page 83.

Indexed Growth in Paper & Board Production

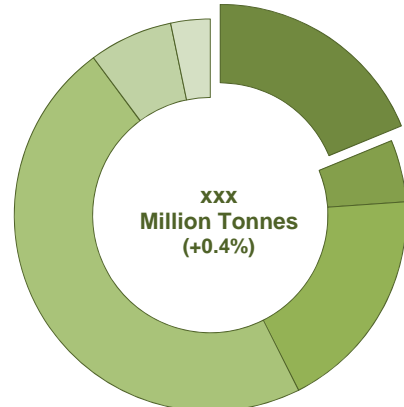
Index (2000 = 100)



Paper & Board Production by Region in 2015

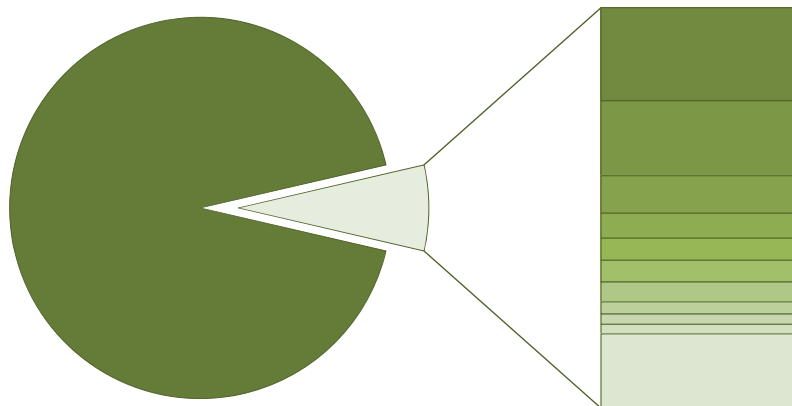


Paper & Board Consumption by Region in 2015



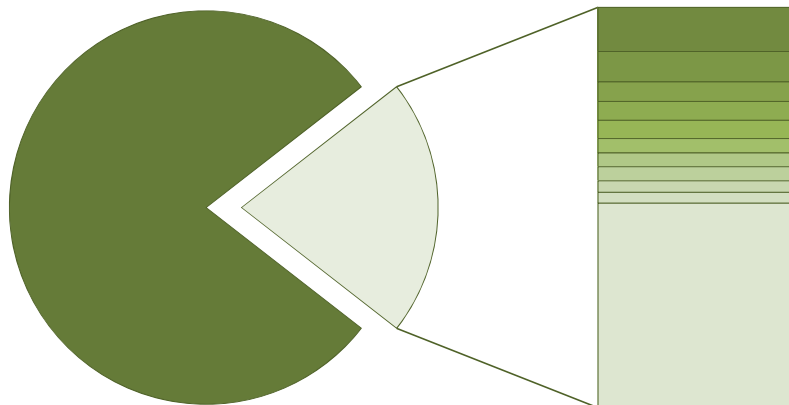
Sources: CEPI, RISI - 2016 figures will be available in December 2017

Origin of CEPI Paper & Board Consumption in 2016



Total Paper & Board Consumption: xxx Million Tonnes

Destination of CEPI Paper & Board Production in 2016



Total Paper & Board Production: xxx Million Tonnes

¹ Other Europe: see nomenclature on page 95.

² CEPI Area = production - exports to outside CEPI

CEPI Exports of Paper & Board to Other Regions

'000 Tonnes	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Other Europe ¹							
North America							
Latin America							
Asia							
Rest of the World							
Total							

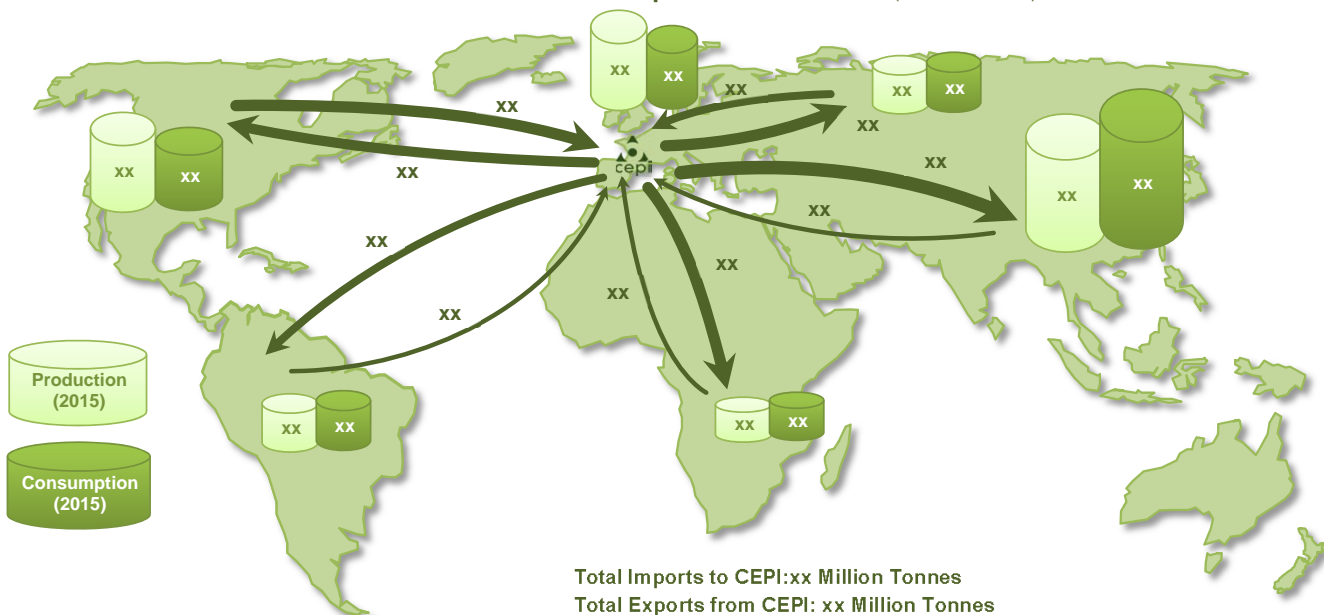
CEPI Imports of Paper & Board from Other Regions

'000 Tonnes	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Other Europe ¹							
North America							
Latin America							
Asia							
Rest of the World							
Total							

CEPI Paper & Board Trade Balance with Other Regions

'000 Tonnes	2000	2005	2010	2015	2016
Other Europe ¹					
North America					
Latin America					
Asia					
Rest of the World					
Total					

CEPI Trade Flows of Paper & Board in 2016 (Million Tonnes)

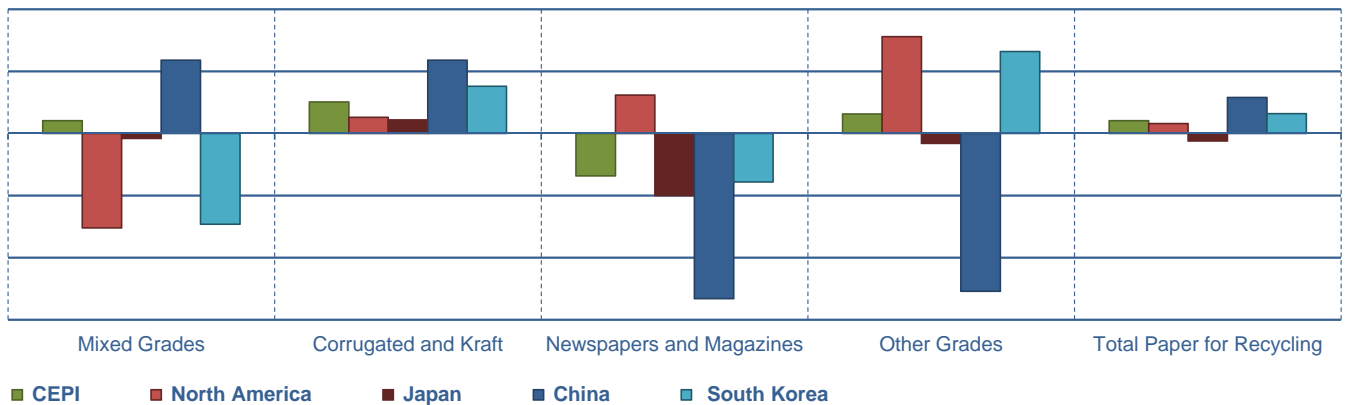


¹ Other Europe: see nomenclature on page 95.

Change in Collection by Class and by Country

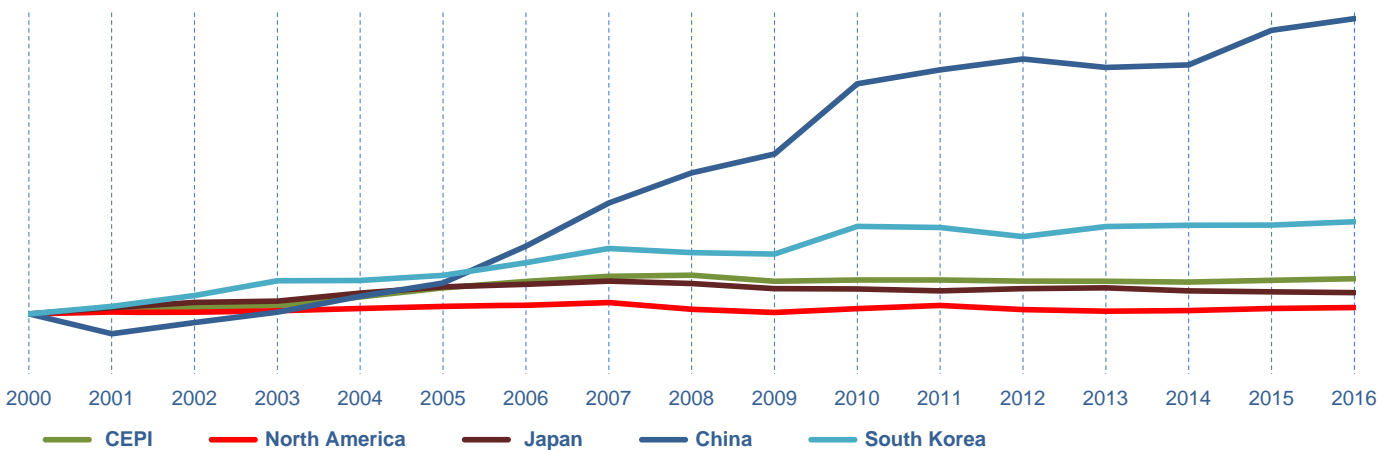
% change 2016/2015	CEPI	South Korea (KPMA ¹)	China (CPA ¹)	Japan (JPA ¹)	North America (PPPC ¹)
Mixed Grades					
Corrugated and Kraft					
Newspapers and Magazines					
Other Grades					
Total Paper for Recycling					

% Change 2016/2015



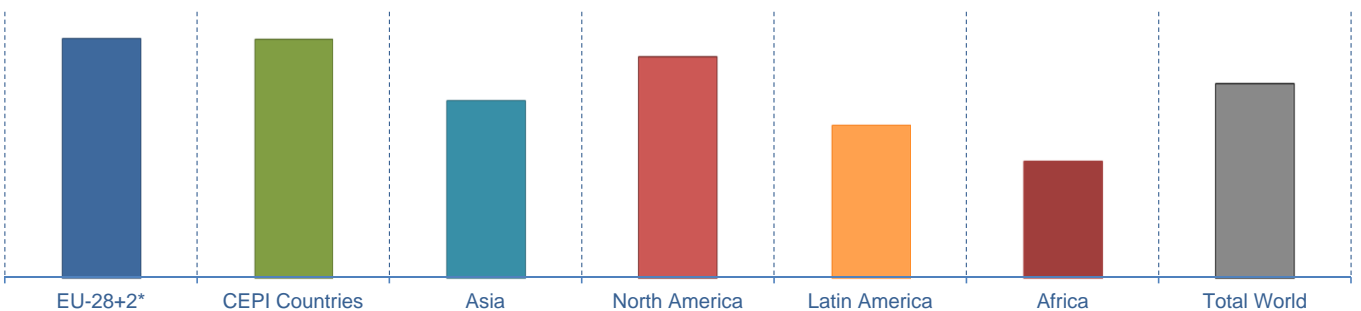
Indexed Growth in Collection of Paper for Recycling

Index (2000 = 100)



Recycling Rate in World Regions in 2015²

Recycling Rate (%)

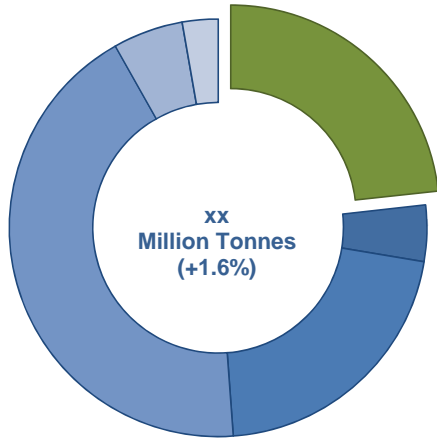


¹ See Glossary on page 83.

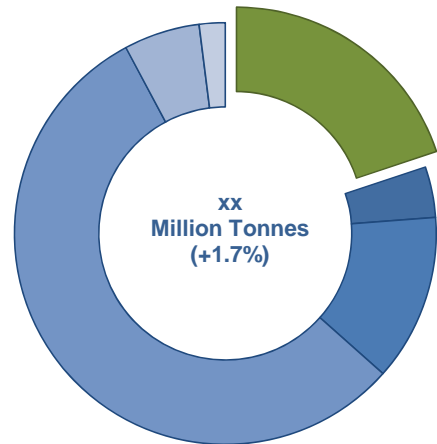
² Source: CEPI, RISI - 2016 figures will be available in December 2017

*EU-28+2 : EU-28 + Norway and Switzerland

Collection of Paper for Recycling by Region in 2015

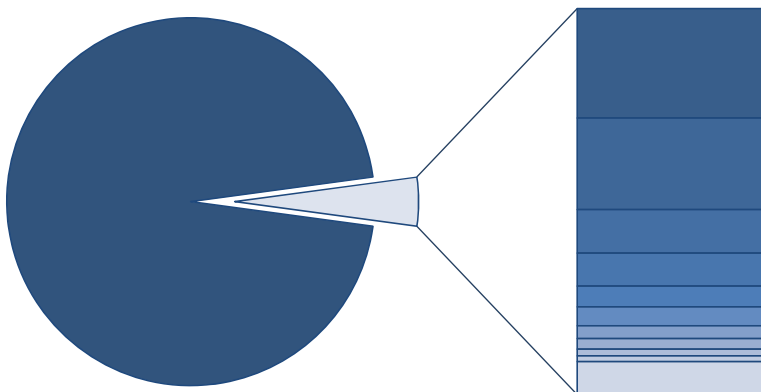


Utilisation of Paper for Recycling by Region in 2015



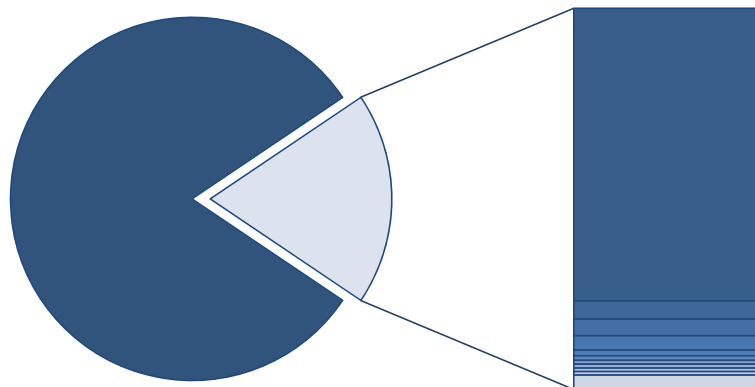
Sources: CEPI, RISI - 2016 figures will be available in December 2017

Origin of CEPI Utilisation of Paper for Recycling in 2016



Total Utilisation of Paper for Recycling: xx Million Tonnes

Destination of CEPI Collection of Paper for Recycling in 2016



Total Collection of Paper for Recycling: xx Million Tonnes

¹ Other Europe: see nomenclature on page 95.

² CEPI Area = Collection - exports to outside CEPI

CEPI Exports of Paper for Recycling to Other Regions

'000 Tonnes	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Other Europe ¹							
North America							
Latin America							
Asia							
Rest of the World							
Total							

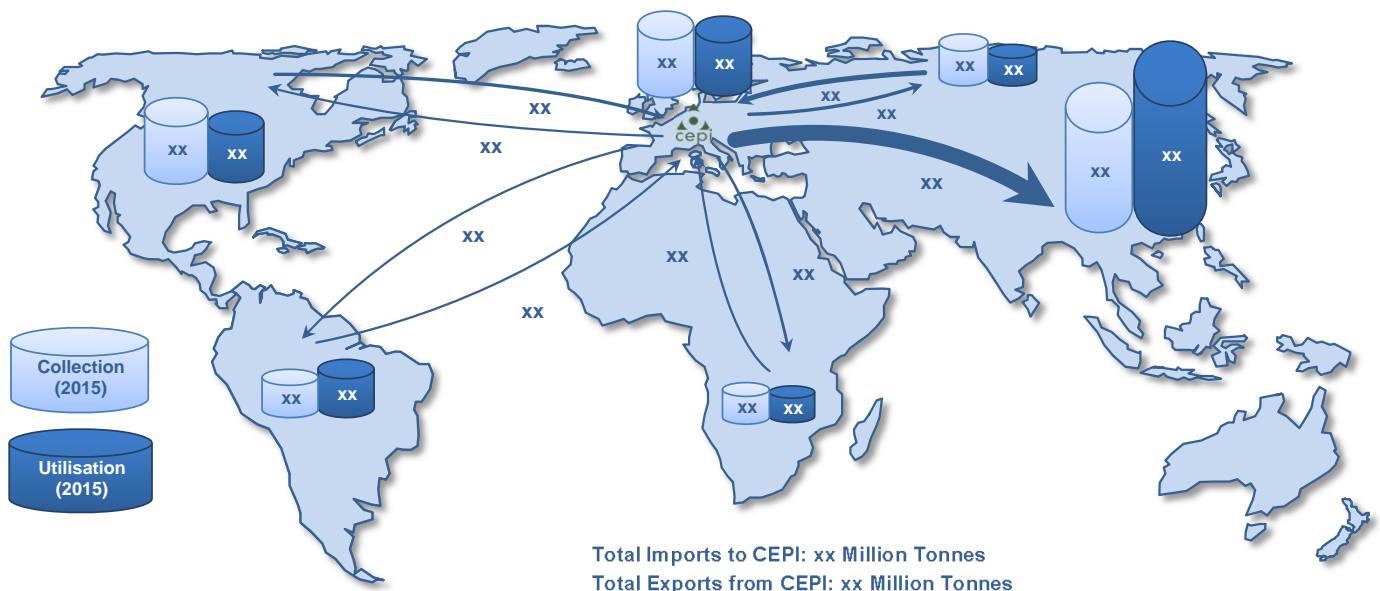
CEPI Imports of Paper for Recycling from Other Regions

'000 Tonnes	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Other Europe ¹							
North America							
Latin America							
Asia							
Rest of the World							
Total							

CEPI Trade Balance of Paper for Recycling with Other Regions

'000 Tonnes	2000	2005	2010	2015	2016
Other Europe ¹					
North America					
Latin America					
Asia					
Rest of the World					
Total					

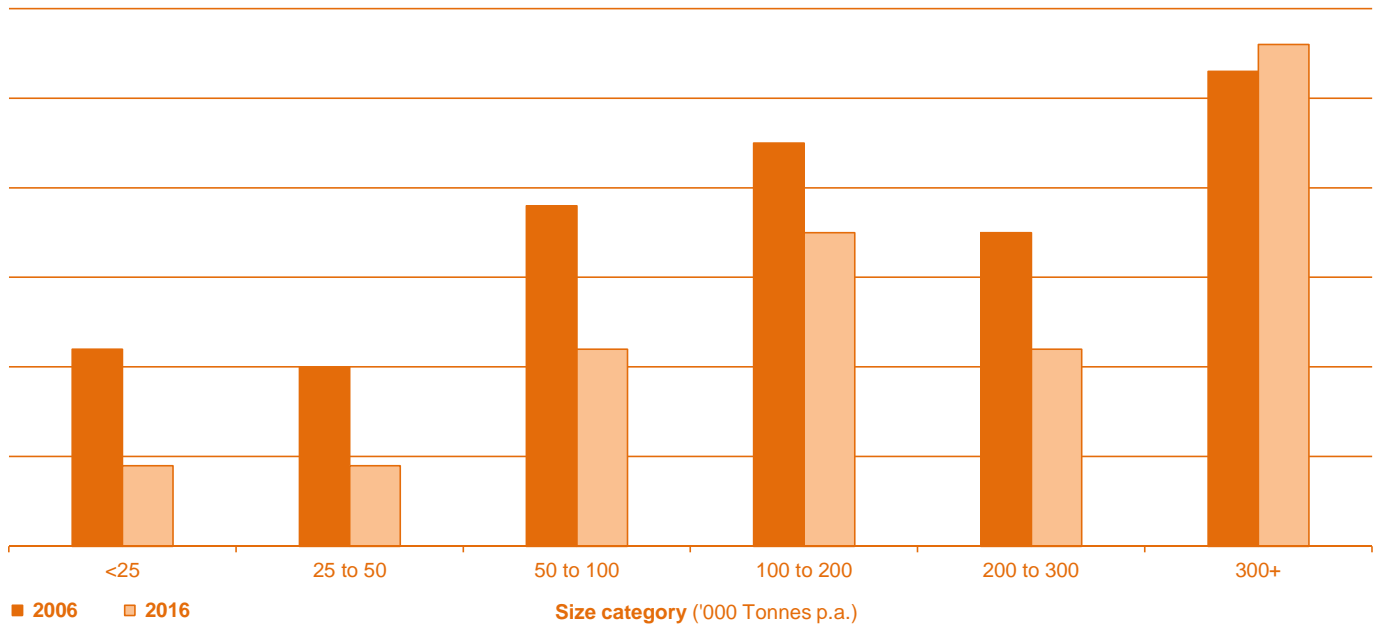
CEPI Trade Flows of Paper for Recycling in 2016 (Million Tonnes)



¹ Other Europe: see nomenclature on page 95.

