



MONITORING REPORT 2018

European Declaration on Paper Recycling 2016-2020



Table of Contents

1.	European Paper Recycling Progressing but Reduced Overseas Exports cause Slight Decline in Overall Recycling Rate	2
2.	Recycling Rate 2018: 71.6%	3
3.	Progress in Qualitative Targets	4
4.	IMPACTPapeRec final conference	6
5.	Data Quality: 2018 data	7

EUROPEAN PAPER RECYCLING PROGRESSING BUT REDUCED OVERSEAS EXPORTS CAUSE SLIGHT DECLINE IN OVERALL RECYCLING RATE

1

Since 2000, the European paper value chain has been committed to the two-fold aim of enhancing recycling and increasing efforts to remove obstacles hampering paper recycling in Europe. In 2016, the signatories of the new European Declaration on Paper Recycling declared their commitment to reach a 74% paper recycling rate by 2020.

In 2018, 71.6% of all paper consumed in Europe was recycled. The collection of paper for recycling has decreased by 1.6% compared to 2017 and reached 58.7 million tonnes. Paper consumption has slightly decreased compared to 2017 and reached 82.0 million tonnes. The recycling rate therefore decreased from 72.4% in 2017 to 71.6% in 2018. Compared to the base year of the Declaration (2015), the amount of paper collected and recycled has decreased by 0.4 million tonnes.

In Europe, the paper industry has increased its utilisation of paper for recycling. However, the recycling rate has decreased mainly due to a disruptive decision by the Chinese government to reduce its dependence on secondary raw materials by 2020. China has also introduced strict quality requirements on

imported paper for recycling. As a consequence, the Chinese imports have drastically reduced by more than 50%. Other countries such as India and Thailand have increased imports of European paper for recycling, but this could not balance the strongly reduced Chinese trade.

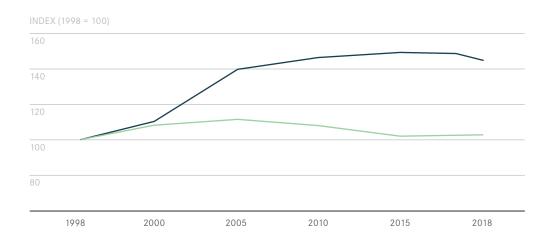
While strong steps towards the 2020 target of 74% have already been taken, reaching the target by 2020 now seems challenging. Doing so will depend on the new European recycling capacities, which have been announced but may not all be ready by 2020. At the same time, the structural change in paper consumption patterns has also continued in 2018: Graphic Paper consumption, in particular newspapers continued to decline in 2018. The increased consumption of corrugated boxes, the other most recycled paper product, only partly compensates for the challenge of declining graphic (printing and writing) paper consumption for the overall recycling rate.

For the commitment period of 2016 to 2020, the recycling rate calculations are independently verified by Deloitte.

PAPER RECYCLING VS PAPER CONSUMPTION

— Paper Recycling

— Paper Consumption



At regional level, the number of countries with a recycling rate below 60% was 8 in 2018, up from 7 in 2017. Over the last year, the number of countries exceeding recycling rates of 70% was 14, down from 15 in 2017.

On an international level, Europe continues to be the world champion in paper recycling followed by North America. The paper recycling rates of other world regions are improving, but from lower levels. In Europe, paper fibres are used 3.5 times on average, while the world average is 2.4 times.

The EU has increased its targets for the recycling of municipal waste and packaging waste; it is clear that the functioning paper recycling chain is a key driver for meeting these targets. Paper recycling is an industry "Made in Europe". It prolongs value creation and job opportunities in Europe from a renewable, predominantly European resource, wood.

Making recycling easy and simple year after year requires a huge effort by the paper value chain. We explain these efforts in our reports and are proud of the progress made.

RECYCLING RATE 2018: 71.6%

2

The recycling rate in Europe reached **71.6%** in 2018.

In a year to year comparison, the total amount of paper collected and recycled in the paper sector has decreased by 1.6% to 58.7 million tonnes, while consumption of paper has decreased by 0.5%.

From a longer term perspective, recycling has increased by 47% (18.7 million tonnes) since 1998, the base year for the first voluntary commitment set in the European Declaration on Paper Recycling. In strong contrast, consumption since 1998 also increased up until 2007, dropped back to the initial level in the following years, and has only slightly recovered in the last four years.

The net trade of paper for recycling is included in the European paper recycling rate (71.6% in 2018). The recycling rate is defined as the ratio between used paper recycling including net trade of paper for recycling, and paper and board consumption.

A net volume of 8.1 million tonnes (13.8%) of the total 58.7 million tonnes was bought by third countries, outside the commitment region of the EU-28, Norway and Switzerland. China is still the biggest third country importing paper for recycling from Europe, but it has announced it wants to become self-sufficient in paper for recycling supplies to its industry and has consequently strongly reduced its imports. Part of the volumes formerly imported by China has now been imported by countries such as India and Indonesia. Another part has been absorbed by the European paper industry, who has increased its consumption of paper for recycling by 364 000 tonnes. Without considering the net trade of paper imported by third countries for recycling outside Europe, the European paper recycling rate 2018 would have been 61.7% (up from 60.9% in 2017 and up from 60.4% in the base year of the Declaration (2015)).

EUROPEAN RECYCLING 1991-2018

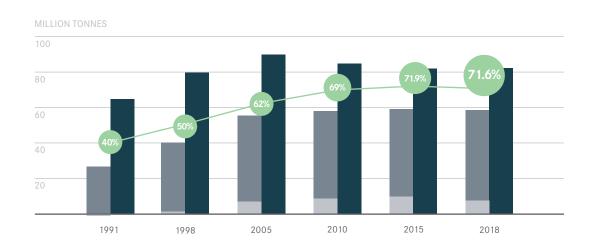
Source: CEPI 2019

Recycling outside