Number of CEPI Pulp Mills by Volume in 2006 and 2016

Number of Pulp Mills

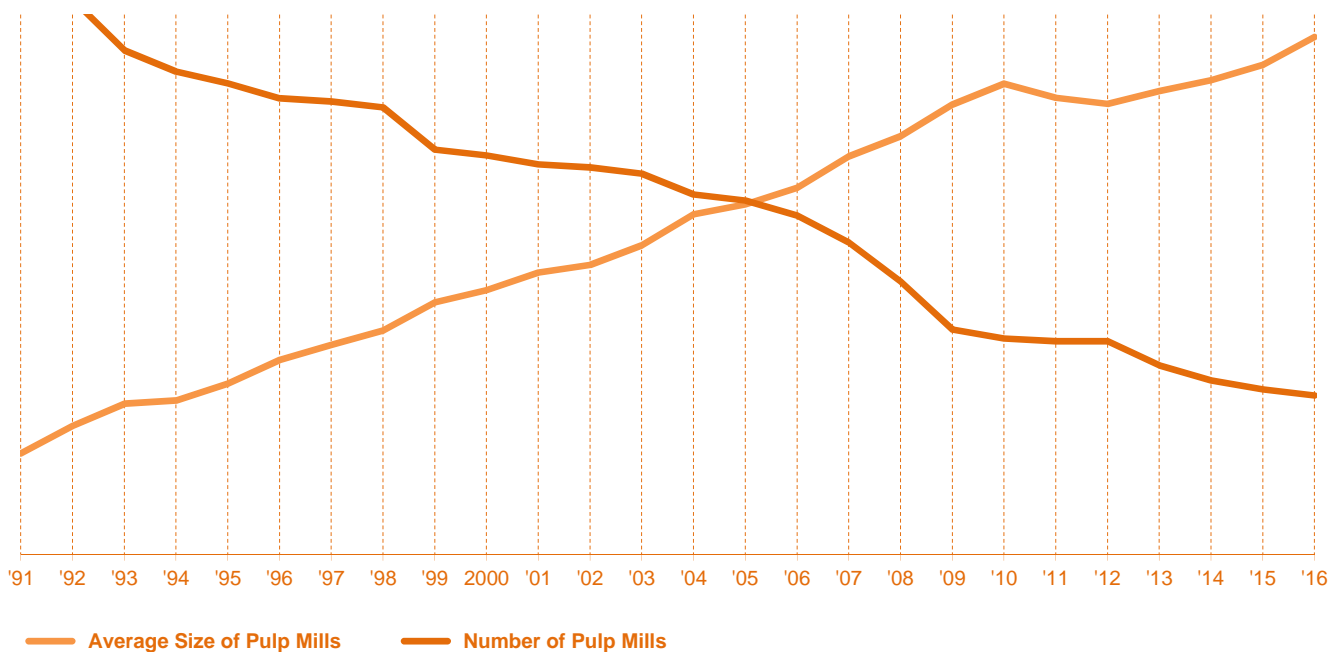


¹ Share of Total Number of Mills

Average Size by CEPI Pulp Mill (Capacity) in CEPI

Average Size ('000 Tonnes)

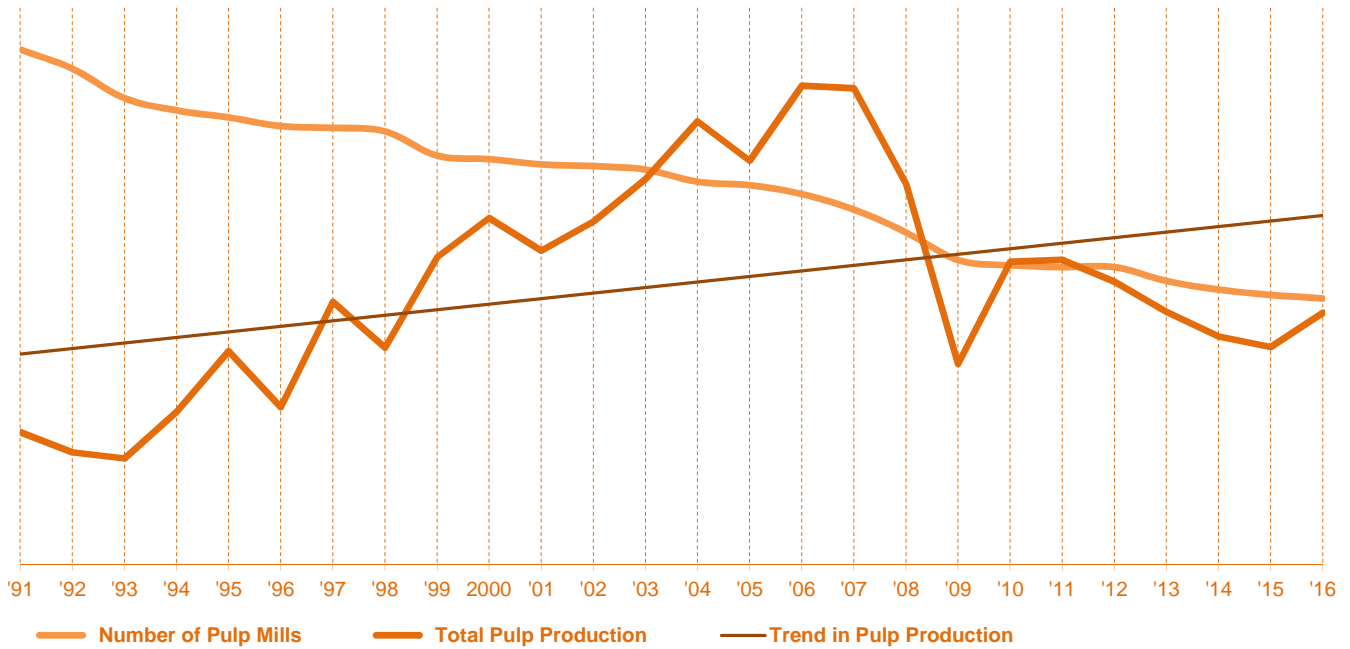
Number of Pulp Mills



Number of CEPI Pulp Mills and Total Pulp Production

Number of Pulp Mills

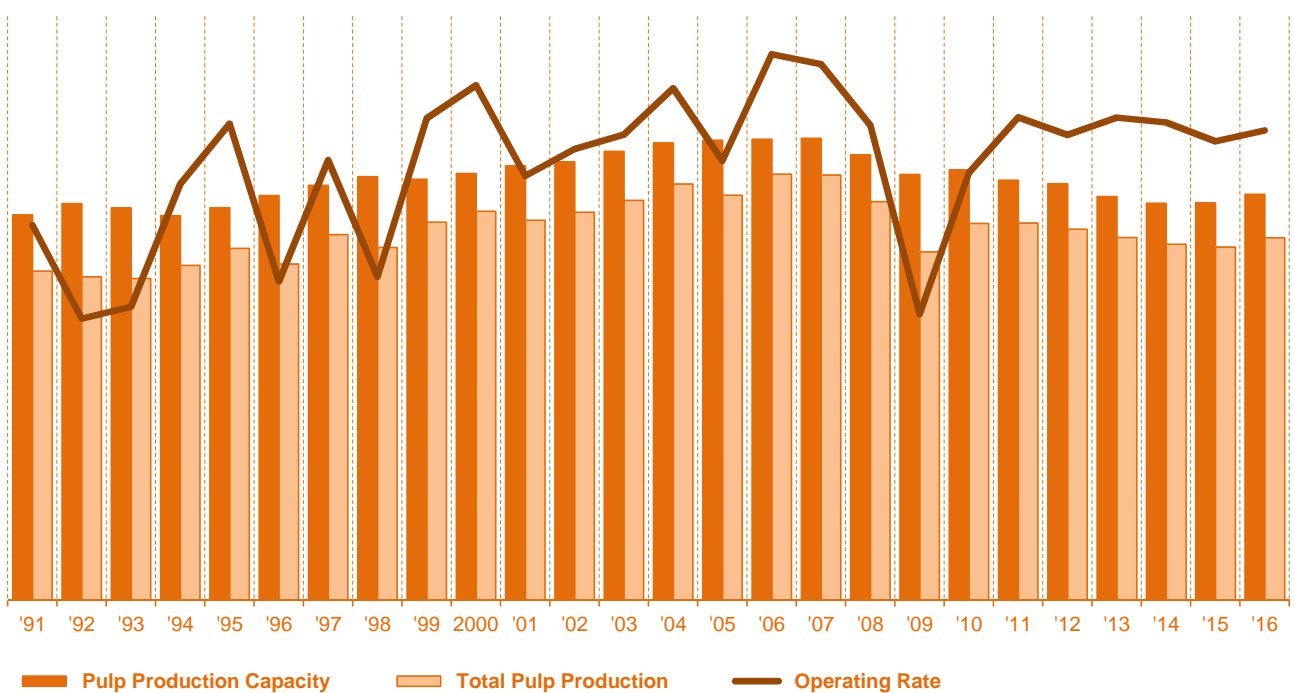
Total Pulp Production (Million Tonnes)



CEPI Total Pulp Production and Capacity

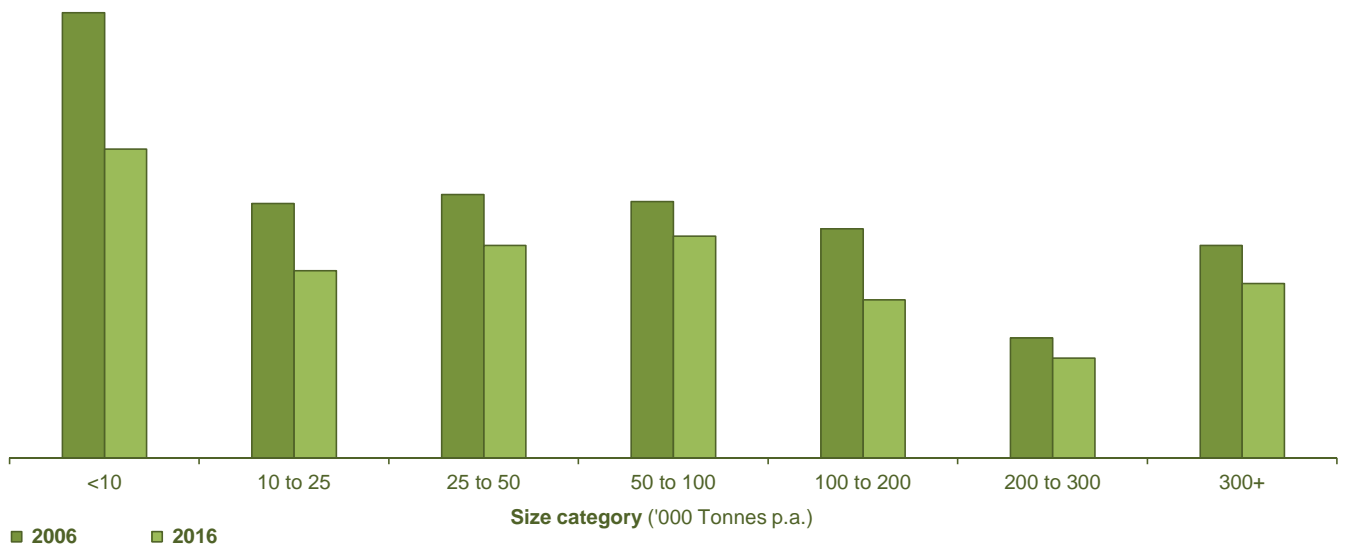
Total Pulp Production (Million Tonnes)

Operating Rate



Number of CEPI Paper & Board Mills by Volume in 2006 and 2016

Number of Paper & Board Mills

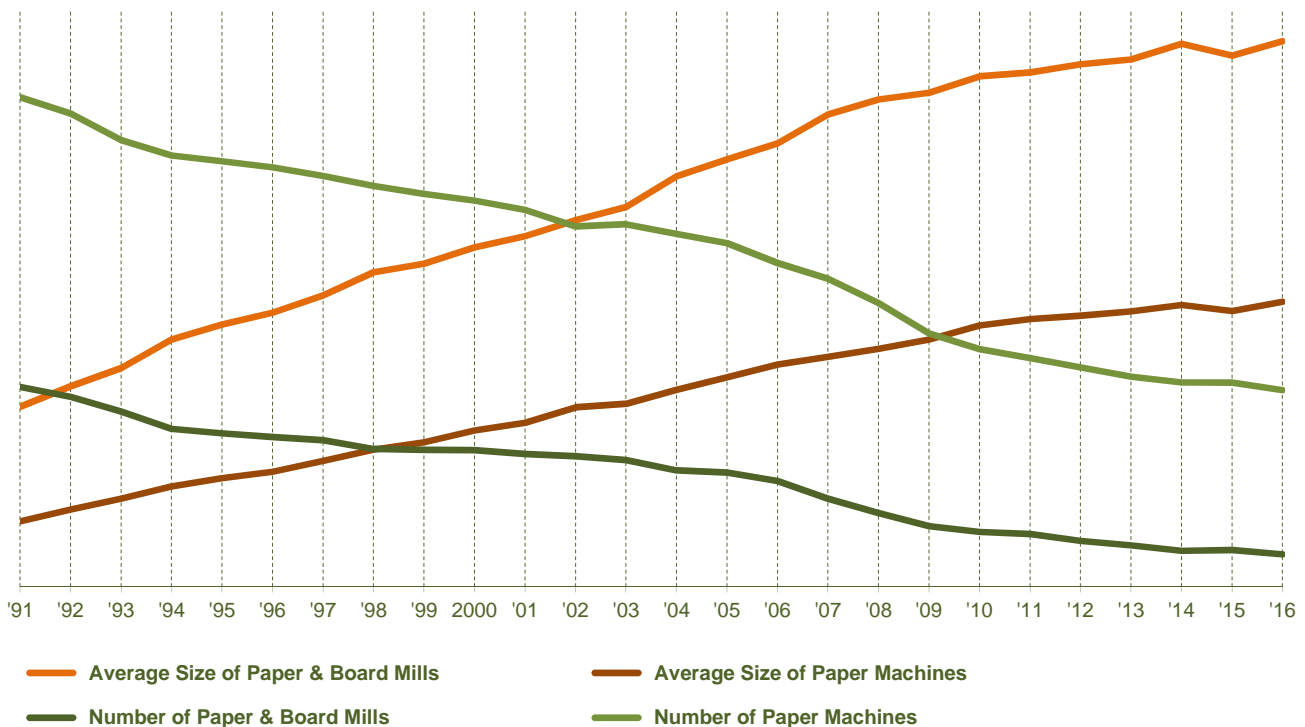


¹ Share of Total Number of Mills

Average Size by CEPI Paper & Board Mill and Machine (Capacity)

Average Size ('000 Tonnes)

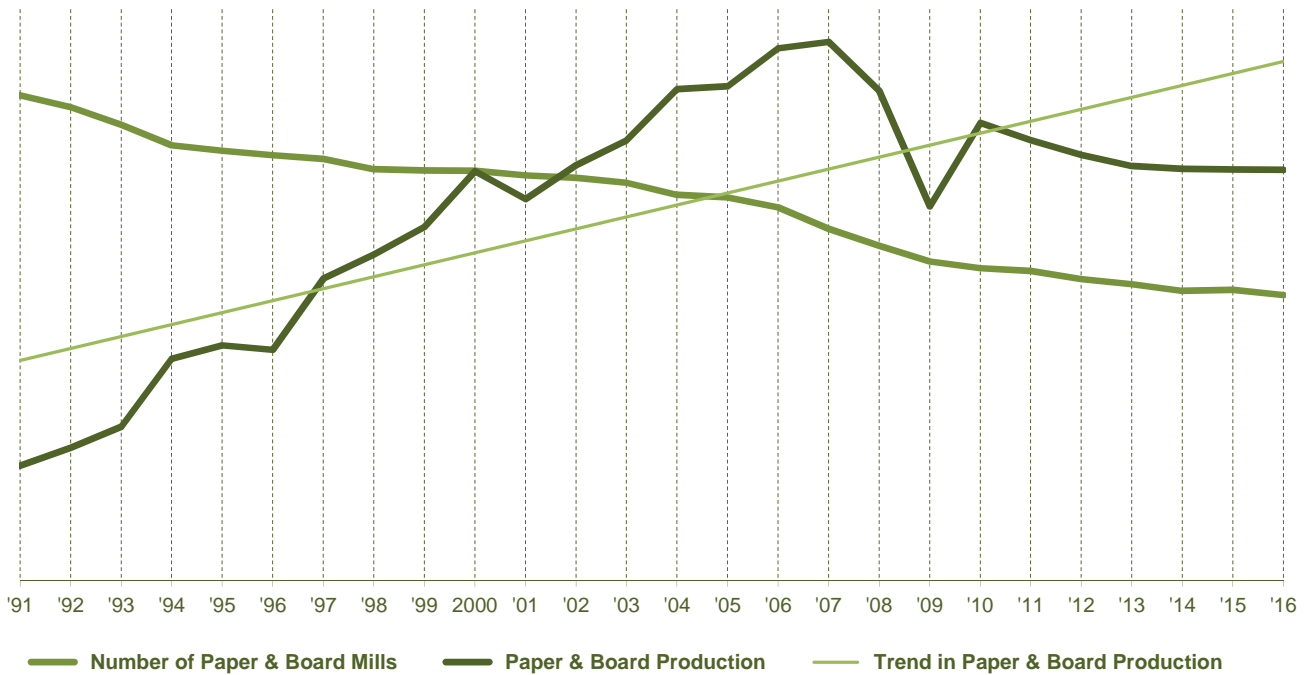
Number of Paper & Board Mills and Machines



Number of CEPI Paper & Board Mills and Paper & Board Production

Number of Paper & Board Mills

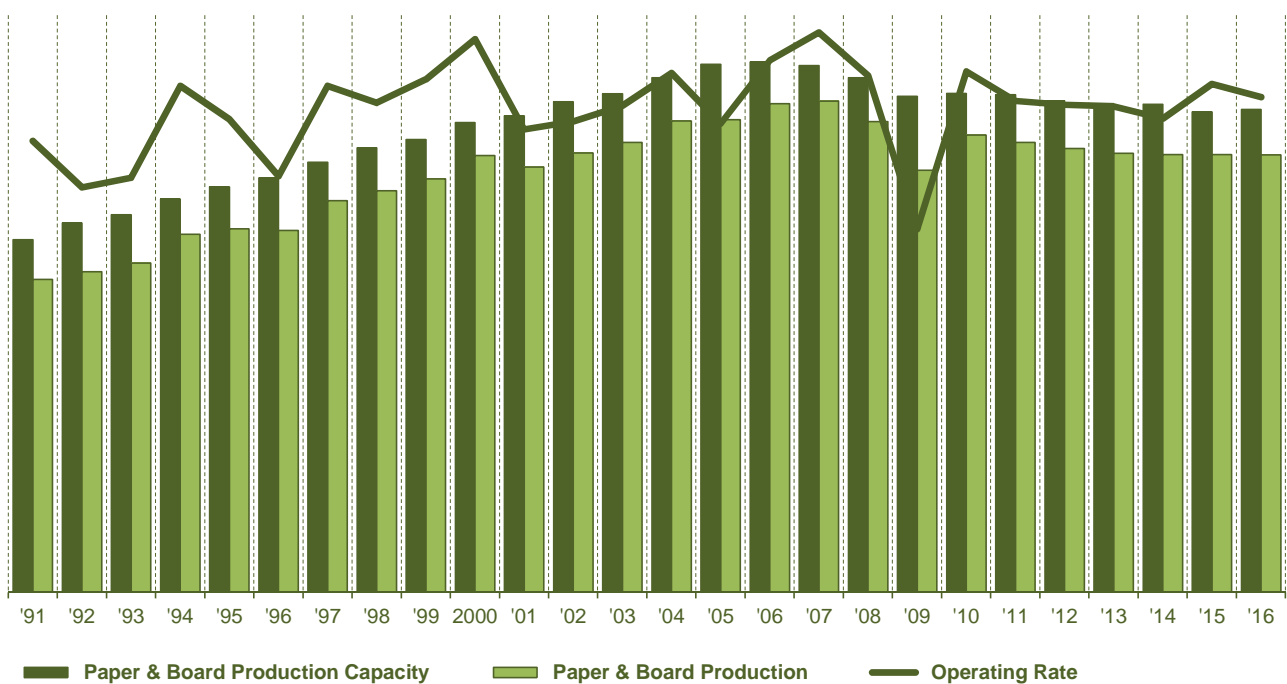
Paper & Board Production (Million Tonnes)



CEPI Paper & Board Production and Capacity

Paper & Board Production (Million Tonnes)

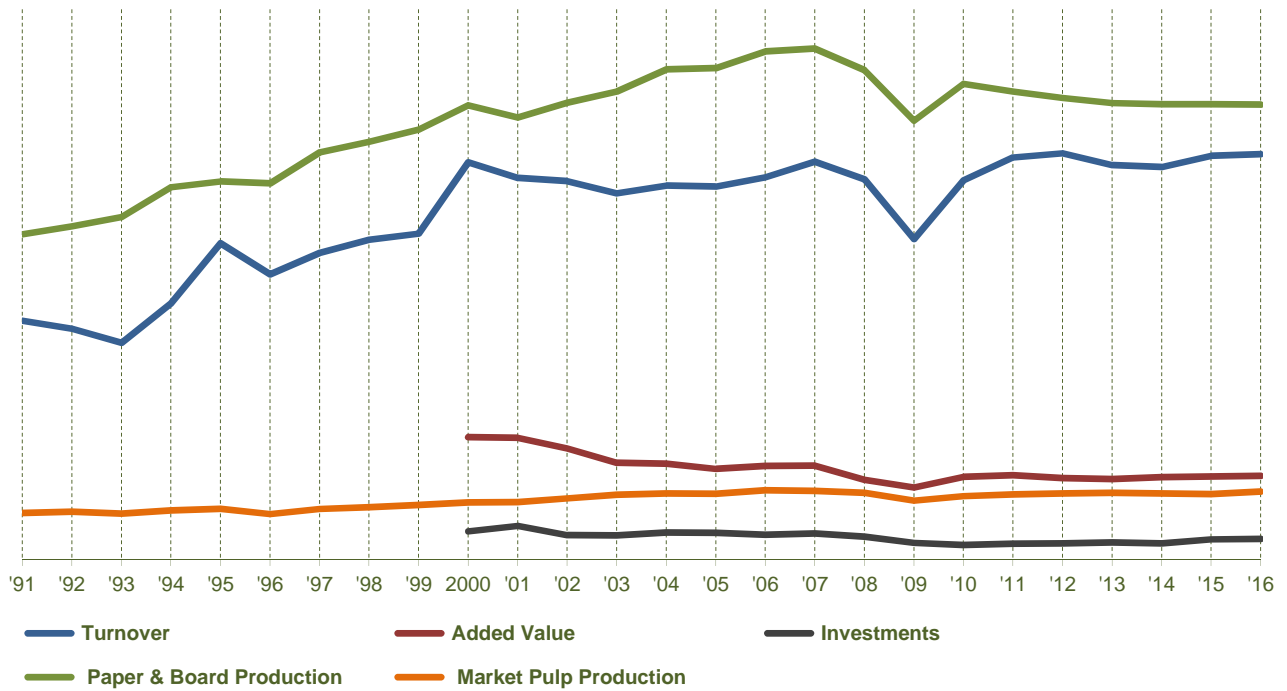
Operating Rate



CEPI Production, Turnover, Added Value and Investments

Turnover, Investments and Added Value (Million Euros)

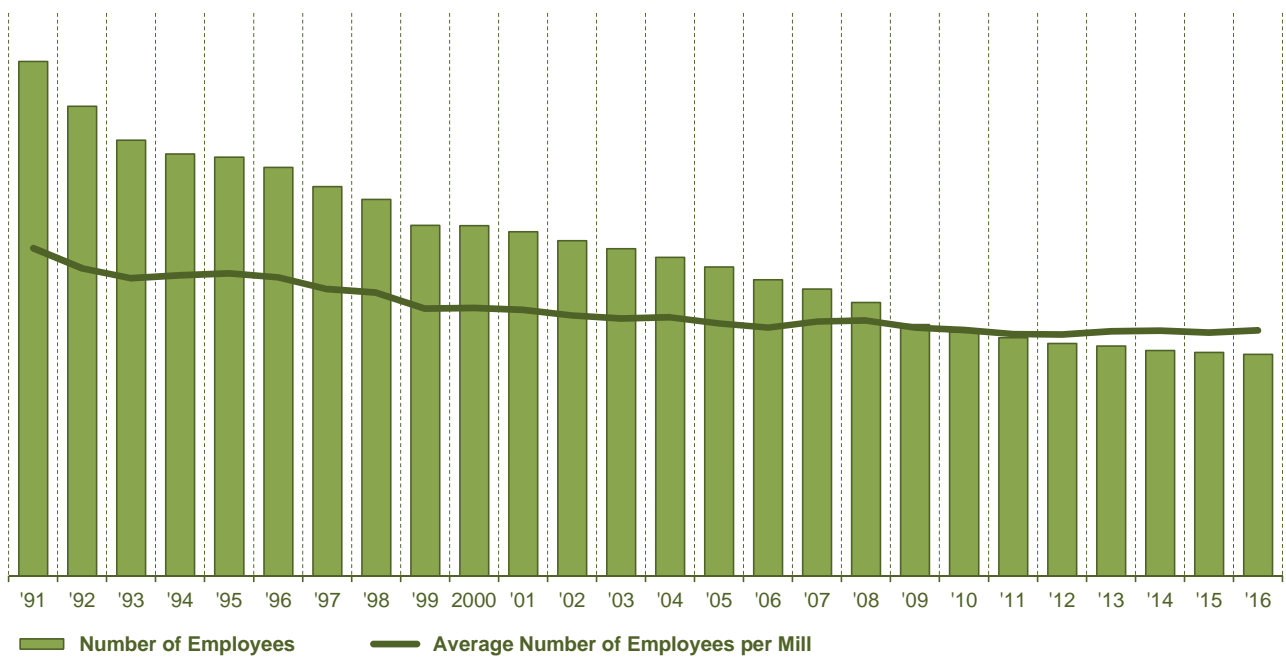
Production (Million Tonnes)



CEPI Employment Evolution

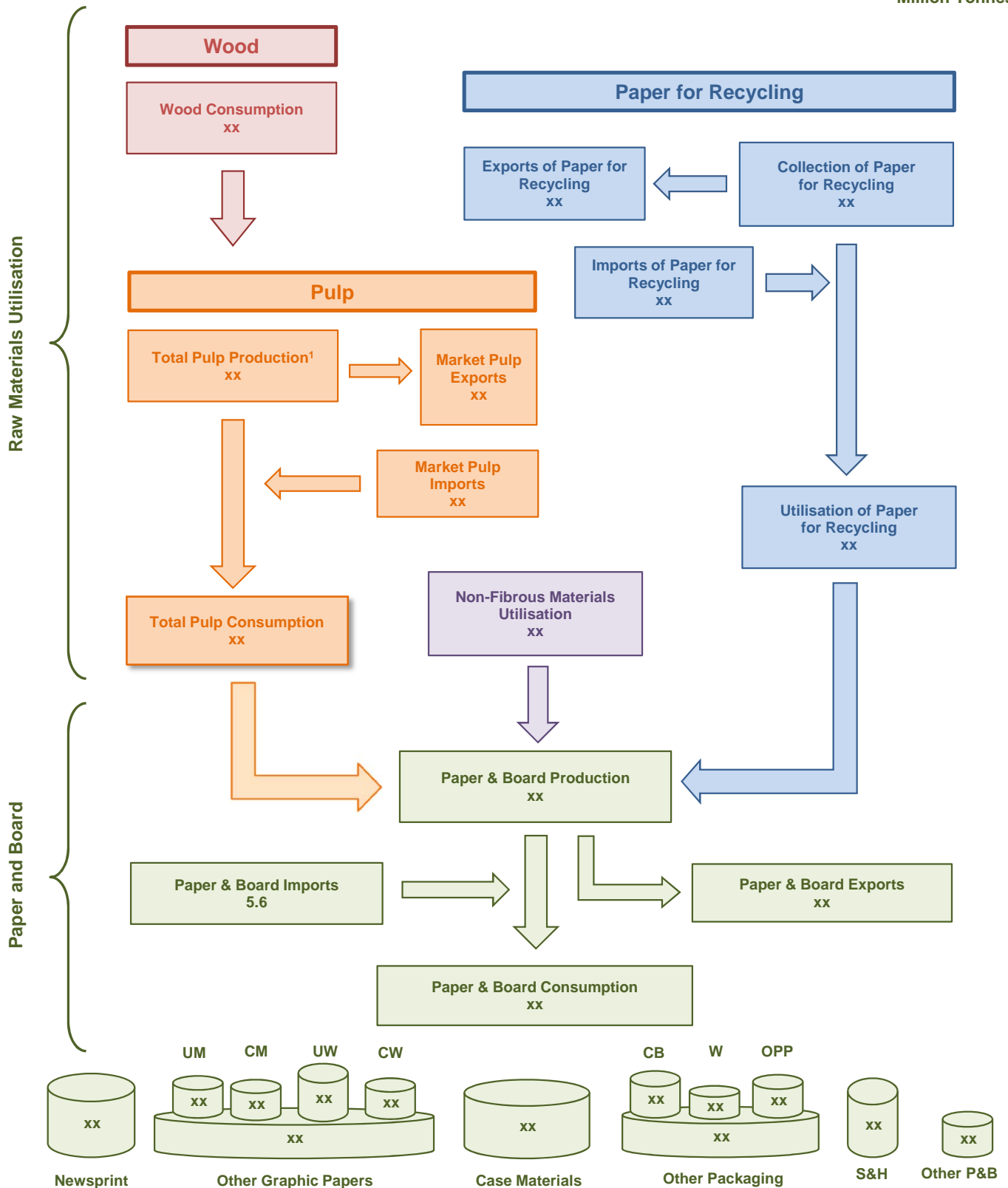
Number of Employees ('000 Employees)

Average Number of Employees per Mill



CEPI Pulp and Paper Industry in 2016

Million Tonnes



Paper & Board Consumption = Production + Imports from outside CEPI - Exports to outside CEPI

UM = Uncoated Mechanical - CM = Coated Mechanical - UW = Uncoated Woodfree - CW = Coated Woodfree

CB = Carton Board - W = Wrappings - OPP = Other Paper & Board for Packaging

S&H = Sanitary and Household

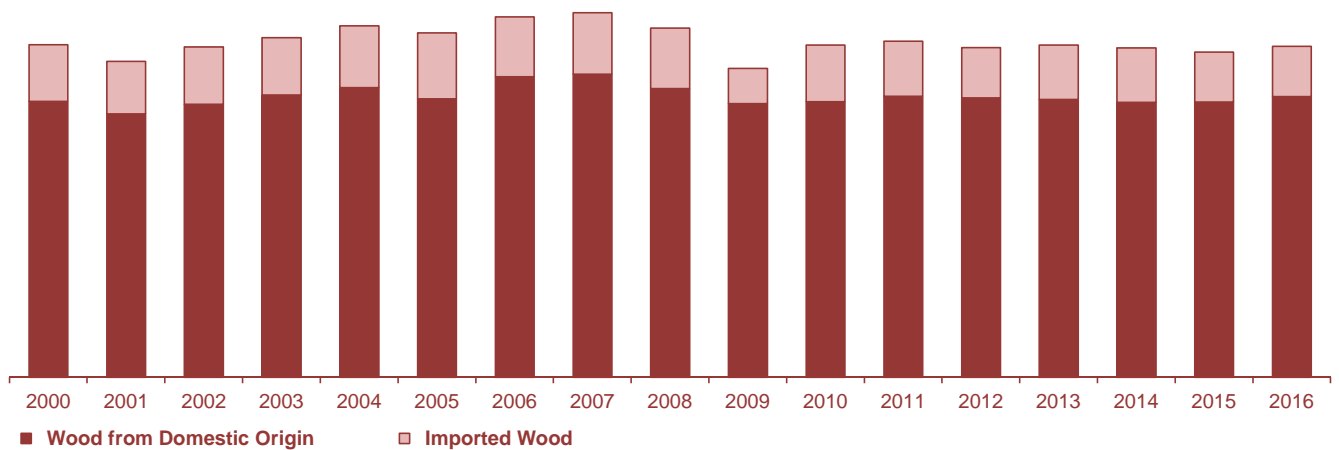
¹ of which Integrated Pulp 23.7 Million Tonnes

CEPI Wood Consumption

'000 m ³	1991	2000	2005	2010	2015	2016	% Share of Total	% Chg 2016/2015
Softwood Roundwood								
Softwood Chips								
Total Softwood								
Hardwood Roundwood								
Hardwood Chips								
Total Hardwood								
Total Roundwood								
Total Chips								
Total Wood								

CEPI Wood Consumption by Origin

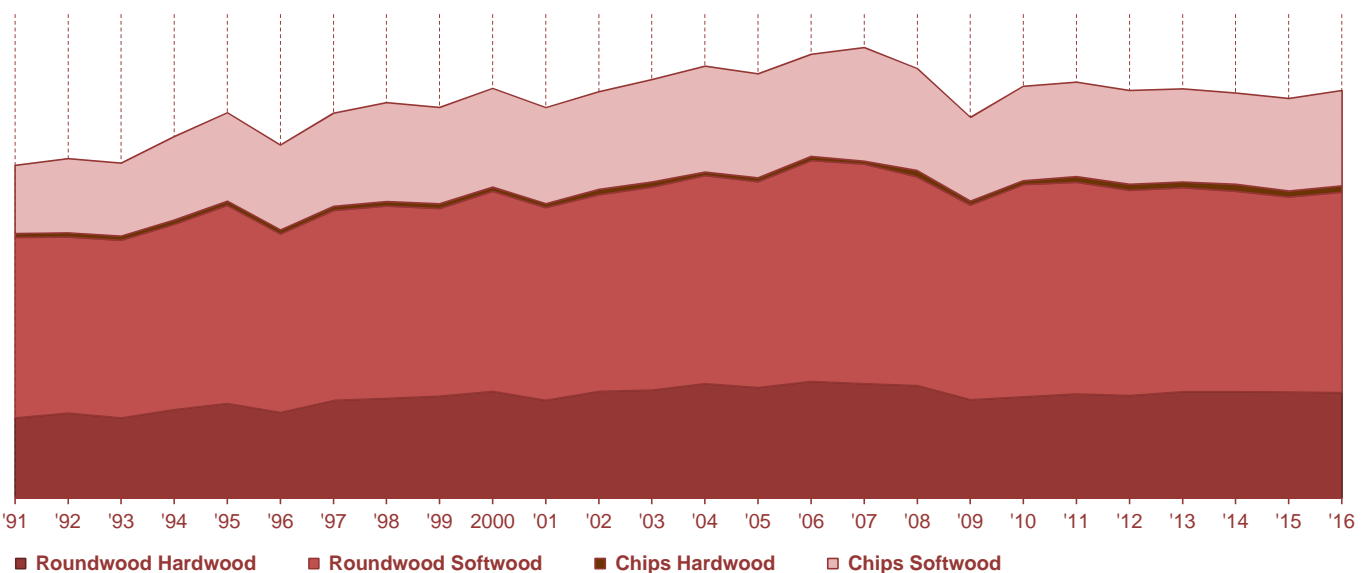
Million Tonnes



* Percentage of total wood consumption

CEPI Wood Consumption by Assortment

Million m³

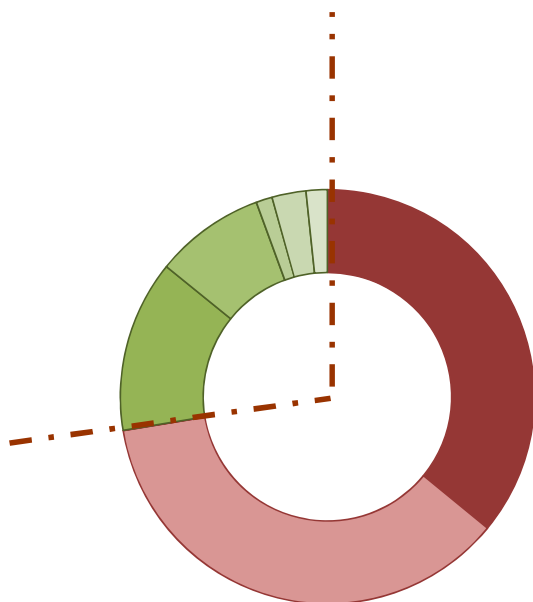


CEPI Wood Consumption

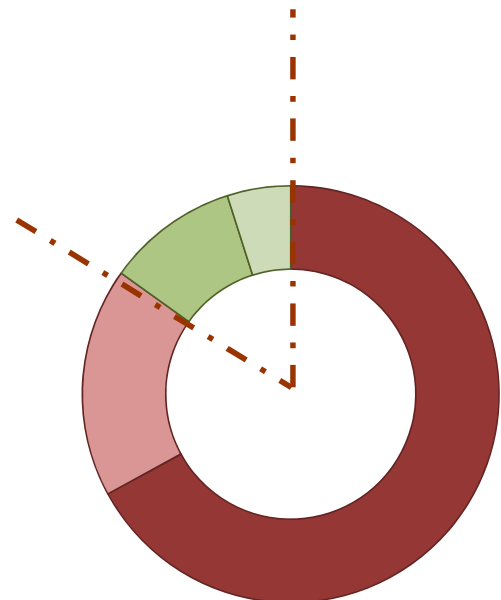
'000 m ³	From Domestic Origin (within the country)			From Imports and internal deliveries ¹			Total Wood Consumption		
	2015	2016	% Chg	2015	2016	% Chg	2015	2016	% Chg
Softwood Roundwood									
Softwood Chips									
Total Softwood									
Hardwood Roundwood									
Hardwood Chips									
Total Hardwood									
Total Roundwood									
Total Chips									
Total Wood									

Share in CEPI Wood Consumption in 2016

By Species ²



By Origin



Total CEPI Wood Consumption: xxx Million m³

¹ Include Imports between CEPI countries

² Based on a sample representing 90% of total CEPI consumption

³ Other Hardwood = hornbeam, ash, maple, accacia, quercus-cerris, oak, alder, poplar, willow, chesnut.

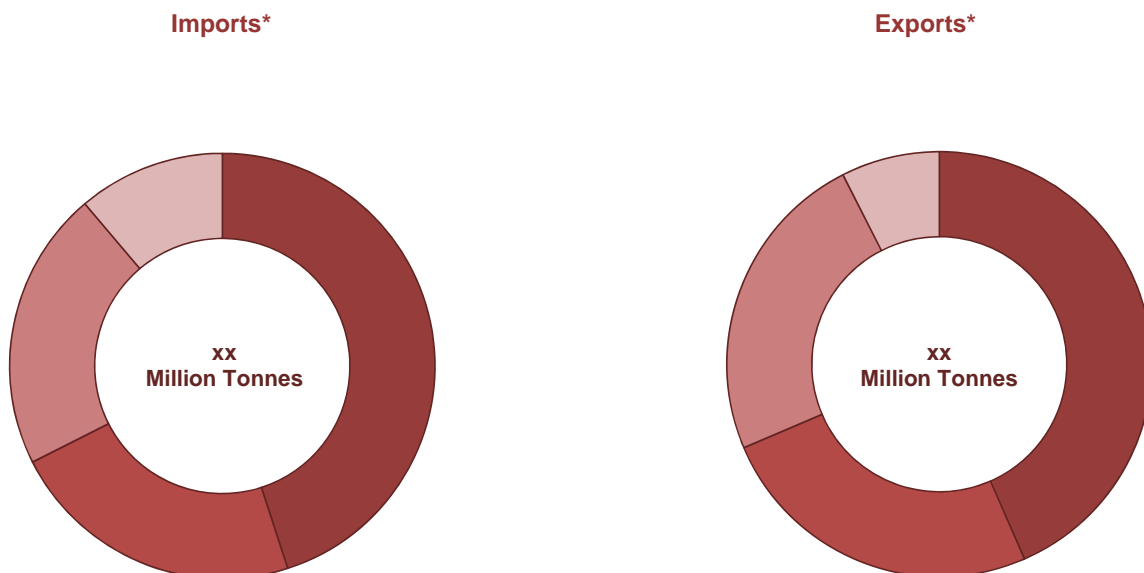
CEPI Wood Trade and Consumption in 2016

'000 Tonnes	Exports			Imports			Consumption	
	To Other CEPI Countries	To outside CEPI	Total Exports	From Other CEPI Countries	From outside CEPI	Total Imports	Total	Share of imports*
Softwood Roundwood								
Softwood Chips								
Total Softwood								
Hardwood Roundwood								
Hardwood Chips								
Total Hardwood								
Total Roundwood								
Total Chips								
Total Wood								

Source: Eurostat

* Imports from outside CEPI

CEPI Wood Trade by Assortment in 2016



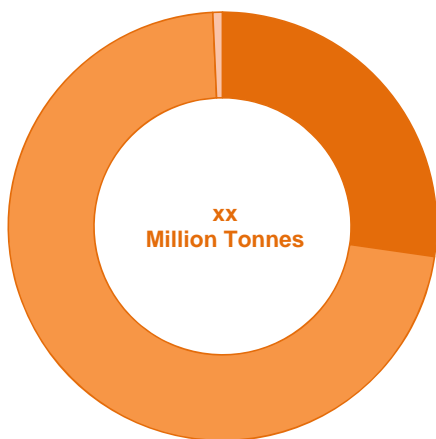
Source: Eurostat

* Imports and exports from and to outside CEPI

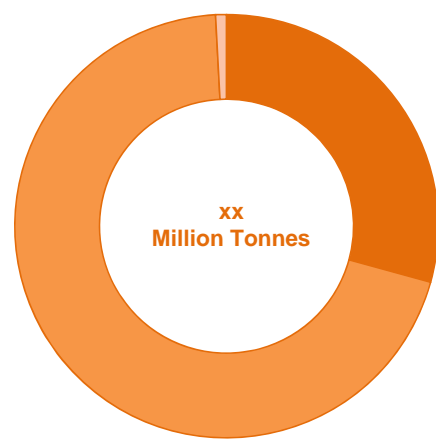
CEPI Total Pulp¹ Production by Grade

'000 Tonnes	1991	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Mechanical & Semi-Chemical Pulp								
Chemical Pulp								
Total Woodpulp								
Other Pulp								
Total Pulp								
of which Market pulp Production								
Market Pulp								

CEPI Total Pulp¹ Production by Grade in 2016

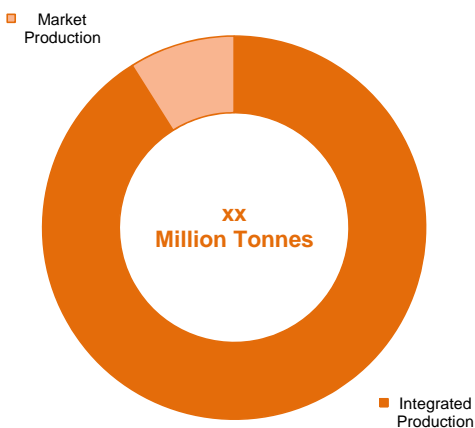


CEPI Total Pulp¹ Production Capacity by Grade in 2016

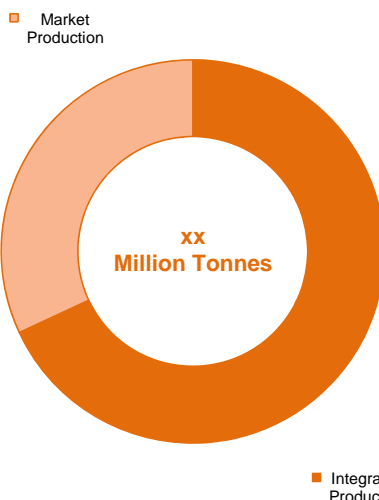


CEPI Integrated and Market Pulp Production by Grade in 2016

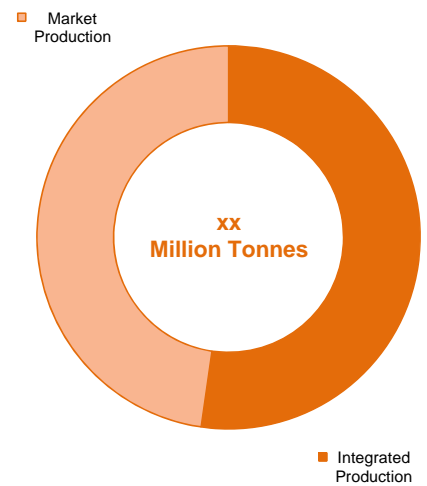
Mechanical pulp



Sulphite Pulp



Sulphate Pulp

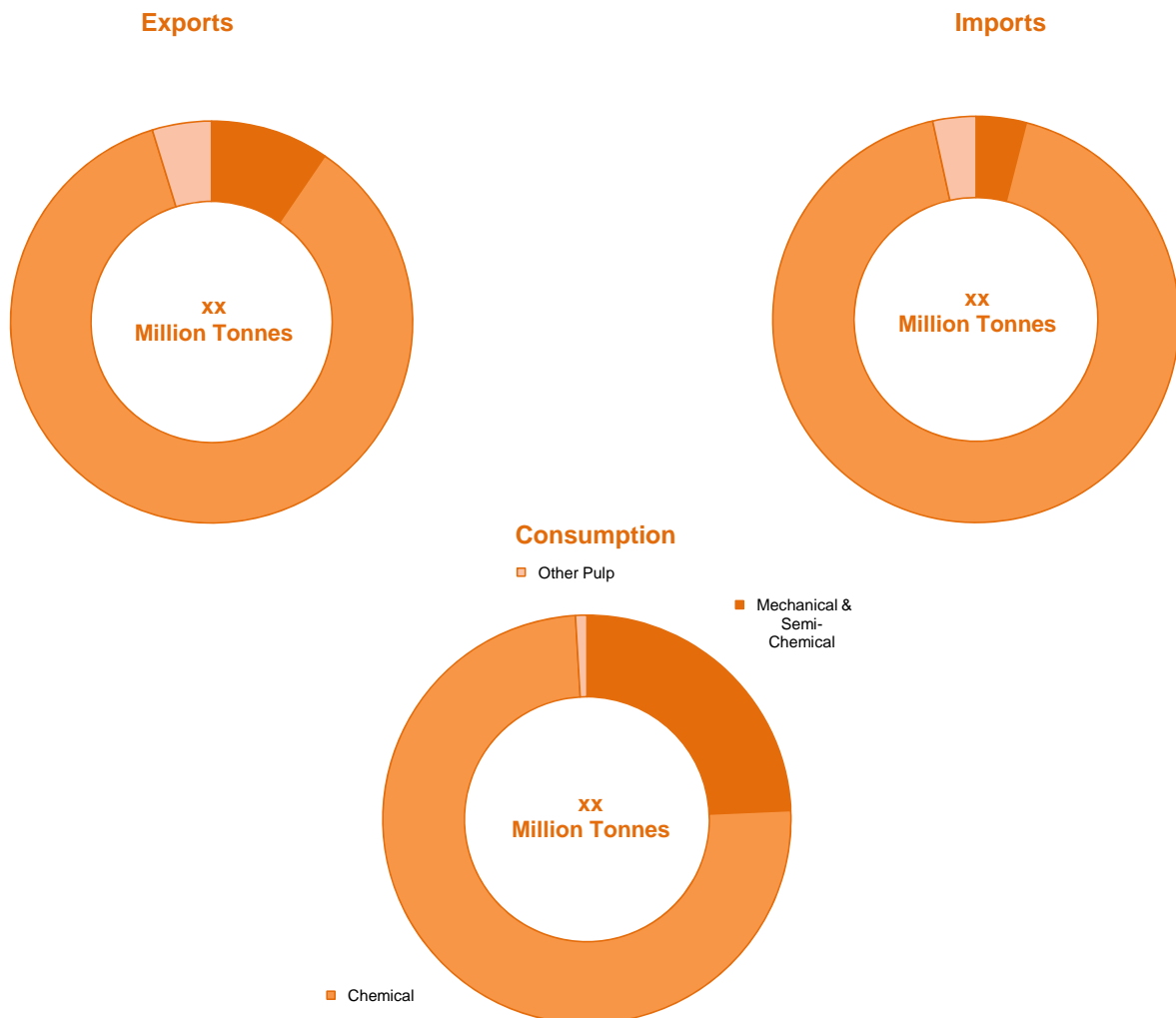


¹ Total Pulp = Integrated Pulp + Market Pulp

CEPI Total Pulp¹ Production, Deliveries and Consumption

'000 Tonnes	A = A1 + A2			A1			A2		
	Total Production			Integrated Production			Market Production		
	2015	2016	% chg	2015	2016	% chg	2015	2016	% chg
Mechanical & Semi-Chemical									
Sulphite Pulp									
Sulphate Pulp									
Total Chemical Pulp									
Total Woodpulp									
Other Pulp									
Total Pulp									

CEPI Trade and Consumption of Total Pulp¹ by Grade in 2016



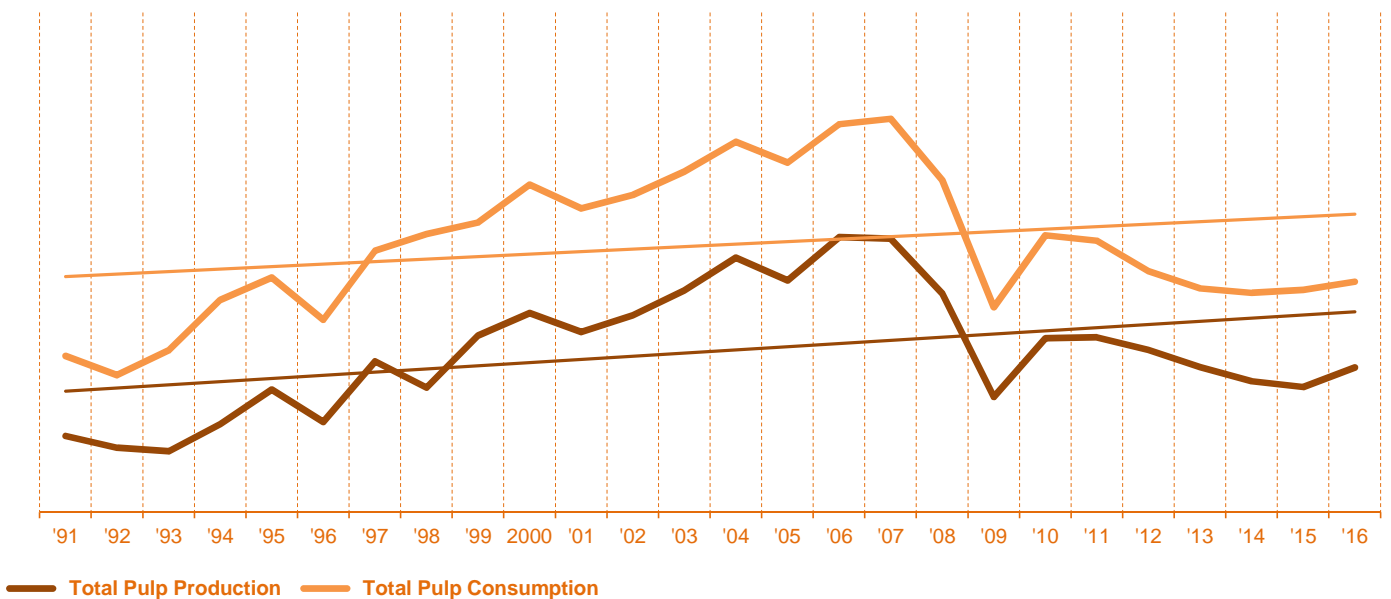
¹ Total Pulp = Integrated Pulp + Market Pulp

CEPI Total Pulp¹ Production, Deliveries and Consumption

'000 Tonnes	B			C			D			E = A+D-C		
	Internal Deliveries			Exports ²			Imports ²			Total Consumption		
	2015	2016	% chg	2015	2016	% chg	2015	2016	% chg	2015	2016	% chg
Mechanical & Semi-Chemical												
Sulphite Pulp												
Sulphate Pulp												
Chemical Pulp												
Woodpulp												
Other Pulp												
Total Pulp												

CEPI Total Pulp¹ Production and Consumption

Million Tonnes

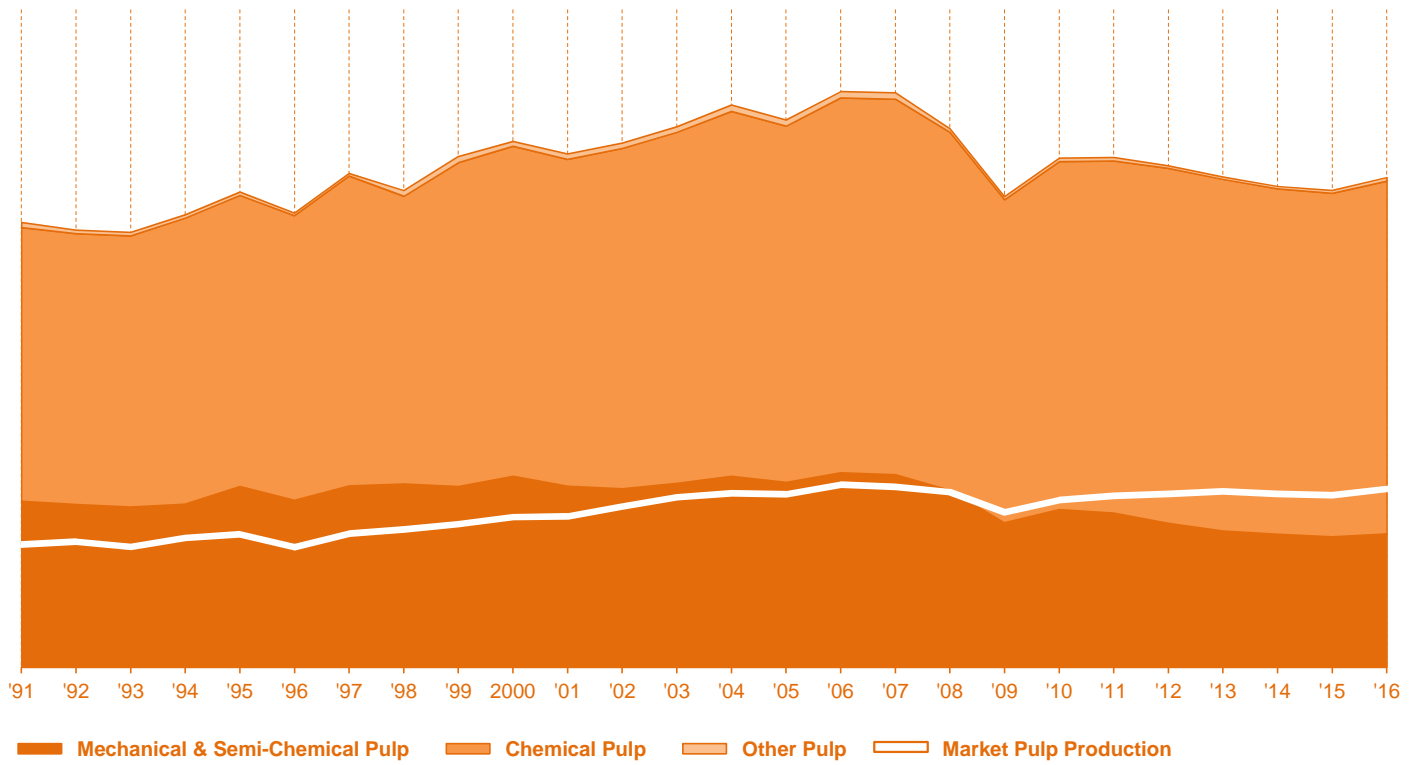


¹ Total Pulp = Integrated Pulp + Market Pulp

² Exports and Imports to and from countries outside CEPI

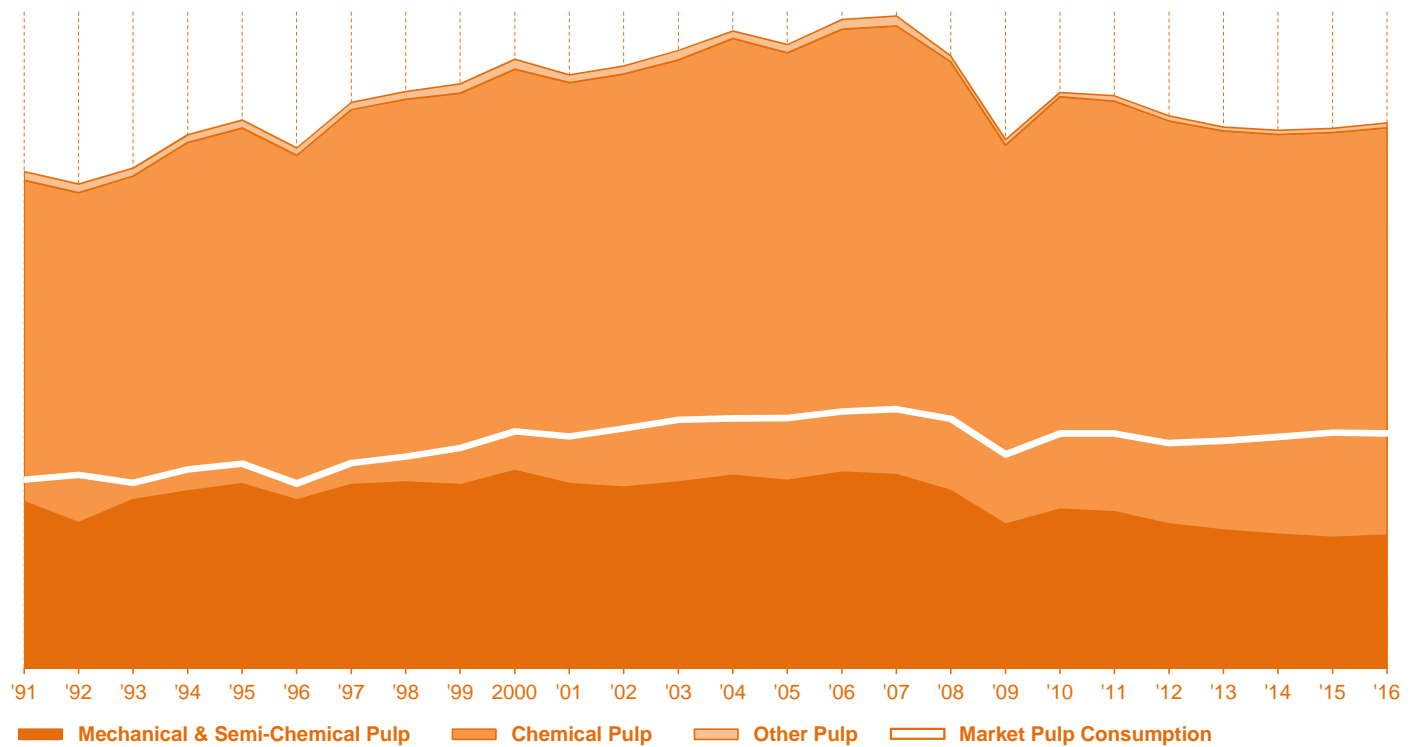
CEPI Total Pulp¹ Production by Grade and Market Pulp Production

Million Tonnes



CEPI Total Pulp¹ Consumption by Grade and Market pulp Consumption

Million Tonnes



¹ Total Pulp = Integrated Pulp + Market Pulp

CEPI Utilisation of Paper for Recycling by Grade

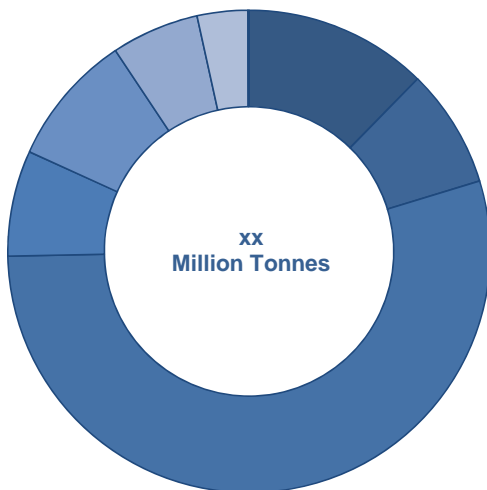
'000 Tonnes	1991	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Mixed Grades								
Corrugated and Kraft								
Newspapers and Magazines								
Other Grades								
Total Paper for Recycling								

CEPI Utilisation of Paper for Recycling by Sector

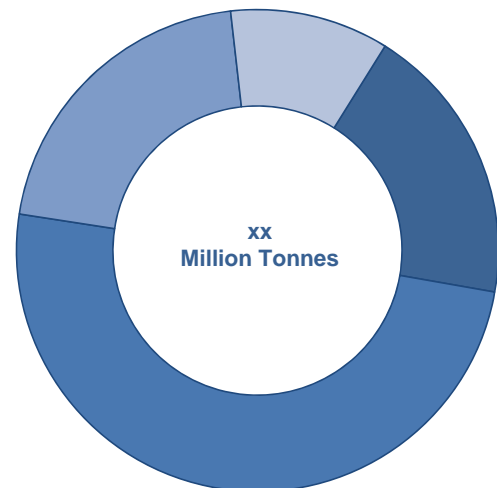
'000 Tonnes	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Newsprint							
Other Graphic Papers							
Case Materials							
Carton Board							
Wrappings and Other P&B for Packaging							
Sanitary and Household							
Other Paper & Board							
De-inked Market Pulp							
Total Paper for Recycling							

CEPI Utilisation of Paper for Recycling in 2016

Utilisation by Sector



Utilisation by Grade



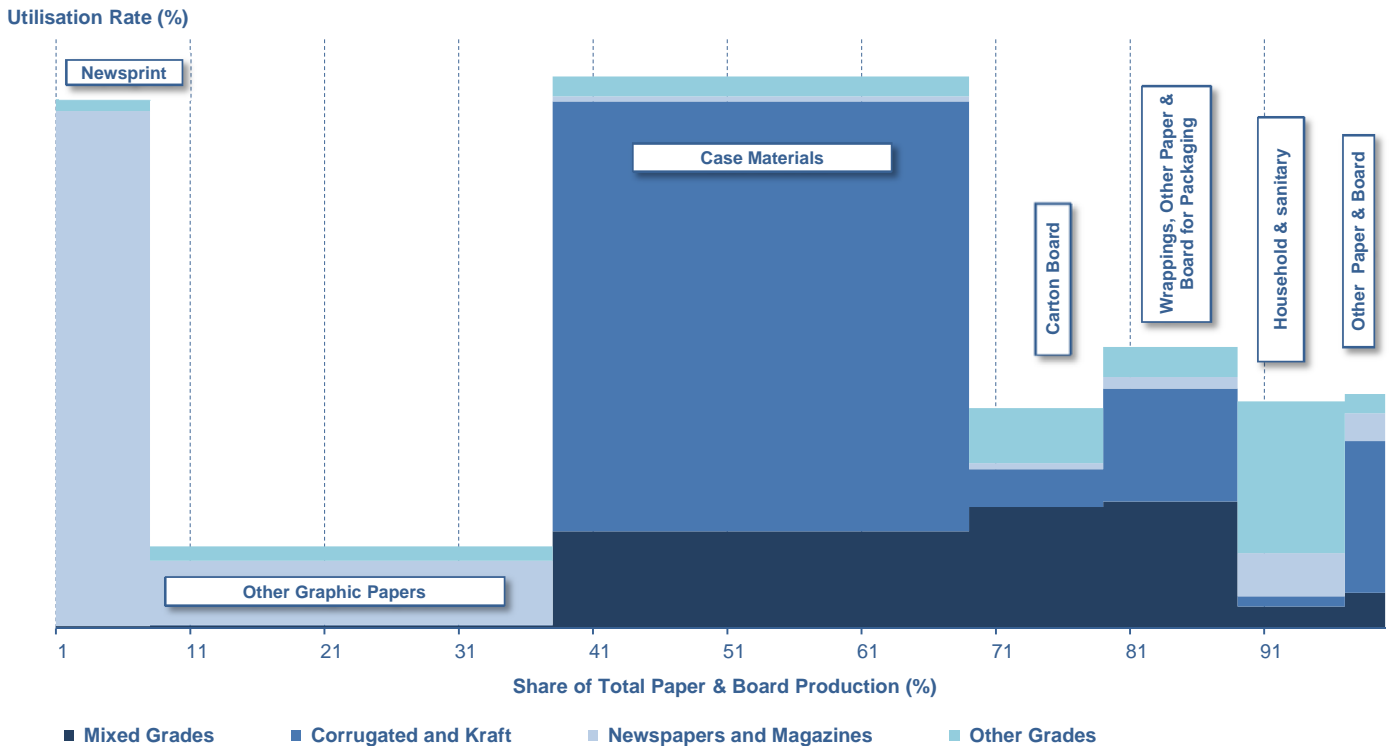
CEPI Utilisation of Paper for Recycling by Sector in 2016

'000 Tonnes	Grades of Paper for Recycling							
	A	B	C	D	E	F	G	E:G
Paper Sector	Mixed Grades	Corrugated and Kraft	Newspapers & Magazines	Other Grades	Total Use of Paper for Recycling	Usage by Sector ¹ %	Total P&B Production	Utilisation Rate ² %
Newsprint								
Other Graphic Papers								
Total Newsprint + O.G.P.								
Case Materials								
Carton Board								
Wrappings, Other Pack.								
Total Packaging Papers								
Sanitary and Household								
Other Paper & Board								
Total Paper & board								
<i>Share of Total</i>								
De-inked Market Pulp								

¹ Utilisation by sector: total use of paper for recycling in a sector as % of the total paper for recycling used by the industry

² Utilisation rate: use of paper for recycling in a sector as % of total paper & board production in that sector (See note below)

CEPI Utilisation of Paper for Recycling by Sector in 2016



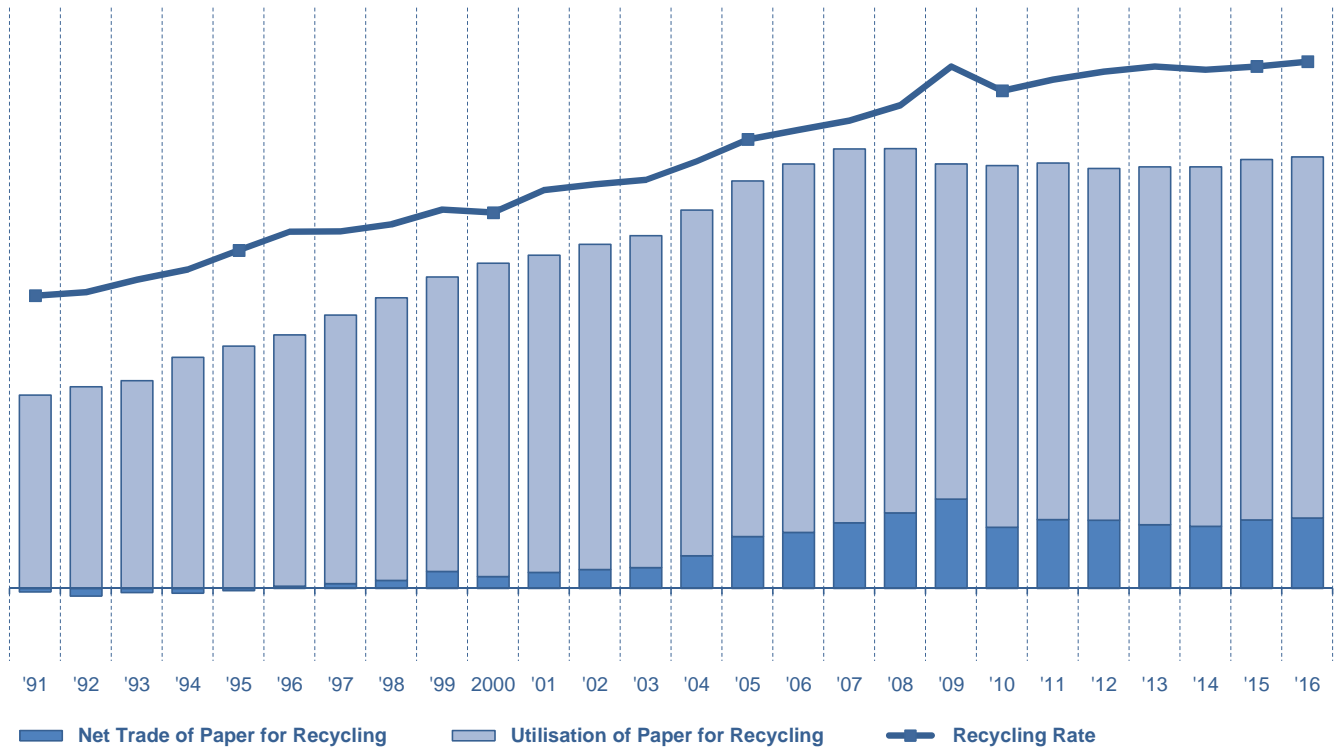
For instance: case materials represent 30% of total paper and board production, have an utilisation rate of 94% and use 54.5% of total paper for recycling volumes used by the industry.

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 grades of paper for recycling and countries. The volume of recycled fibres actually used to produce new paper is therefore lower than the volume of paper for recycling considered. The utilisation rate compares utilisation of paper for recycling to paper & board production.

Utilisation, Net Trade and Recycling Rate¹ of Paper for Recycling in Europe²

Million Tonnes

Recycling Rate* (%)

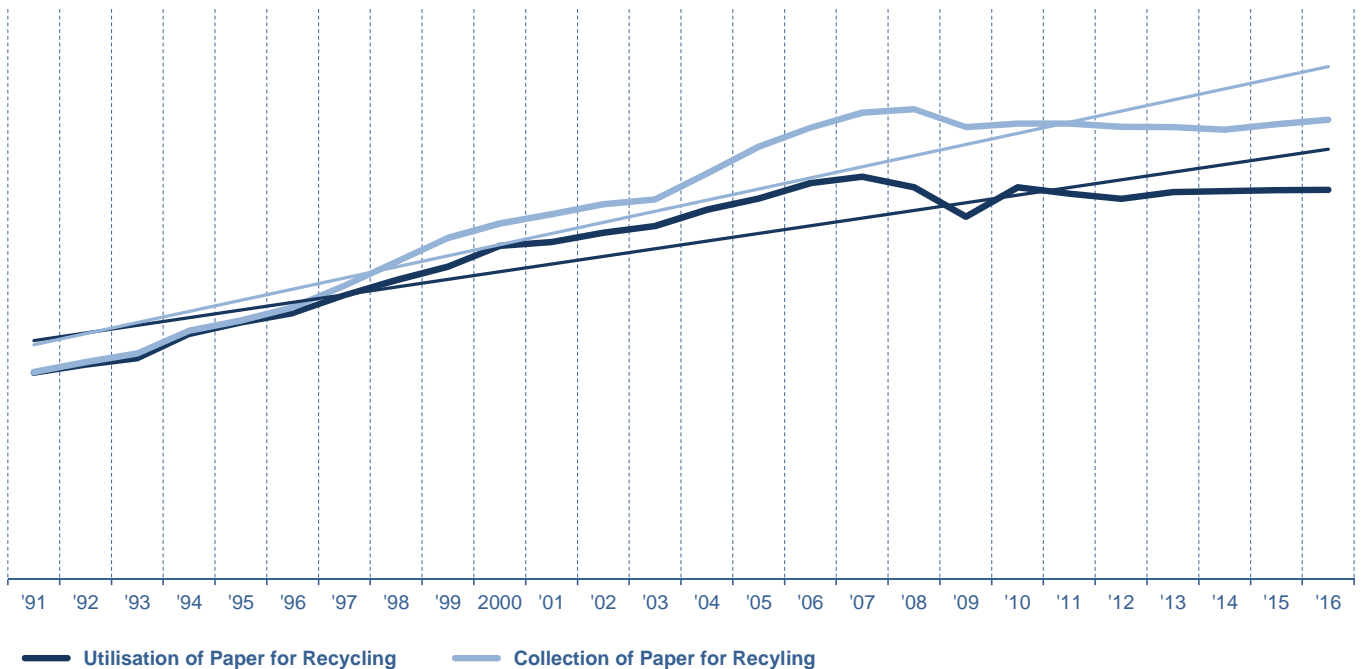


¹ Recycling Rate = "Utilisation of Paper for Recycling + Net Trade of Paper for Recycling", compared to Paper & Board Consumption

² Europe means EU-28 countries plus Norway and Switzerland

CEPI Utilisation and Collection of Paper for Recycling

Million Tonnes



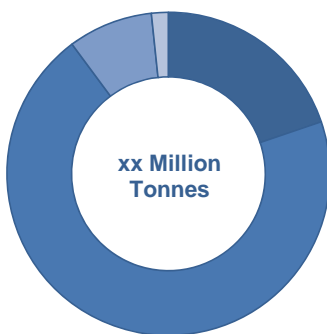
CEPI Utilisation, Trade and Collection of Paper for Recycling by Grade

'000 Tonnes	A			B			C		
	Utilisation			Exports to Other CEPI Countries			Exports to Countries Outside CEPI		
	2015	2016	% chg	2015	2016	% chg	2015	2016	% chg
Mixed Grades									
Corrugated and Kraft									
Newspapers and Magazines									
Other Grades									
Total Paper for Recycling									

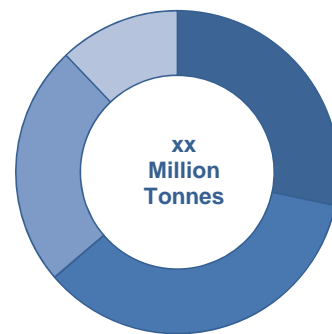
'000 Tonnes	D			E			A + C - E		
	Imports from Other CEPI Countries			Imports from Countries outside CEPI			Collection		
	2015	2016	% chg	2015	2016	% chg	2015	2016	% chg
Mixed Grades									
Corrugated and Kraft									
Newspapers and Magazines									
Other Grades									
Total Paper for Recycling									

CEPI Trade and Collection of Paper for Recycling by Grade

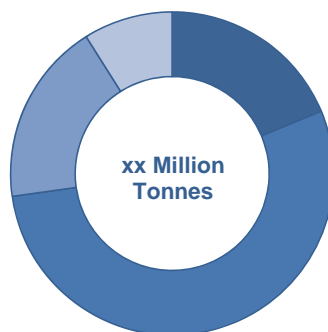
Exports



Imports

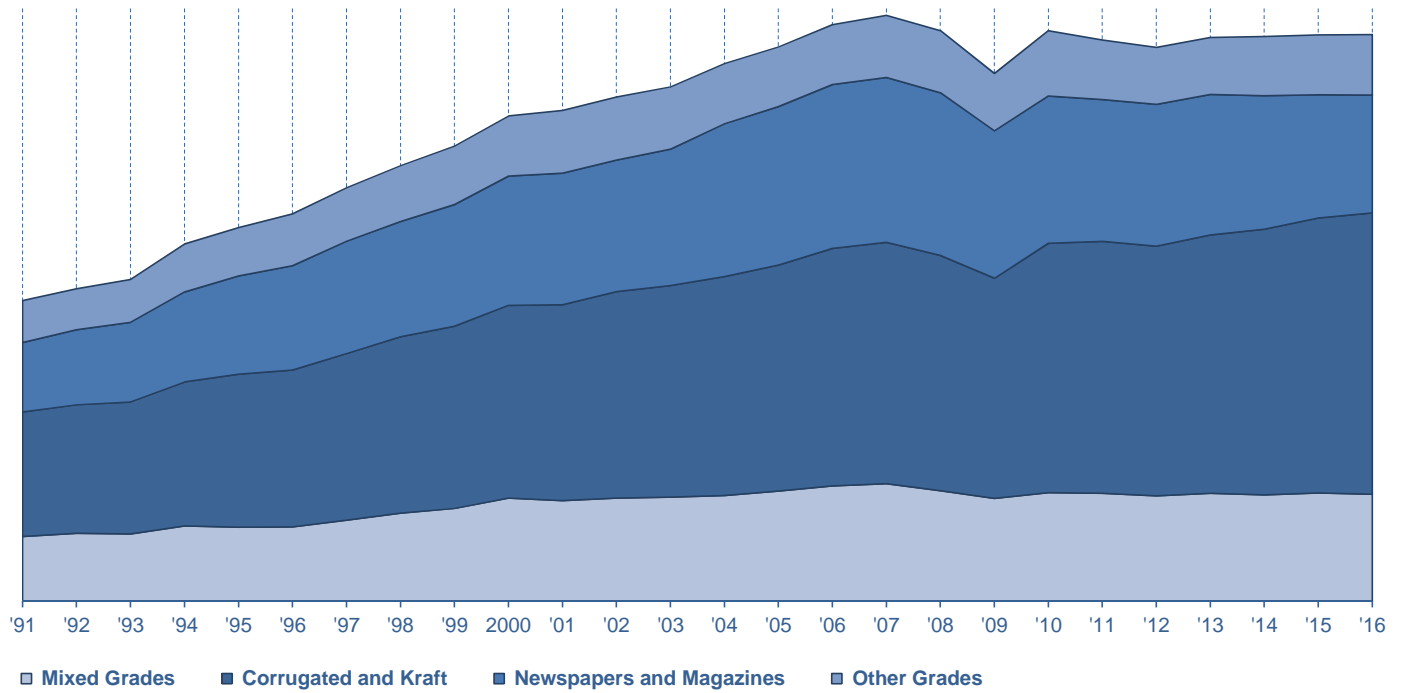


Collection



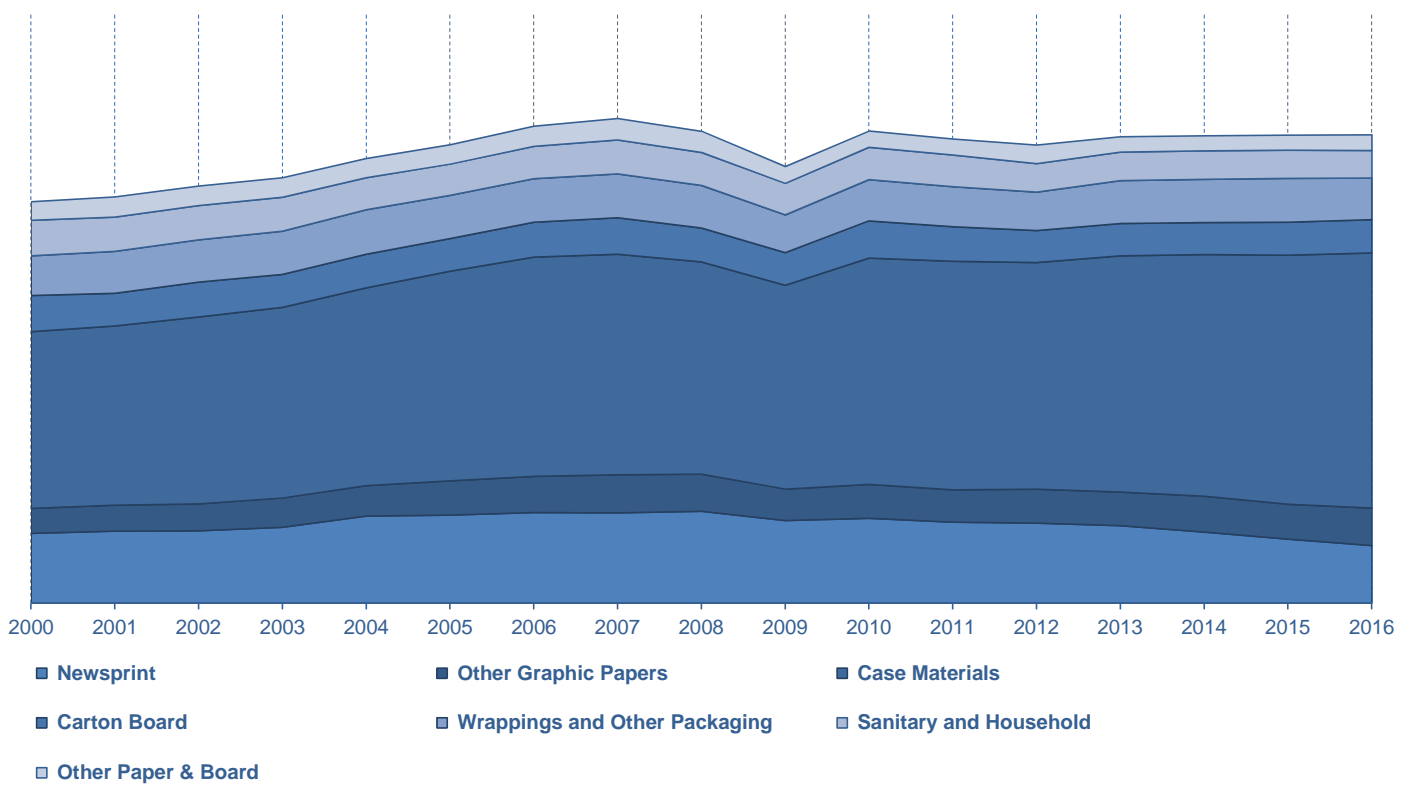
CEPI Utilisation of Paper for Recycling by Grade

Million Tonnes



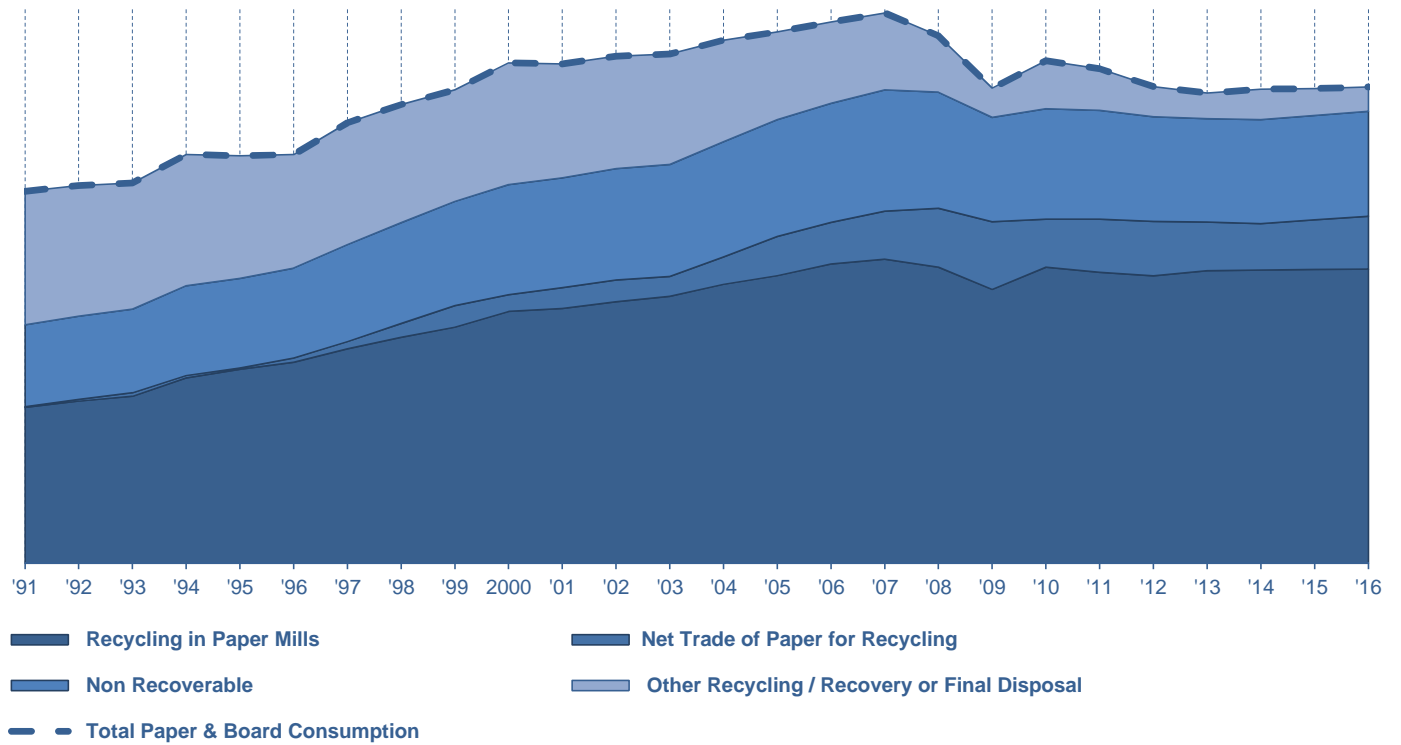
CEPI Utilisation of Paper for Recycling by Sector

Million Tonnes



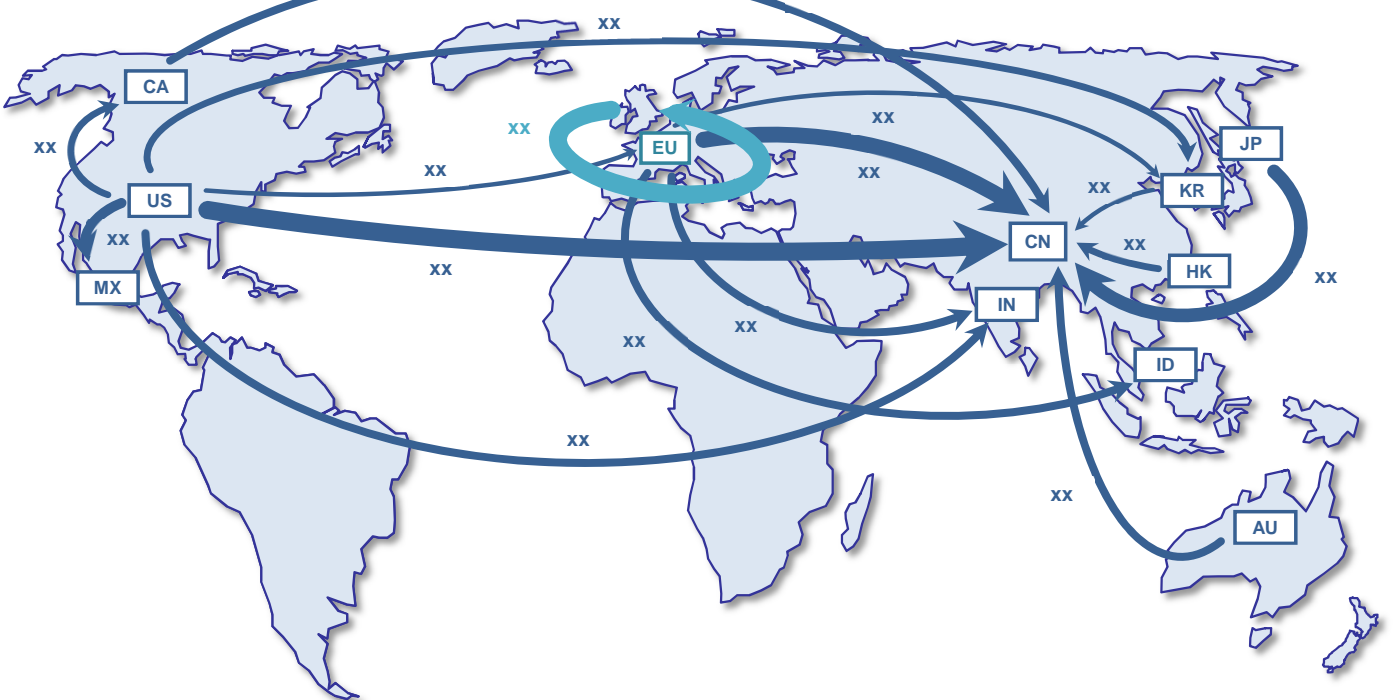
CEPI Paper & Board Consumption and Recycling

Million Tonnes



Major Global Trade Flows of Paper for Recycling in 2016

Million Tonnes



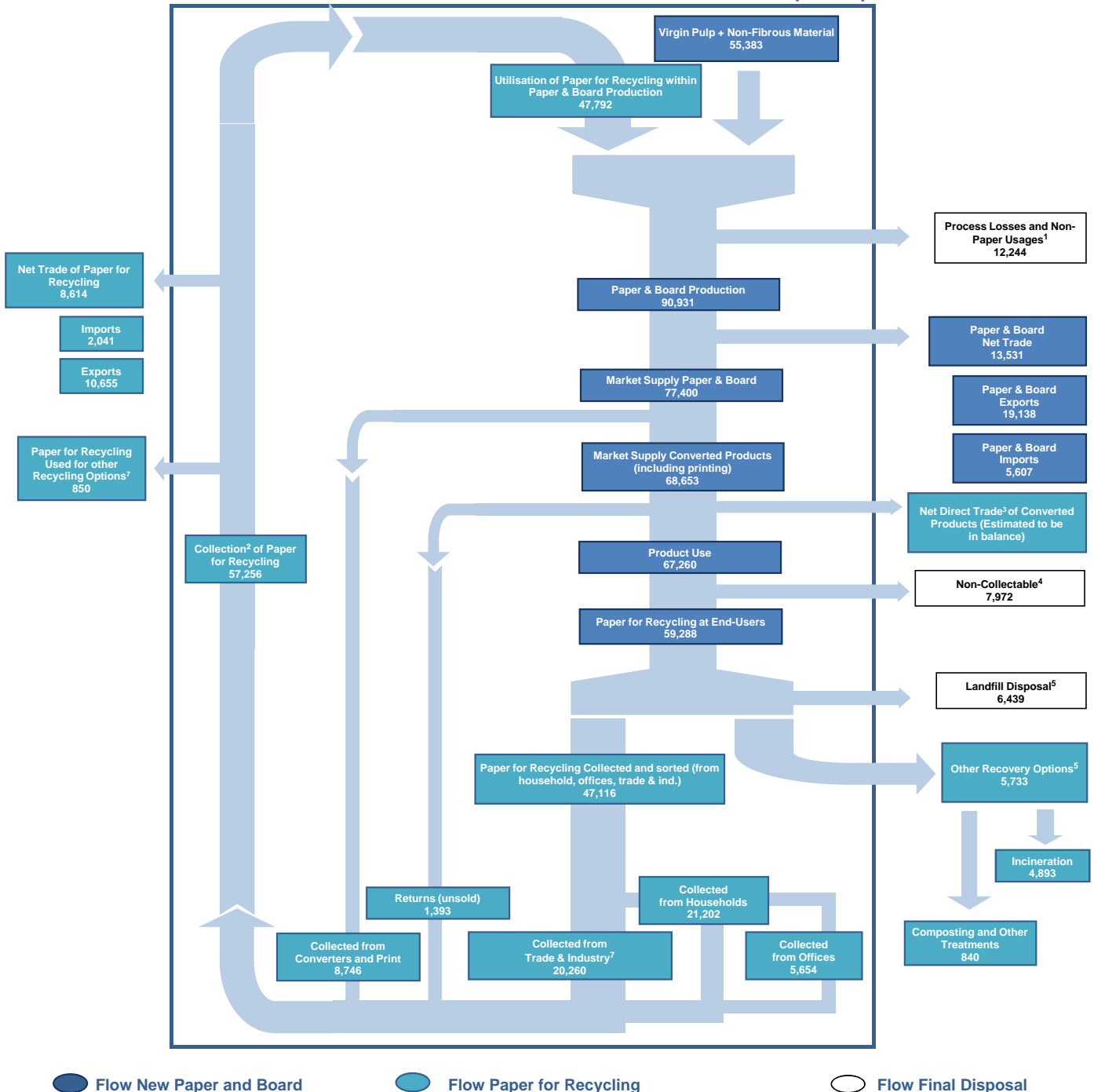
Total Trade Flow of Paper for Recycling: xxx Million Tonnes

CA: Canada - US: United States - MX: Mexico - JP: Japan - AU: Australia - ID: Indonesia - IN: India - HK: Hong-Kong - KR: South Korea - CN: China

Source: GTIS- RISI

Fibre Flow Chart for CEPI Countries in 2016

Paper Loop



Note: Some figures are estimates.

¹ The non-paper usages include products such as absorbent and hygienic personal products made of fluff pulp.

² The difference between recovered paper collection and recovered paper utilisation can be explained by trade, stock variations and some volumes destined to other material recycling options.

³ The trade of converted products and as well as the trade of packaging surrounding traded goods (including manuals) has been estimated to be in balance.

⁴ To the amount of non-collectable paper & board have to be added the paper & board that are non-recyclable and which go to landfills and other recovery options. In total, based on the 2013 PTS/Intecus study, it is estimated that around 22% of the total paper & board volume put on the markets are non-collectable and non-recyclable.

⁵ The actual volumes of paper & board going to landfills / final disposal and to other recovery options have been estimated with a consultant.

⁶ Returns unsold and recovered paper volumes from converters and printers should be taken into account when considering the "trade & industry" channel globally.

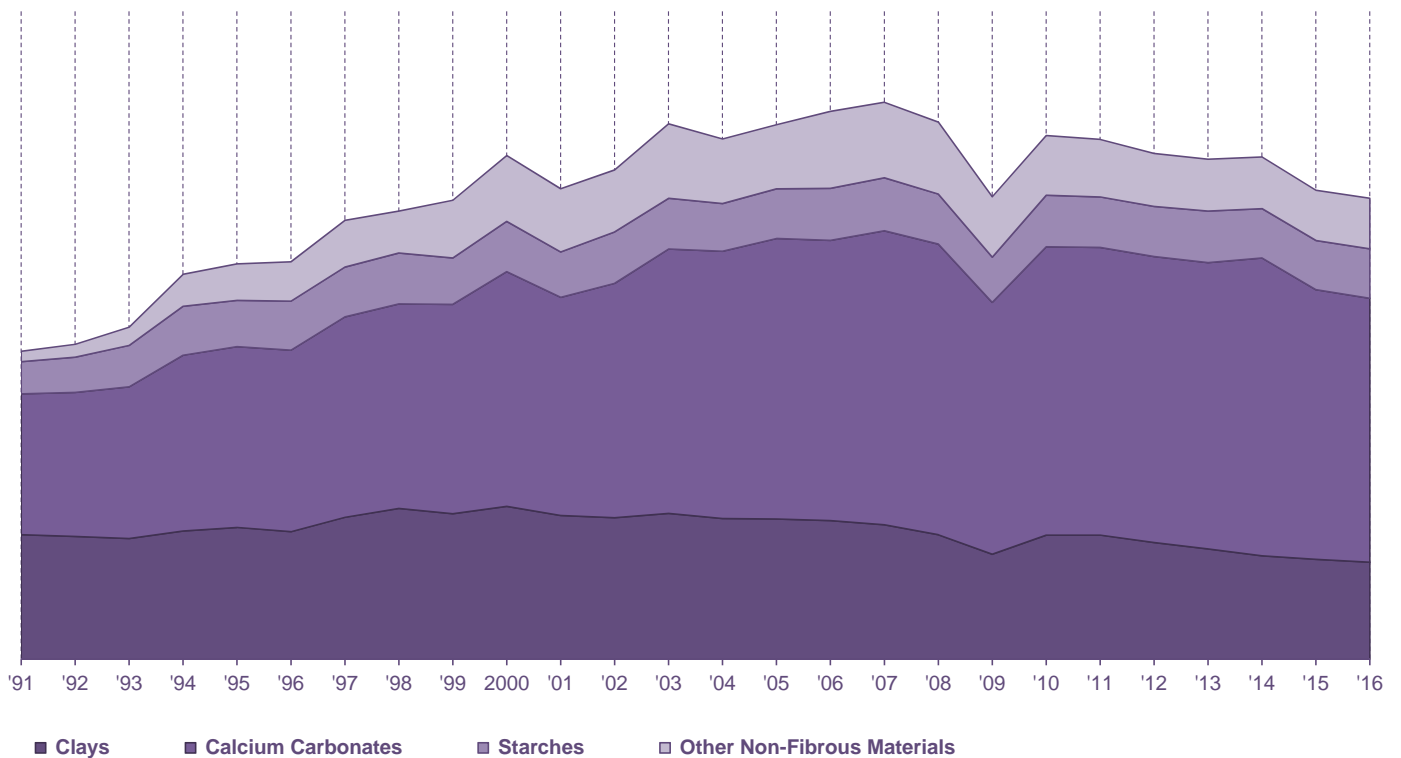
⁷ Around 75% of these volumes go to the construction and building sector according to a recent study. The remaining 25% go to other industries and activities such as the packaging industry and farming.

CEPI Non-Fibrous Materials¹ Consumption

'000 Tonnes	1991	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Clays (coating and filler)								
Calcium Carbonates (coating and filler)								
Starches (native and modified)								
Other Non-Fibrous Materials								
Non Fibrous Materials								

CEPI Non-Fibrous Materials¹ Consumption

Million Tonnes



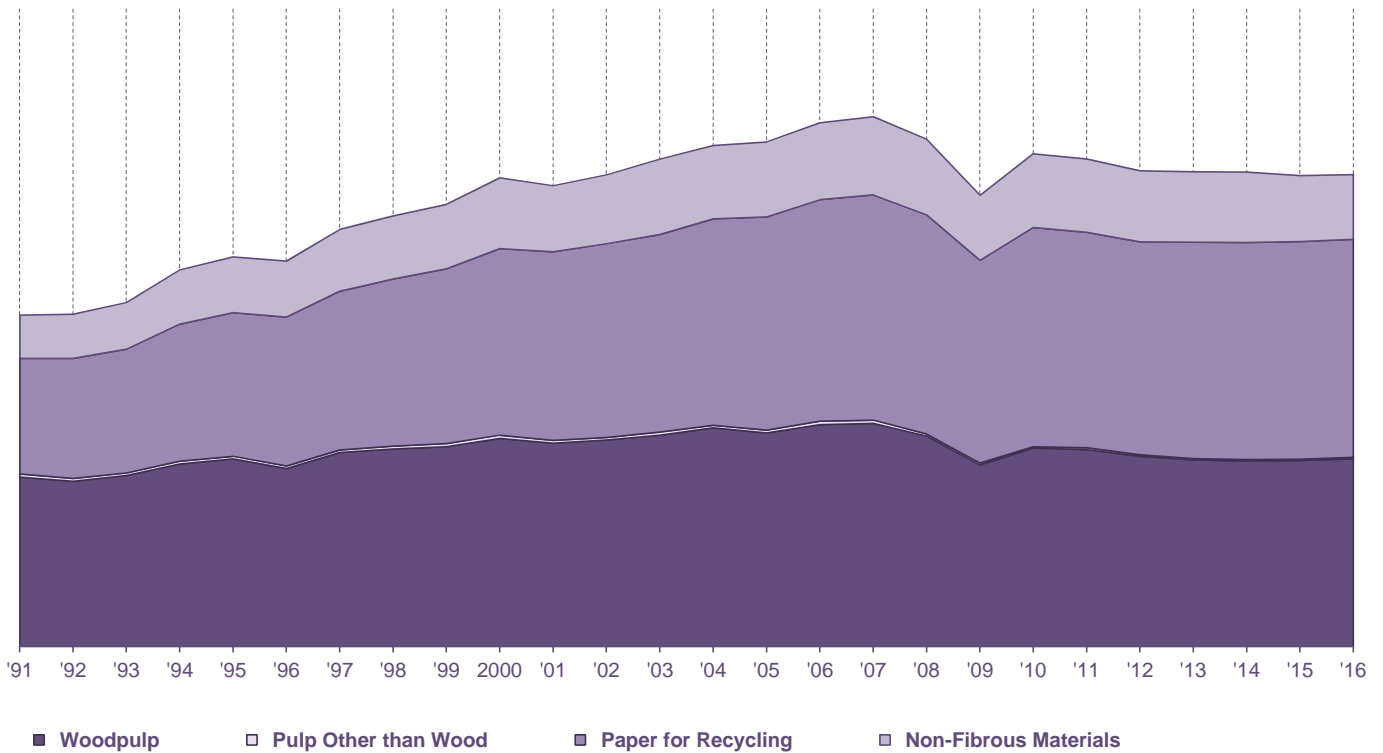
¹ See Definitions page 89.

CEPI Raw Materials Consumption

'000 Tonnes	1991	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Woodpulp								
Pulp Other than Wood								
Paper for Recycling								
Non-Fibrous Materials								
Total Raw Materials								

CEPI Raw Materials Consumption

Million Tonnes



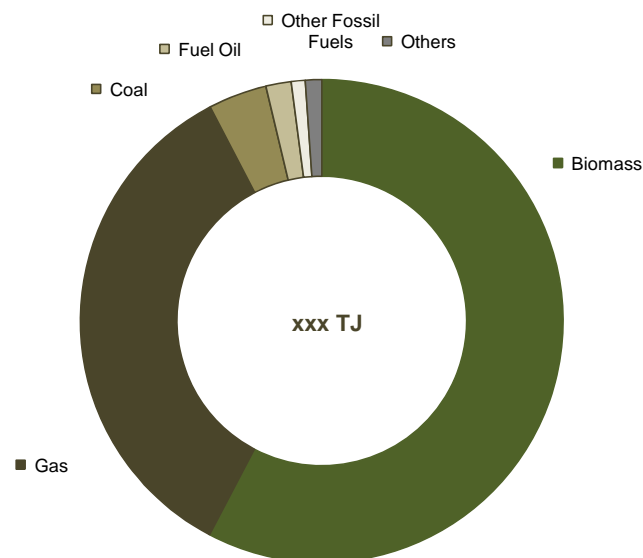
CEPI Primary Energy and Electricity Consumption¹

Primary Energy Consumption TJ	1991	2000	2005	2010	2014	2015	% Share of Total	Change 2015/2014
Gas								
Fuel Oil								
Coal								
Other Fossil Fuels								
Biomass								
Other								
Total Fuels Consumption								
Net Bought Electricity								
Total Primary Energy Consumption								
Fraction of Biomass in Total Fuels Consumption								
Electricity Consumption GWh								
Total Electricity Produced at Site								
Purchased Electricity								
Sold Electricity								
Total Electricity Consumption								
% of Electricity produced through CHP ²								

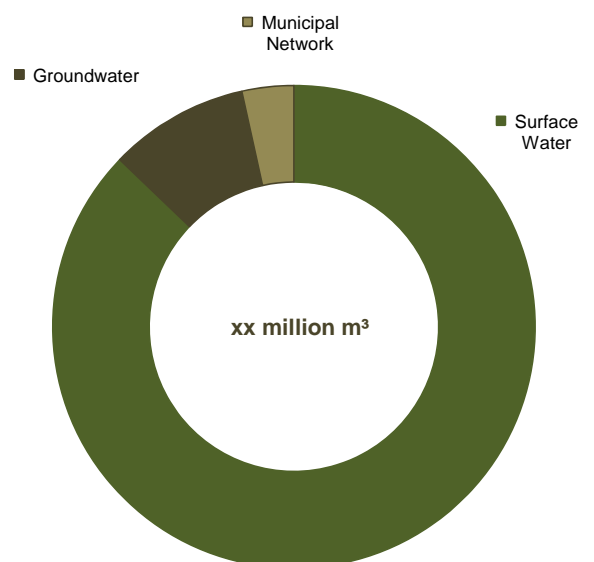
¹ Excluding Hungary , Romania & Slovenia - excluding Poland before 2003 - Figures for 2016 will be available in December 2017.

² CHP: combined heat and power (compared to total on-site electricity generation).

CEPI Fuels Consumption in 2015¹



Sources of Water Intake in 2015¹



CEPI Key Figures on Energy and Environment¹

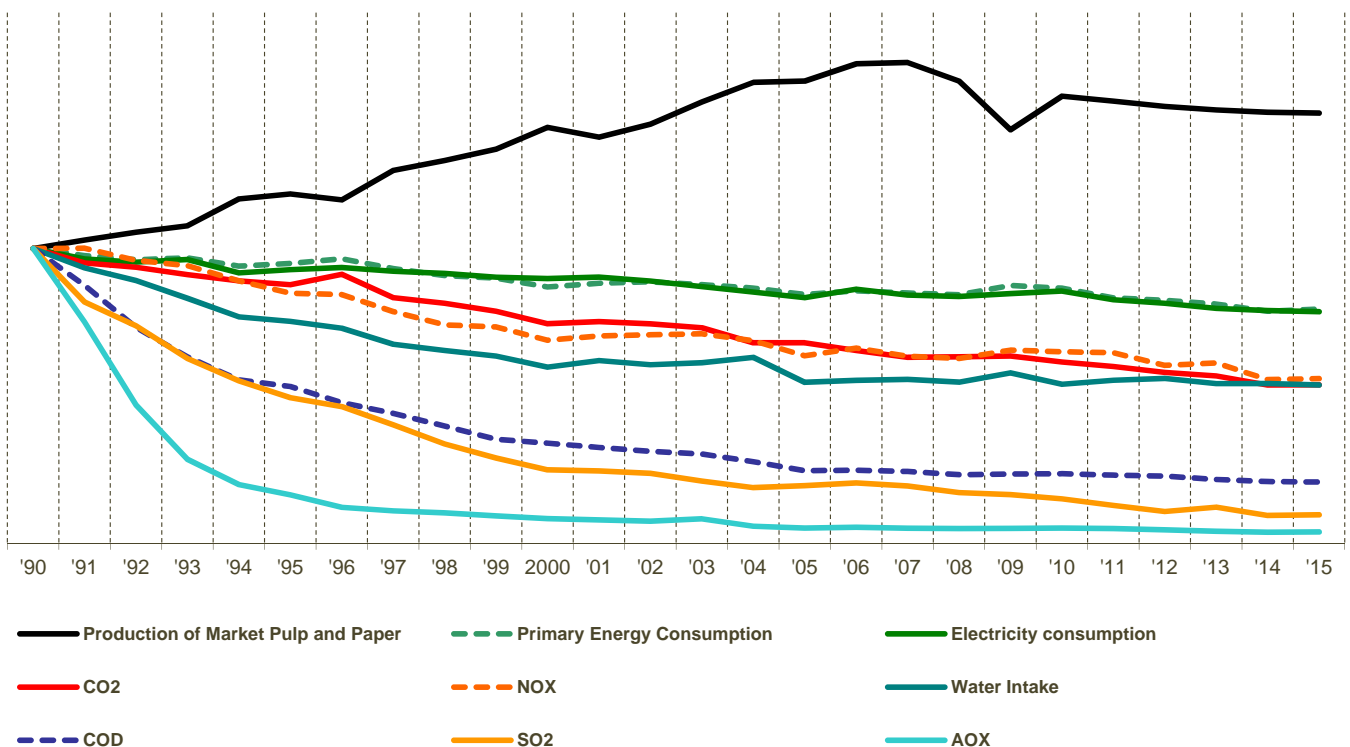
	1991	2000	2005	2010	2014	2015	% Change 2015/2014	% Change 2015/1991
Energy Consumption								
Production of Market Pulp and Paper & Board ('000 Tonnes)								
Specific Primary Energy Consumption (Tj/kt)								
Specific Electricity Consumption (MWh/kt)								
Direct CO₂ Emissions²								
Absolute (Mega Tonnes)								
Specific (kt CO ₂ / kt of product)								
Indirect CO₂ Emissions								
Absolute (Mega Tonnes)								
Specific (kt CO ₂ / kt of product)								
Water Specific Emissions								
COD (kg / T of product)								
AOX (kg / T of product)								
Air Specific Emissions								
SO ₂ (kg S / T of product)								
NOx (kg NOx / T of product)								

¹ Excluding Hungary, Romania & Slovenia - excluding Poland before 2003 - Figures for 2016 will be available in December 2017.

² Including all CEPI countries from 2005. See Key Figures for the 2016 data.

Evolution of Environmental Impacts of the CEPI Pulp and Paper Industry

Index of Specific Values (1990 = 100)



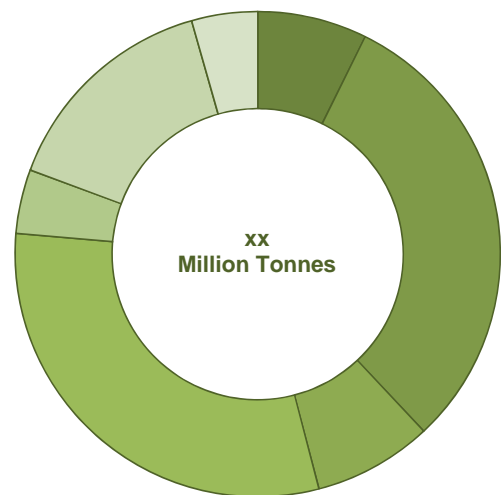
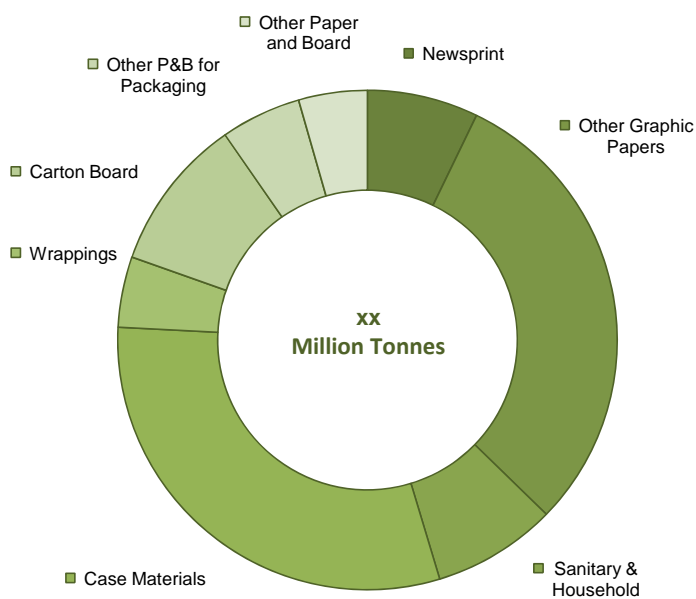
Water Emissions: COD (Chemical Oxygen Demand) - AOX
 Air Emissions: CO₂ - NO_x (Azote Oxydes) - SO₂

CEPI Paper & Board Production by Grade

'000 Tonnes	1991	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
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								

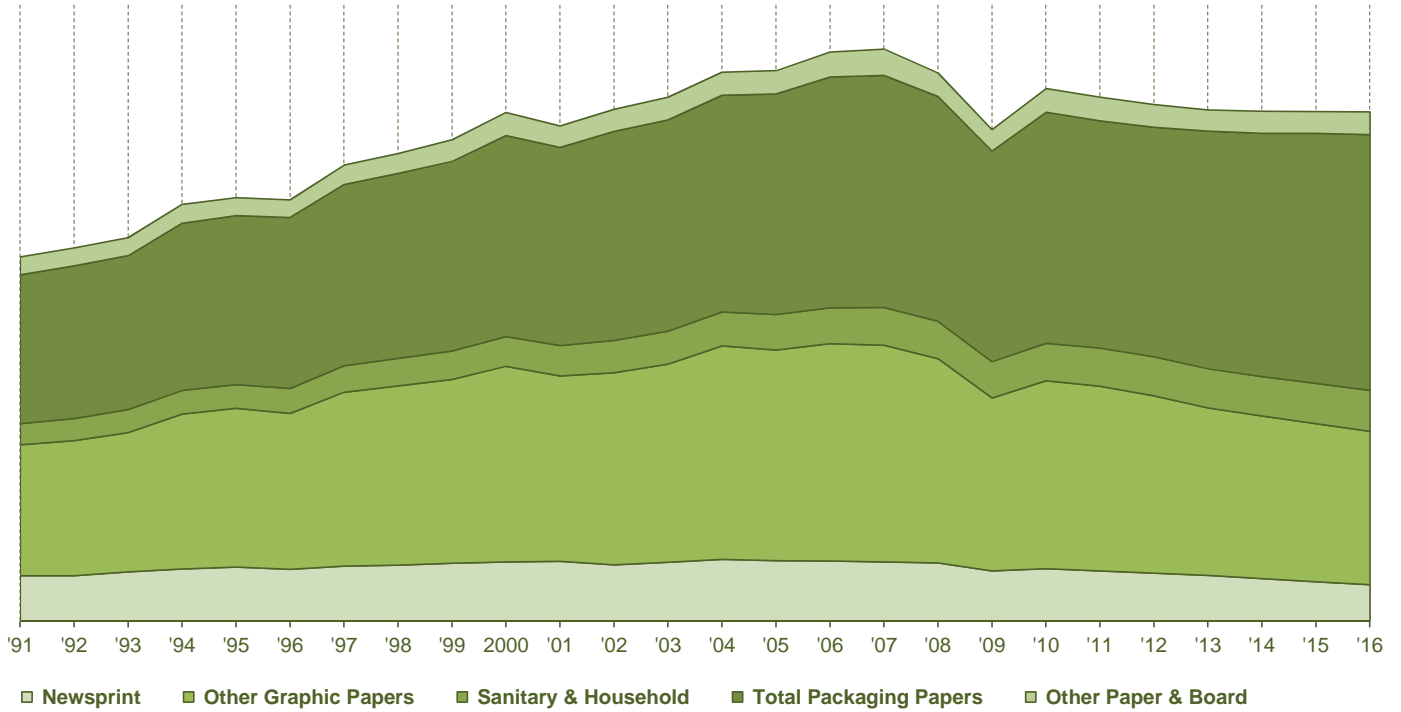
CEPI Paper & Board Production in 2016

CEPI Paper & Board Production Capacity in 2016



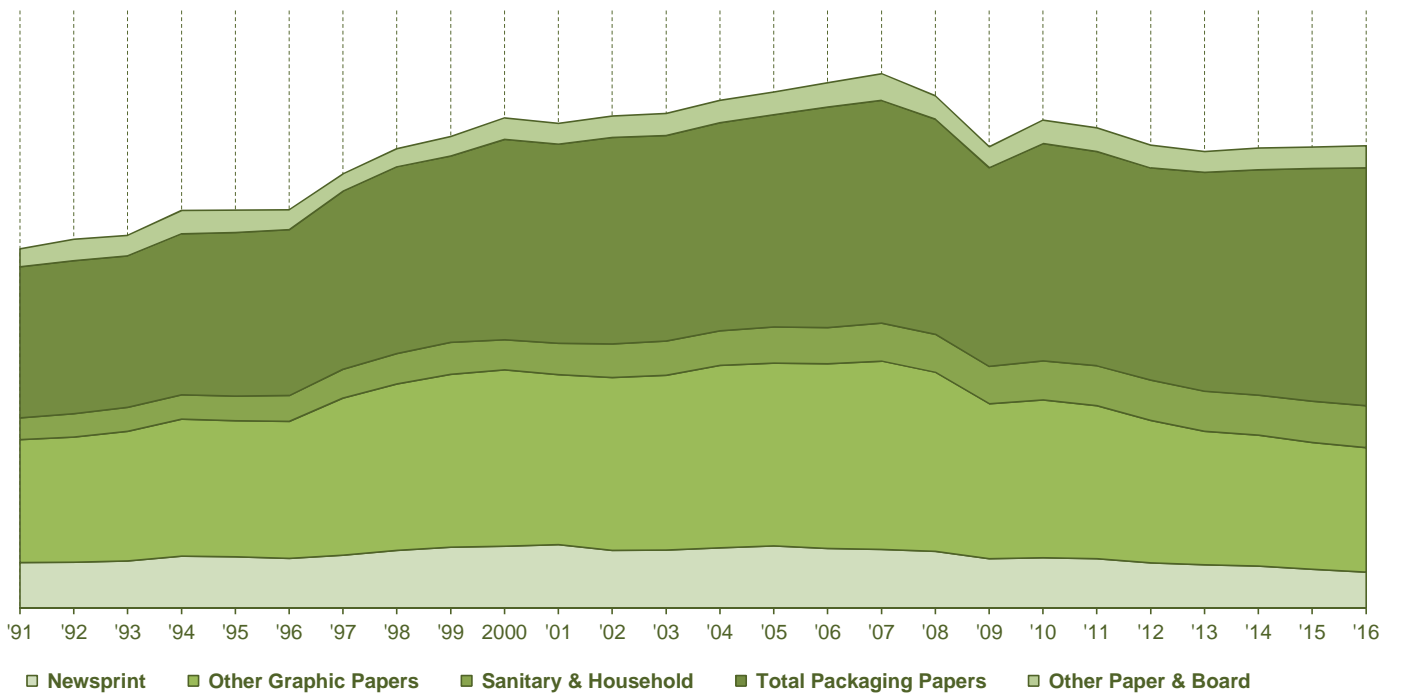
CEPI Paper & Board Production by Grade

Million Tonnes



CEPI Paper & Board Consumption by Grade

Million Tonnes



CEPI Paper & Board Deliveries and Consumption

'000 Tonnes	A CEPI Production			B Internal Deliveries within CEPI		
	2015	2016	% chg	2015	2016	% chg
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 Trade and Consumption of Paper & Board by Grade



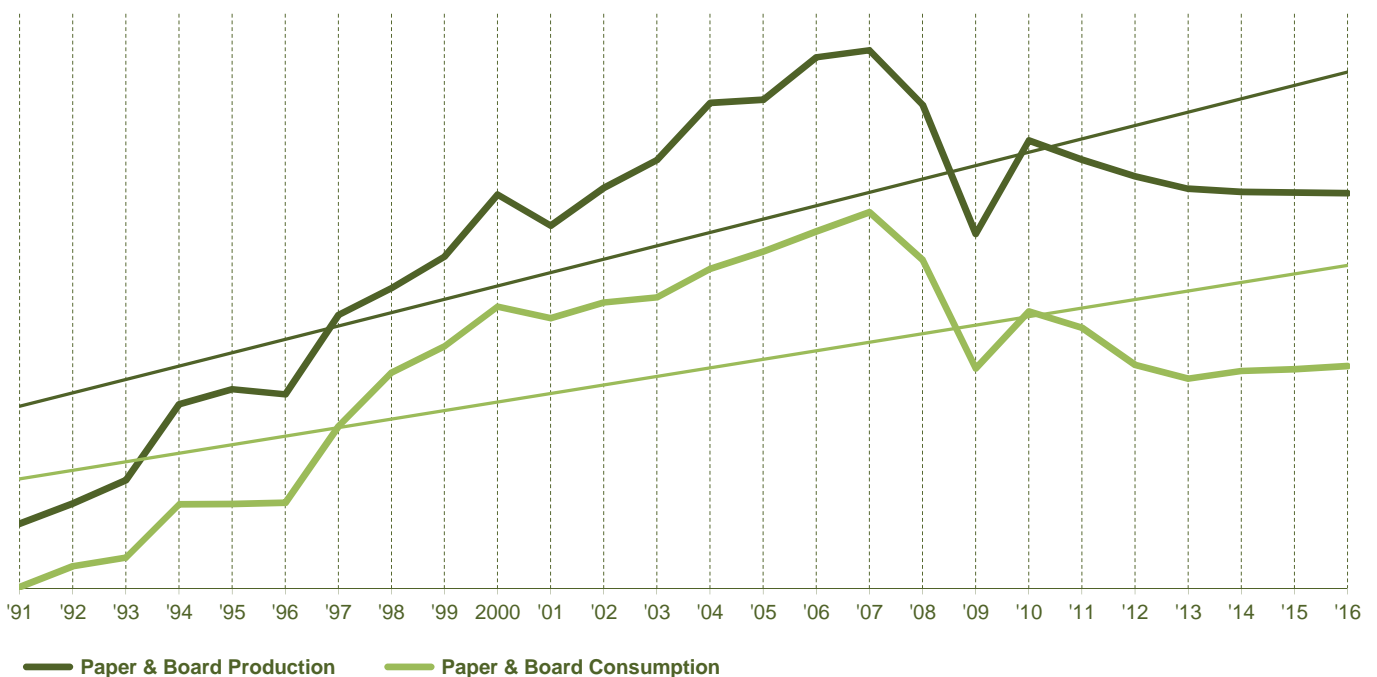
CEPI Paper & Board Deliveries and Consumption

'000 Tonnes	C			D			E = A - C + D			
	Exports*			Imports*			CEPI Consumption			
	2015	2016	% chg	2015	2016	% chg	2015	2016	% Share	% chg
Newsprint										
Uncoated Mechanical										
Coated Mechanical										
Uncoated Woodfree										
Coated Woodfree										
Other Graphic Papers										
Total Graphic Papers										
Sanitary and Household										
Case Materials										
Carton Board										
Wrappings										
Other P&B for Packaging										
Total Packaging Papers										
Other Paper & Board										
Total Paper & Board										

* Exports and Imports to and from countries outside CEPI

CEPI Paper & Board Production and Consumption

Million Tonnes





Number of Pulp Mills by Grade in 2016

	Mechanical	Semi-Chemical	Chemical Sulphite	Chemical Sulphate	Total Woodpulp	Other Pulp	TOTAL
Austria							
Belgium							
Czech Republic							
Finland							
France							
Germany							
Hungary							
Italy							
Netherlands							
Norway							
Poland							
Portugal							
Romania							
Slovakia							
Slovenia							
Spain							
Sweden							
United Kingdom							
Total CEPI							

Number of Pulp Mills by Volume in 2016

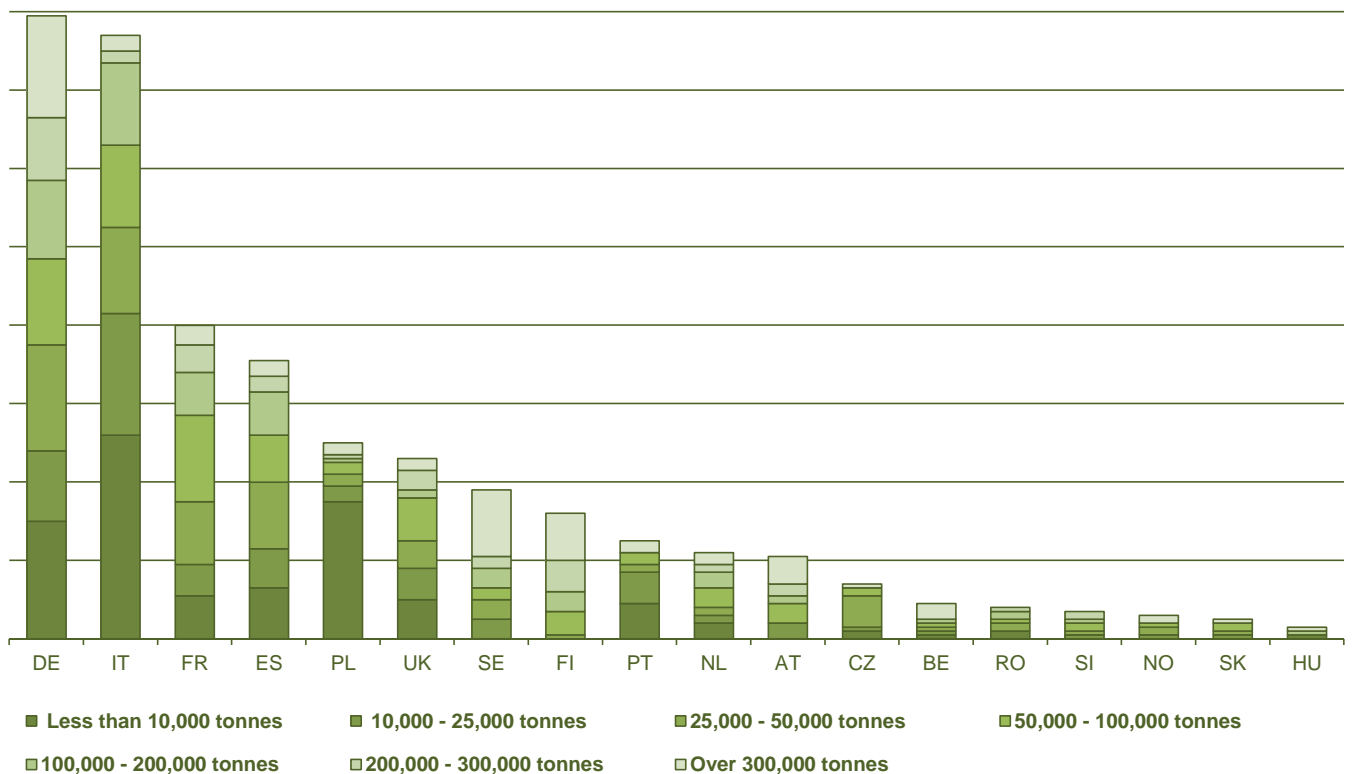
'000 Tonnes	Less than 25	25 - 50	50 - 100	100 - 200	200 - 300	Over 300	TOTAL
Austria							
Belgium							
Czech Republic							
Finland							
France							
Germany							
Hungary							
Italy							
Netherlands							
Norway							
Poland							
Portugal							
Romania							
Slovakia							
Slovenia							
Spain							
Sweden							
United Kingdom							
Total CEPI							

Number of Paper & Board Mills by Volume in 2016

'000 Tonnes	Less than 10	10 - 25	25 - 50	50 - 100	100 - 200	200 - 300	Over 300	TOTAL
Austria								
Belgium								
Czech Republic								
Finland								
France								
Germany								
Hungary								
Italy								
Netherlands								
Norway								
Poland								
Portugal								
Romania								
Slovakia								
Slovenia								
Spain								
Sweden								
United Kingdom								
Total CEPI								

Number of Paper & Board Mills by Country and by Volume in 2016

Number of Mills



Employment in the Pulp and Paper Industry

Persons	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Austria							
Belgium							
Czech Republic							
Finland							
France							
Germany							
Hungary							
Italy							
Netherlands							
Norway							
Poland							
Portugal							
Romania							
Slovakia							
Slovenia							
Spain							
Sweden							
United Kingdom							
Total CEPI							

n.a. : Figures that have been estimated by CEPI in order to keep consistency in "Total CEPI" numbers. These are included in Total CEPI.

Turnover in the Pulp and Paper Industry

Million Euros	2000	2005	2010	2015	2016	% Share of Total	% Change 2016/2015
Austria							
Belgium							
Czech Republic							
Finland							
France							
Germany							
Hungary							
Italy							
Netherlands							
Norway							
Poland							
Portugal							
Romania							
Slovakia							
Slovenia							
Spain							
Sweden							
United Kingdom							
Total CEPI							

n.a. : Figures that have been estimated by CEPI in order to keep consistency in "Total CEPI" numbers. These are included in Total CEPI.

Finland: 2016 figures are estimated by FFIF. As from 2013, 17 companies have been reclassified and therefore added to turnover data.

France: Turnover includes all pulp mills (integrated and market pulp producers)

Wood Consumption in 2016

'000 m ³	Roundwood			Chips			Total		% change 2016/2015
	HW	SW	Total	HW	SW	Total	HW	SW	
Austria									
Belgium									
Czech Republic									
Finland									
France									
Germany									
Hungary									
Norway									
Poland									
Portugal									
Romania									
Slovakia									
Spain									
Sweden									
United Kingdom									
Other CEPI Countries									
Total CEPI									

HW = Hardwood - SW=Softwood

n.a. : Figures can't be published due to transparency reasons.

... of which Domestic Wood Consumption

'000 m ³	Roundwood			Chips			Total		% change 2016/2015
	HW	SW	Total	HW	SW	Total	HW	SW	
Austria									
Belgium									
Czech Republic									
Finland									
France									
Germany									
Hungary									
Norway									
Poland									
Portugal									
Romania									
Slovakia									
Spain									
Sweden									
United Kingdom									
Other CEPI Countries									
Total CEPI									

HW = Hardwood - SW=Softwood

n.a. : Figures can't be published due to transparency reasons.

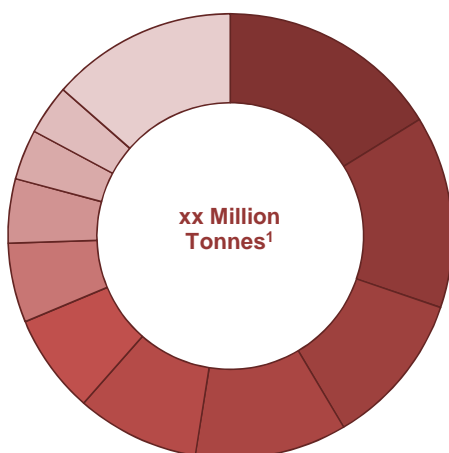
Wood Trade in 2016

'000 Tonnes	Exports			Imports		
	To Other CEPI Countries	To outside CEPI Countries	Total Exports	From Other CEPI Countries	From outside CEPI Countries	Total Imports
Austria						
Belgium						
Czech Republic						
Finland						
France						
Germany						
Hungary						
Italy						
Netherlands						
Norway*						
Poland						
Portugal						
Romania						
Slovakia						
Slovenia						
Spain						
Sweden						
United Kingdom						
Total CEPI						

*Norway: don't include imports and exports outside EU-28.

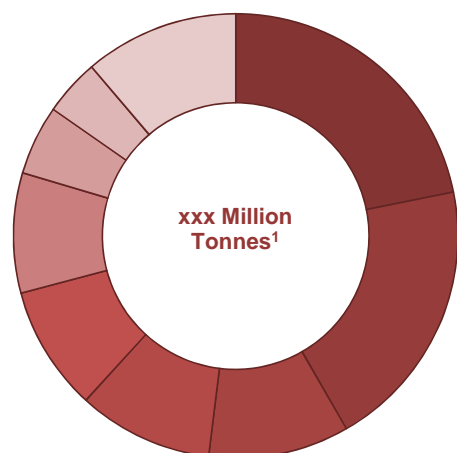
Source: Eurostat

Wood Exports by Country in 2016



Source: Eurostat

Wood Imports by Country in 2016



Source: Eurostat

*Norway: don't include exports and imports outside EU-28.

¹ Include exports and imports between CEPI countries



List of countries reported can change from a year to another following transparency issues.

Total Pulp - Production, Deliveries and Consumption in 2016

'000 Tonnes	Total Production	% change 2016/2015	Integrated Production	Market Production	Domestic Deliveries	Deliveries to Other CEPI Countries	Imports from Other CEPI Countries
Austria							
Finland							
Germany							
Italy							
Norway							
Poland							
Portugal							
Romania							
Spain							
Sweden							
Other CEPI Countries							
Total CEPI	37,232	2.7	23,676	13,556	3,017	8,896	9,285

France: domestic deliveries and total deliveries have been estimated by CEPI

Total Pulp - Production, Deliveries and Consumption in 2016

'000 Tonnes	Exports to Countries Outside CEPI	Imports from Countries Outside CEPI	Total Deliveries	Apparent Consumption	% change 2016/2015
Austria					
Finland					
Germany					
Italy					
Norway					
Poland					
Portugal					
Romania					
Spain					
Sweden					
Other CEPI Countries					
Total CEPI	3,816	8,109	38,131	41,525	1.0

France: domestic deliveries and total deliveries have been estimated by CEPI



List of countries reported can change from a year to another following transparency issues.

Mechanical & Semi-Chemical Pulp - Production, Deliveries and Consumption in 2016

'000 Tonnes	Total Production	Integrated Production	Market Production	Domestic Deliveries	Deliveries to Other CEPI Countries
Austria					
Finland					
Germany					
Portugal					
Romania					
Sweden					
Other CEPI Countries					
Total CEPI					

n.a.: Figures can't be published for transparency reasons and are included in Total CEPI figures.

'000 Tonnes	Imports from Other CEPI Countries	Exports to Countries Outside CEPI	Imports from Countries Outside CEPI	Total Deliveries	Apparent Consumption
Austria					
Finland					
Germany					
Portugal					
Romania					
Sweden					
Other CEPI Countries					
Total CEPI					



List of countries reported can change from a year to another following transparency issues.

Chemical Pulp - Production, Deliveries and Consumption in 2016

	Total Production	Integrated Production	Market Production	Domestic Deliveries	Deliveries to Other CEPI Countries
Austria					
Finland					
Germany					
Poland					
Portugal					
Romania					
Spain					
Sweden					
Other CEPI Countries					
Total CEPI					

n.a.: Figures can't be published for transparency reasons and are included in Total CEPI figures.

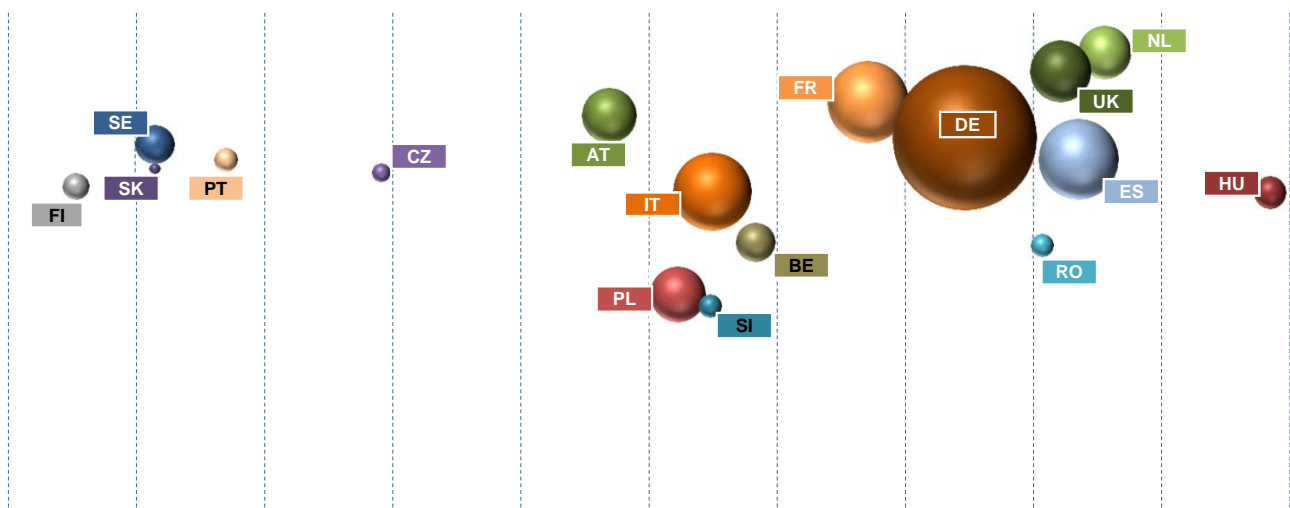
	Imports from Other CEPI Countries	Exports to Countries Outside CEPI	Imports from Countries Outside CEPI	Total Deliveries	Apparent Consumption
Austria					
Finland					
Germany					
Poland					
Portugal					
Romania					
Spain					
Sweden					
Other CEPI Countries					
Total CEPI					

Utilisation of Paper for Recycling by Grade in 2016

'000 Tonnes	Mixed Grades	Corrugated & Kraft	Newspapers & Magazines	Other Grades	Total	% change 2016/2015	Utilisation Rate %	Recycling Rate ⁴ %
Austria								
Belgium								
Czech Republic								
Finland								
France								
Germany								
Hungary ¹								
Italy								
Netherlands								
Norway ²								
Poland								
Portugal								
Romania								
Slovakia								
Slovenia								
Spain								
Sweden								
United Kingdom								
Total CEPI								
Europe ³ non-CEPI								
Total Europe³								

Recycling Rate⁴, Utilisation Rate and Utilisation of Paper for Recycling in 2016

Recycling Rate⁴



Utilisation Rate

Bubble size is proportional to Paper for Recycling Utilisation

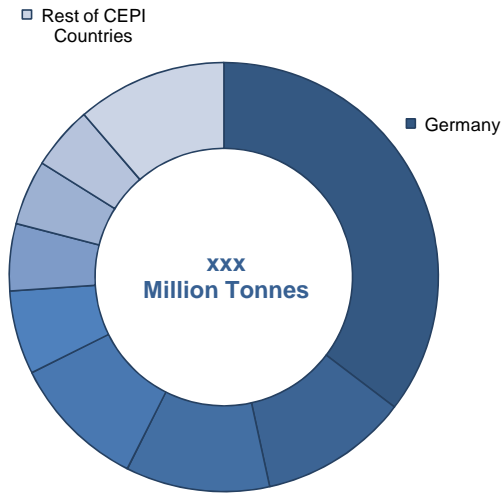
¹ Hungary: PFR utilisation by grade has been estimated by CEPI

² Norway: The recycling rate is above 100% due to a drop in paper & board consumption in 2016. It can also be explained by the recycling of packaging of imported goods and net import of converted paper products, not included in the apparent consumption of paper & board

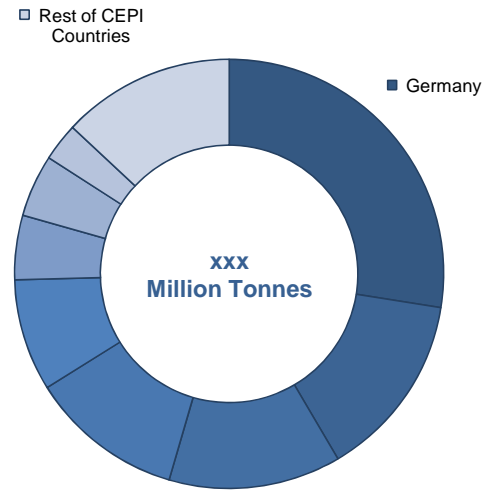
³ Total Europe means EU-28 countries plus Norway and Switzerland

⁴ Recycling Rate : "Utilisation of Paper for Recycling + Net Trade ", compared to Paper & Board Consumption

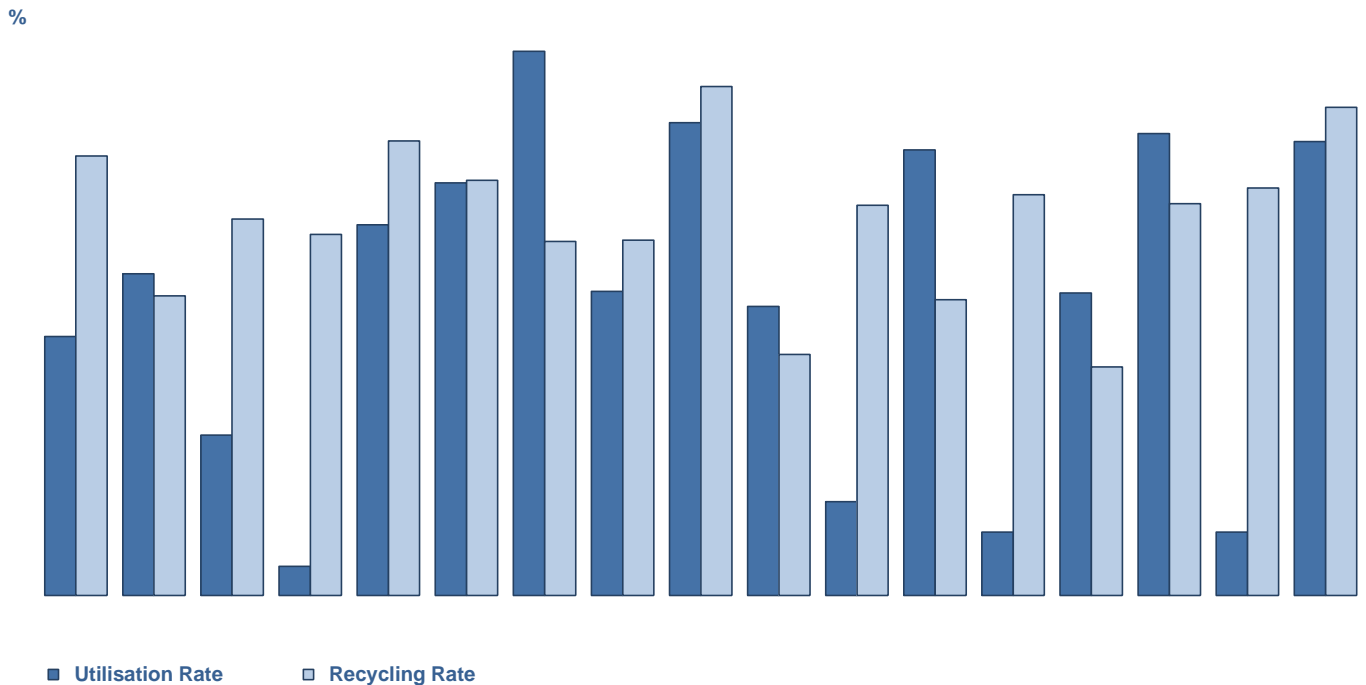
Utilisation of Paper for Recycling in 2016



Collection of Paper for Recycling in 2016



Rates of Paper for Recycling by Country in 2016



Recycling Rate : "Utilisation of Paper for Recycling + Net Trade " , compared to Paper & Board Consumption

Key Figures on Paper and Board and Paper for Recycling in 2016

'000 Tonnes	Paper and Board			Paper for Recycling					
	Production	Consumption ¹	Net Trade ²	Utilisation	% chg 16/15	Net Trade ²	% chg 16/15	Collection ³	% chg 16/15
Austria									
Belgium									
Czech Republic									
Finland									
France									
Germany									
Hungary									
Italy									
Netherlands									
Norway									
Poland									
Portugal									
Romania									
Slovakia									
Slovenia									
Spain									
Sweden									
United Kingdom									
Total CEPI									

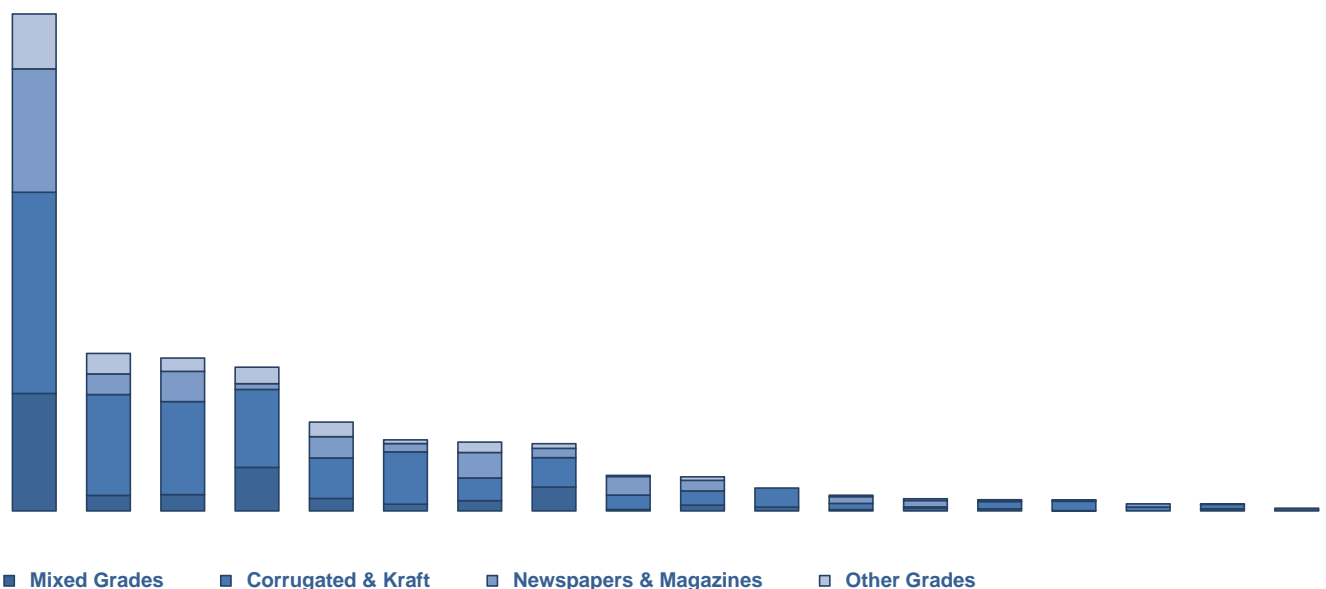
¹ Some of the paper & board consumption figures reported here have been adjusted by the National Associations (see notes page 84). These figures have been used to calculate the recycling rate of paper for recycling.

² Net Trade = Total Exports - Total Imports

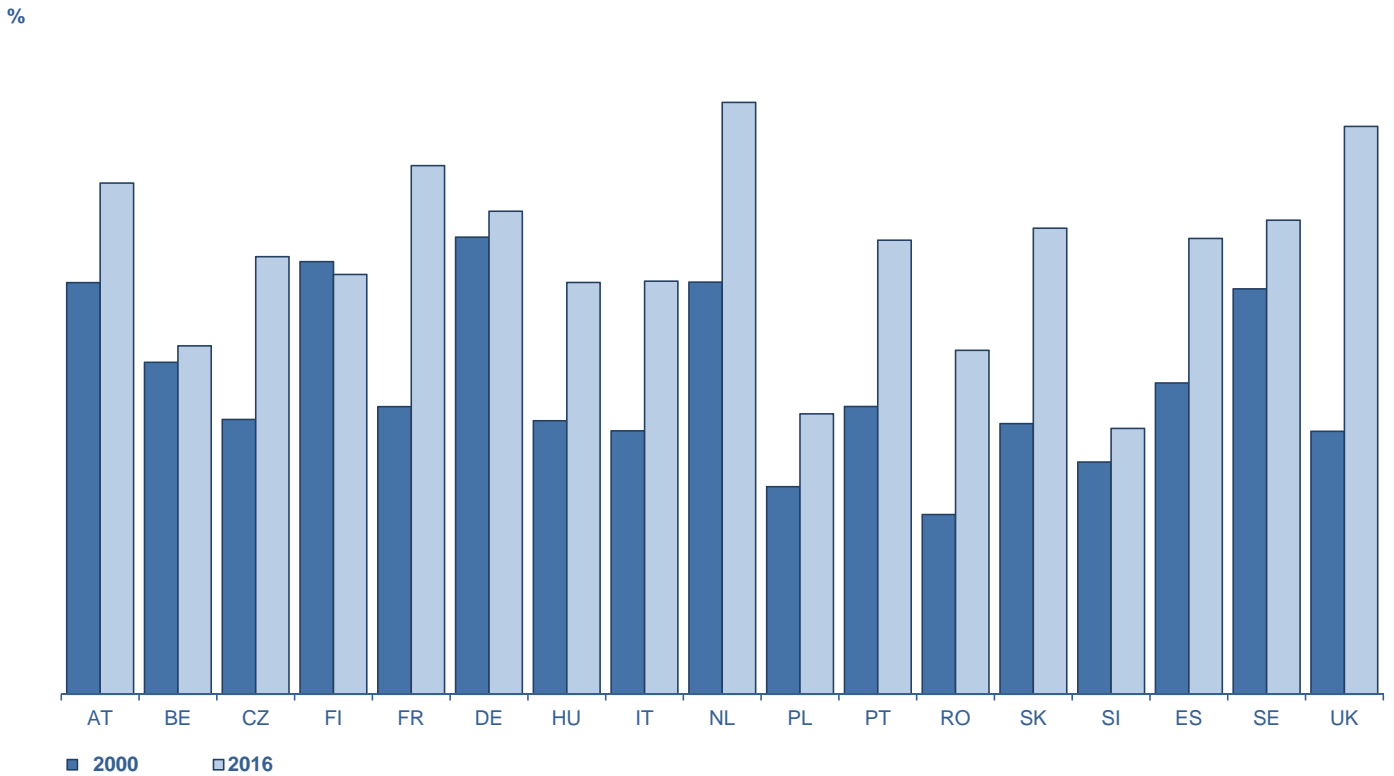
³ Some of the collection figures reported here have been adjusted by the National Associations (see notes page84).

Utilisation of Paper for Recycling by Class and by Country in 2016

Utilisation of Paper for Recycling (Million Tonnes)

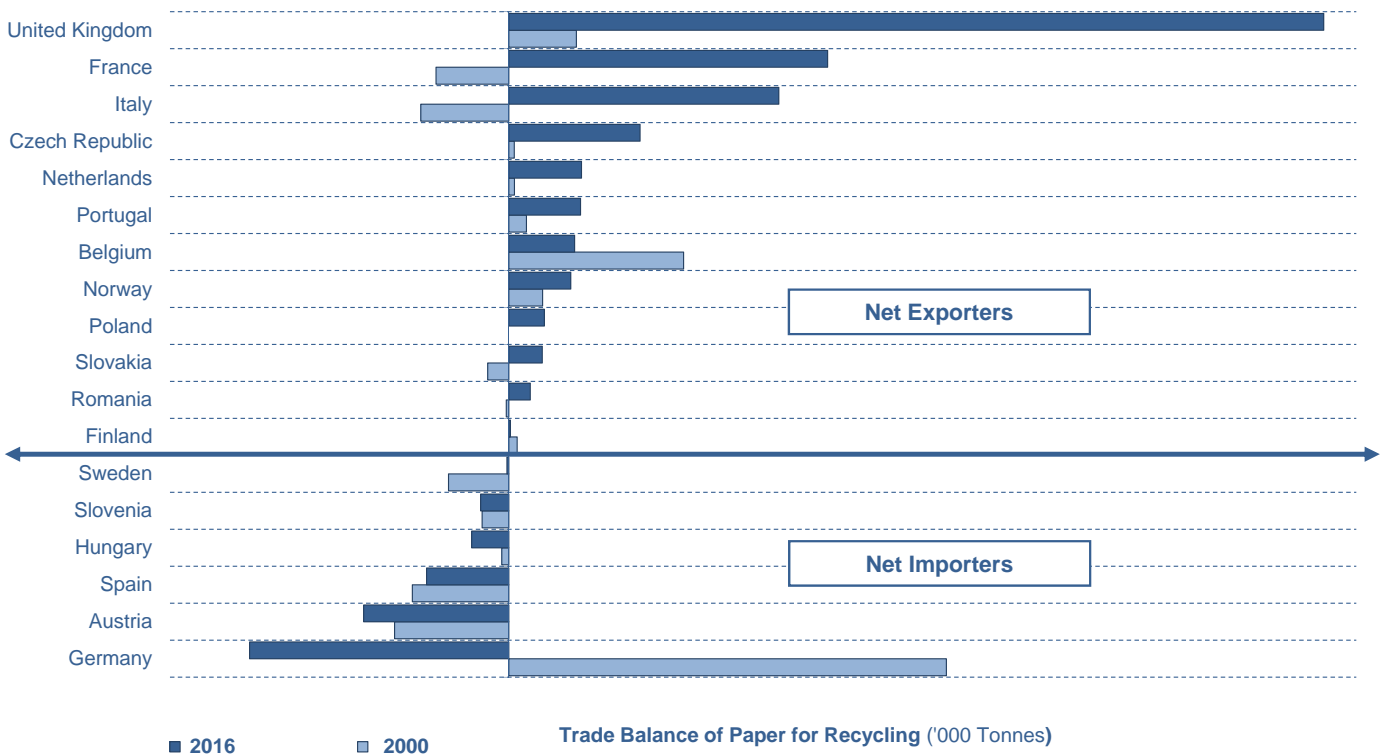


Evolution of the Recycling Rate¹ by Country in 2000 and 2016



¹ Recycling Rate = (Utilisation of Paper for Recycling + Net Trade) / Paper & Board Consumption

Net Trade of Paper for Recycling by Country in 2000 and 2016



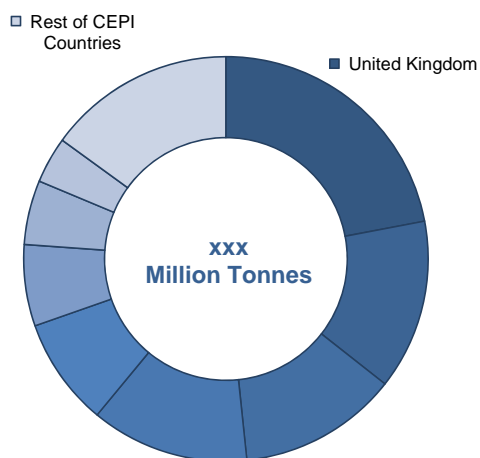
Utilisation, Trade and Collection of Paper for Recycling in 2016

'000 Tonnes	A Utilisation	B Exports to Other CEPI Countries	C Exports to Countries outside CEPI	D Imports from Other CEPI Countries	E Imports from Countries outside CEPI	A+B+C-D-E Collection ¹
Austria						
Belgium						
Czech Republic						
Finland						
France						
Germany						
Hungary						
Italy						
Netherlands						
Norway						
Poland						
Portugal						
Romania						
Slovakia						
Slovenia						
Spain						
Sweden						
United Kingdom						
Total CEPI						

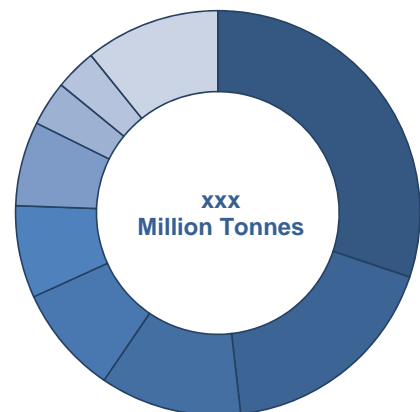
¹ Collection of Paper for Recycling = Utilisation + Exports - Imports

Some of the collection figures reported here have been adjusted by the National Associations (see notes page 84).

Exports² of Paper for Recycling in 2016



Imports² of Paper for Recycling in 2016



² Include exports and imports within CEPI countries

Utilisation of Non-Fibrous Materials in 2016

'000 Tonnes	Clays ¹	Calcium Carbonates ¹	Starches ²	Others	TOTAL
Austria					
Belgium					
Czech Republic					
Finland					
France					
Germany					
Hungary					
Italy					
Netherlands					
Norway					
Poland					
Portugal					
Romania					
Slovakia					
Slovenia					
Spain					
Sweden					
United Kingdom					
Total CEPI					

n.a. : Figures that have been estimated by CEPI in order to keep consistency in "Total CEPI" numbers. These are included in Total CEPI.

Finland: total includes only filling and coating pigments

¹ Total (coating and filler) - ² Total (native and modified)

Raw Materials Consumption in 2016

'000 Tonnes	Woodpulp	Pulp Other than Wood	Paper for Recycling	Non-Fibrous Materials	TOTAL
Austria					
Belgium					
Czech Republic					
Finland					
France					
Germany					
Hungary					
Italy					
Netherlands					
Norway					
Poland					
Portugal					
Romania					
Slovakia					
Slovenia					
Spain					
Sweden					
United Kingdom					
Total CEPI					

n.a. : Figures that have been estimated by CEPI in order to keep consistency in "Total CEPI" numbers. These are included in Total CEPI.

Key Figures on Energy and Environment in 2015¹

	Total Fuels Consumption (TJ)	% Biomass Utilisation of Total Fuels Consumption	Total Electricity Consumption (GWh)	% of Electricity produced through CHP ³	Absolute CO2 Emissions ⁴ (kt CO2)	Specific CO2 Emissions (kt CO2 / kt)
Austria						
Belgium						
Czech Republic						
Finland						
France						
Germany						
Italy						
Netherlands						
Norway						
Poland						
Portugal						
Slovakia						
Spain						
Sweden						
United Kingdom						
Total CEPI²	1,140,230	57.7	99,937	96.1	31,931	0.31

¹ Figures for 2016 will be available in December 2017

² Excluding Hungary, Romania & Slovenia, except for CO2 Emissions

³ Compared to total on-site electricity generation.

⁴ From Fuels.  Source: European Environment Agency (European Union Emissions Trading System (EU ETS) data from EUTL).

Paper & Board Production by Grade in 2016

'000 Tonnes	Total Graphic	Sanitary & Household	Total Packaging	Other Paper & Board	Total Paper & Board	% change 2016/2015
Austria						
Belgium						
Czech Republic						
Finland						
France						
Germany						
Hungary						
Italy						
Netherlands						
Norway						
Poland						
Portugal						
Romania						
Slovakia						
Slovenia						
Spain						
Sweden						
United Kingdom						
Other CEPI Countries						
Total CEPI						



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

n.a.: Due to transparency reasons, the figures cannot be published and are included in "Other CEPI Countries"

'000 Tonnes	Newsprint	Uncoated Papers	Coated Papers	Case Materials	Wrappings	Carton Board & Other P&B for Packaging
Austria						
Belgium						
Czech Republic						
Finland						
France						
Germany						
Hungary						
Italy						
Netherlands						
Norway						
Poland						
Portugal						
Romania						
Slovakia						
Slovenia						
Spain						
Sweden						
United Kingdom						
Other CEPI Countries						
Total CEPI						

n.a.: Due to transparency reasons, the figures cannot be published and are included in "Other CEPI Countries"

Total Paper & Board - Deliveries and Consumption in 2016

'000 Tonnes	Domestic Deliveries	Deliveries to Other CEPI Countries	Exports to Countries Outside CEPI	Total Deliveries	Imports from Other CEPI Countries	Imports from Countries outside CEPI	Apparent Consumption ¹
Austria							
Belgium							
Czech Republic							
Finland							
France							
Germany							
Hungary							
Italy							
Netherlands							
Norway							
Poland							
Portugal							
Romania							
Slovakia							
Slovenia							
Spain							
Sweden							
United Kingdom							
Total CEPI²							

Adjusted Consumption: Belgium: 2,946 Thousand Tonnes Finland: 858 Thousand Tonnes
 (See notes page) United Kingdom: 8,860 Thousand Tonnes Sweden: 1,669 Thousand Tonnes

France: Domestic Deliveries and total deliveries have been estimated by CEPI.

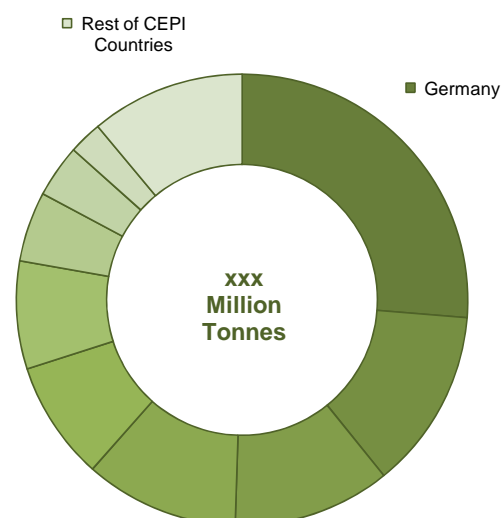
¹ Paper & Board Apparent Consumption = Production + Imports - Exports

² CEPI Apparent Consumption = Production + Imports from outside CEPI - Exports to outside CEPI

Per Capita Consumption in 2016³

Kgs	Population ⁴ ('000 persons)	Per Capita Consumption
Austria		
Belgium		
Czech Republic		
Finland		
France		
Germany		
Hungary		
Italy		
Netherlands		
Norway		
Poland		
Portugal		
Romania		
Slovakia		
Slovenia		
Spain		
Sweden		
United Kingdom		
Total CEPI		

Paper & Board Consumption in 2016



³ See Definition on page 92

⁴ Population on 1st January 2016



List of countries reported can change from a year to another following transparency issues.

Total Graphic Papers - Deliveries and Consumption in 2016

'000 Tonnes	Domestic Deliveries	Deliveries to Other CEPI Countries	Exports to Countries Outside CEPI	Total Deliveries	Imports from Other CEPI Countries	Imports from Countries outside CEPI	Apparent Consumption
Austria							
Belgium							
Czech Republic							
Finland							
France							
Germany							
Italy							
Netherlands							
Poland							
Portugal							
Romania							
Spain							
Sweden							
United Kingdom							
Other CEPI Countries							
Total CEPI	8,396	19,407	8,796	36,599	19,615	1,735	-7,061

France: Domestic Deliveries and total deliveries have been estimated by CEPI.

Total Packaging Papers - Deliveries and Consumption in 2016

'000 Tonnes	Domestic Deliveries	Deliveries to Other CEPI Countries	Exports to Countries Outside CEPI	Total Deliveries	Imports from Other CEPI Countries	Imports from Countries outside CEPI	Apparent Consumption
Austria							
Czech Republic							
Finland							
France							
Germany							
Italy							
Netherlands							
Poland							
Portugal							
Romania							
Spain							
Sweden							
United Kingdom							
Other CEPI Countries							
Total CEPI							

France: Domestic Deliveries and total deliveries have been estimated by CEPI.



List of countries reported can change from a year to another following transparency issues.

Newsprint - Deliveries and Consumption in 2016

'000 Tonnes	Domestic Deliveries	Deliveries to Other CEPI Countries	Exports to Countries Outside CEPI	Total Deliveries	Imports from Other CEPI Countries	Imports from Countries outside CEPI	Apparent Consumption

Uncoated Mechanical - Deliveries and Consumption in 2016

'000 Tonnes	Domestic Deliveries	Deliveries to Other CEPI Countries	Exports to Countries Outside CEPI	Total Deliveries	Imports from Other CEPI Countries	Imports from Countries outside CEPI	Apparent Consumption

Uncoated Woodfree - Deliveries and Consumption in 2016

'000 Tonnes	Domestic Deliveries	Deliveries to Other CEPI Countries	Exports to Countries Outside CEPI	Total Deliveries	Imports from Other CEPI Countries	Imports from Countries outside CEPI	Apparent Consumption



List of countries reported can change from a year to another following transparency issues.

Coated Mechanical - Deliveries and Consumption in 2016

'000 Tonnes	Domestic Deliveries	Deliveries to Other CEPI Countries	Exports to Countries Outside CEPI	Total Deliveries	Imports from Other CEPI Countries	Imports from Countries outside CEPI	Apparent Consumption
Austria							
Germany							
Italy							
Netherlands							
Portugal							
Romania							
Spain							
Other CEPI Countries							
Total CEPI							

Coated Woodfree - Deliveries and Consumption in 2016

'000 Tonnes	Domestic Deliveries	Deliveries to Other CEPI Countries	Exports to Countries Outside CEPI	Total Deliveries	Imports from Other CEPI Countries	Imports from Countries outside CEPI	Apparent Consumption
Austria							
Germany							
Italy							
Poland							
Portugal							
Romania							
Other CEPI Countries							
Total CEPI							

Sanitary and Household - Deliveries and Consumption in 2016

'000 Tonnes	Domestic Deliveries	Deliveries to Other CEPI Countries	Exports to Countries Outside CEPI	Total Deliveries	Imports from Other CEPI Countries	Imports from Countries outside CEPI	Apparent Consumption
France							
Germany							
Italy							
Netherlands							
Poland							
Portugal							
Romania							
Slovakia							
Spain							
United Kingdom							
Other CEPI Countries							
Total CEPI							



List of countries reported can change from a year to another following transparency issues.

Case Materials - Deliveries and Consumption in 2016

'000 Tonnes	Domestic Deliveries	Deliveries to Other CEPI Countries	Exports to Countries Outside CEPI	Total Deliveries	Imports from Other CEPI Countries	Imports from Countries outside CEPI	Apparent Consumption
Austria							
France							
Germany							
Italy							
Netherlands							
Poland							
Romania							
Spain							
United Kingdom							
Other CEPI Countries							
Total CEPI							

France: Domestic Deliveries and total deliveries have been estimated by CEPI.

Wrappings - Deliveries and Consumption in 2016

'000 Tonnes	Domestic Deliveries	Deliveries to Other CEPI Countries	Exports to Countries Outside CEPI	Total Deliveries	Imports from Other CEPI Countries	Imports from Countries outside CEPI	Apparent Consumption
Austria							
Czech Republic							
France							
Germany							
Italy							
Poland							
Other CEPI Countries							
Total CEPI							

France: Domestic Deliveries and total deliveries have been estimated by CEPI.



List of countries reported can change from a year to another following transparency issues.

Carton Board & Other Paper & Board for Packaging - Deliveries and Consumption in 2016

'000 Tonnes	Domestic Deliveries	Deliveries to Other CEPI Countries	Exports to Countries Outside CEPI	Total Deliveries	Imports from Other CEPI Countries	Imports from Countries outside CEPI	Apparent Consumption
Austria							
France							
Germany							
Italy							
Poland							
Other CEPI Countries							
Total CEPI							

France: Domestic Deliveries and total deliveries have been estimated by CEPI.

Other Paper & Board - Deliveries and Consumption in 2016

'000 Tonnes	Domestic Deliveries	Deliveries to Other CEPI Countries	Exports to Countries Outside CEPI	Total Deliveries	Imports from Other CEPI Countries	Imports from Countries outside CEPI	Apparent Consumption
France							
Germany							
Italy							
Netherlands							
Poland							
Portugal							
Romania							
Spain							
United Kingdom							
Other CEPI Countries							
Total CEPI							

France: Domestic Deliveries and total deliveries have been estimated by CEPI.

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 2016 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 (ISO Standard 3166)

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)

Gross Domestic Product at Market Prices

GDP at market prices is the sum of the gross values added of all resident producers at market prices, plus taxes less subsidies on imports. (Source: Eurostat)

Industrial Production

As specified in the Regulation on short-term statistics (STS-R), and in line with traditional practice in business statistics, the production index should show the evolution of value added at factor cost, at constant prices. Value added at factor cost can be calculated from turnover (excluding VAT), 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 and taxes linked to production (Source: Eurostat)

Private Final Consumption Expenditure

Final consumption expenditure consists of expenditure incurred by resident institutional units on goods or services that are used for the direct satisfaction of individual needs or wants or the collective needs of members of the community. The final consumption expenditure may take place on the domestic territory or abroad (ESA 1995, 3.75). Private final consumption expenditure includes households' and Non Profit Institutions Serving Households (NPISH's) final consumption expenditure. Data are calculated as chain-linked volumes (i.e. data at previous year's prices, linked over the years via appropriate growth rates). Growth rates with respect to the previous quarter (Q/Q-1) are calculated from calendar and seasonally adjusted figures while growth rates with respect to the same quarter of the previous year (Q/Q-4) are calculated from raw data. (Source: Eurostat)

Retail Trade Turnover

The Retail Trade Index is a business cycle indicator which shows the monthly activity of the retail sector in value and volume. It is a short-term indicator for final domestic demand. It should be noted that the volume of sales is different from the volume of (retail) trade services. The latter takes account of changes in the quality of the trade service supplied. As such the volume of sales is conceptually different from the index of production which takes account of quality changes. Data are compiled according to the Statistical classification of economic activities in the European Community, (NACE Rev.2, Eurostat). Turnover for retail trade are compiled as a "fixed base year Laspeyres type volume-index". The current base year is 2005 (Index 2005=100). The index is presented in calendar and seasonally adjusted form. Growth rates with respect to the previous month (M/M-1) are calculated from calendar and seasonally adjusted figures while growth rates with respect to the same month of the previous year (M/M-12) are calculated from calendar adjusted figures. (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)

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).

Group or Corporation

Association of companies located in one or several EU countries and bound together by legal and/or financial links. A group of companies can have more than one decision-making centre, especially for policy on production, sales and profit. It may centralise certain aspects of financial management and taxation. It constitutes an economic entity which is empowered to make choices, particularly concerning the units which it comprises.

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 505 (Group or Corporation).

Number of Mills (Pulp and Paper)

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

Practical maximum capacity is the tonnage of paper, paperboard or pulp of normal commercial quality that could be produced per 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 lack of power, etc., which cause decreases in actual production, but not in production capacity. Capacity of paper machines that produce more than one grade is apportioned in accordance with actual production patterns or plans for future operation.

Capacity is reported in metric tons of net finished paper and paperboard, and air-dry (10 percent moisture content) pulp.
(Source: FAO)

Average size of mills (Pulp or Paper)

Total production divided by the total number of mills.

Operating Rate (Pulp or Paper)

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. Employment figures reported in CEPI annual statistics don't include employees in converting operations. However, employees of integrated converting operations (within the producing mill) and those of headquarters are included.

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)

Wood

Wood Consumption

The wood used for pulp and paper manufacturing is mainly constituted of the following assortments: pulpwood (roundwood other than sawlogs, from silvicultural measures such as thinning or final felling), chips and residues from sawmills. The utilisation of sawlogs is very limited and sawdust volumes consumed are negligible. The relative shares of softwood and hardwood used depend on the country considered and the pulp and paper grades produced. The main softwood species used are pine and spruce. The main hardwood species used are birch, eucalyptus, beech and aspen. Oak is hardly used.

The wood consumption figures reported by the pulp and paper companies and included in the CEPI statistics are the volumes of wood at the mill gates and come from domestic supply or imports.

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. However, market pulp production and deliveries are shown separately.

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

Pulp for sale in the open market and does not include pulp used in own plant or shipped to wholly owned or associated companies within the country. All pulp moving outside the producing country is considered to be market pulp.

Pulp Internal Deliveries

Integrated Production + Domestic Deliveries + Internal Trade within CEPI

Pulp Total Deliveries

Integrated Production + Domestic Deliveries + Exports

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.

The main grades are:

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.

Pulp

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

Non-cellulose items added to the paper stock during the papermaking process in order to impart special characteristics to the final product, such as rosins, dyes, fillers, chemicals, starches, additives, brighteners, etc. Non-fibrous materials include functional chemicals and coating chemicals. 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

Total Primary Energy Consumption

Use of the primary energy source that has not been subjected to any conversion or transformation process. It is the use of energy contained in raw fuels, and other forms of energy received as input to a system. Primary energy can be non-renewable or renewable.

Specific Primary Energy Consumption

Primary energy use calculated per quantity of the final output (paper & board + market pulp).

Energy

Specific CO2 Emissions

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

Total Electricity Produced on Site

Electrical energy produced on the mill site from different primary sources such as: hidro power, steam boilers, CHPs, recovery boilers, etc.

Purchased Electricity

Electrical energy bought from the public grid and used for production on site

Sold Electricity

Net electrical energy produced on side and send (sold) to the public grid network

CHP – Combined heat and power installation

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

Environment

Specific Emissions to Water

Emissions calculated per quantity of the final output (paper & board + market pulp).

BOD – Biochemical Oxygen Demand

Indicator of the oxygenation status of water bodies. BOD is the amount of oxygen used for biochemical oxidation by a unit volume of water at a given temperature and for a given time, i.e. the amount of dissolved oxygen necessary to satisfy metabolic requirements of microorganisms which utilize the waste as food in water.

COD – Chemical Oxygen Demand

Quantity of oxygen used in biological and non-biological oxidation of materials in water. COD is a measure of water quality important in assessing the strength of an industrial waste where the liquid waste may be toxic or resistant to biological oxidation.

AOX

Organic halogens subject to absorption is a measure of the amount of chlorine (and other halogens) combined with organic compounds.

Water intake (million cubic meters per year)

The amount of freshwater abstracted by source and any other water received at the mill and the amount of water content in purchased materials and products for the purpose of pulp and paper production.

Water outflow (million cubic meters per year)

The amount of wastewater discharged from mill site to final destination.

Water consumption (million cubic meters per year)

Water lost during manufacturing plus water in sold products and water in waste – i.e. “the portion of the water that is removed from a water source that is not immediately returned to the water source”.

Specific Emissions to Air

Emissions calculated per quantity of the final output (paper & board + market pulp).

NOx

Nitrogen oxides including nitric oxide (NO) and nitrogen dioxide (NO2)

SO₂

Sulphur dioxide

Paper for Recycling

To clarify the intended use of collected paper for recycling in paper mills, it has been decided to substitute the term "recovered paper" by "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 used paper in a production process into new paper and board.
See also the Waste Directive 2008/98/EC

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 & board consumption.

Utilisation by Sector

Total utilisation of paper for recycling in a paper & board production sector as percentage of the overall paper for recycling utilisation. The paper & board production sectors are newsprint, other graphic grades, case materials, cartonboard, wrapping, other paper and board for packaging and special papers.

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

Paper & Board Internal Deliveries

Domestic Deliveries + Internal Trade within 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 kraits, 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 and 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

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

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

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

CEPI uses the following Geonomenclature for its statistics

Europe

CEPI Countries

Austria, Belgium, Czech Republic, Finland, France, Germany, Hungary, Italy, The Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom.

Other Europe than CEPI Countries

Albania, Andorra, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Denmark, Estonia, Faeroe Islands, Gibraltar, Greece, Iceland, Ireland, Isle of Man, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Moldova (Republic of), Monaco, Montenegro, Russian Federation, San Marino, Serbia, Svalbard & Jan Mayen Islands, Switzerland, Turkey, Ukraine, Vatican City State.

EU-28 Countries

Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, The Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom.

Africa

Algeria, Angola, Benin, Botswana, British Indian Ocean Territory, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Ceuta, Chad, Comoros, Congo, Congo (Democratic Republic), Cote d'Ivoire, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libyan Arab Jamahiriya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mayotte, Melilla, Morocco, Mozambique, Namibia, Niger, Nigeria, Reunion, Rwanda, Saint Helena, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Tunisia, Uganda, Western Sahara, Zambia, Zimbabwe.

Asia

Afghanistan, Armenia, Azerbaijan, Bahrain, Bangladesh, Bhutan, Brunei, Darussalam, Cambodia, China, Georgia, Hong Kong, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kazakhstan, Korea (Democratic People's Republic of), Korea (Republic of(S)), Kuwait, Kyrgyzstan, Lao People's Democratic Republic, Lebanon, Macao, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Oman, Pakistan, Philippines, Qatar, Saudi Arabia, Singapore, Sri Lanka, Syrian Arab Republic, Taiwan, Tajikistan, Thailand, Timor Leste, Turkmenistan, United Arab Emirates, Uzbekistan, Viet Nam, West bank /Gaza, Yemen.

Latin America

Anguilla, Antigua & Barbuda, Argentina, Aruba, Bahamas, Barbados, Belize, Bermuda, Bolivia, Brazil, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Falkland Islands (Malvinas), French Guiana, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Mexico, Montserrat, Netherlands Antilles, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent & Grenadines, Sint-Maarten (France), Suriname, Trinidad & Tobago, Turks & Caicos Islands, Uruguay, Venezuela, Virgin Islands (British), Virgin Islands (U.S.).

North America

Canada, Greenland, Saint Pierre and Miquelon, United States.

Rest of the World

American Samoa, Antarctica, Australia, Bouvet Island, Christmas Island, Cocos (Keeling) Islands, Cook Islands, Fiji, French Polynesia, French Southern Territories, Guam, Hawaiian Islands (U.S.), Heard & McDonald Islands, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Caledonia, New Zealand, Niue, Norfolk Island, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn, Samoa, Salomon Islands, South Georgia & South Sandwich Islands, Tokelau, Tonga, Tuvalu, US Minor Outlying Islands, Vanuatu, Wallis & Futuna Islands.

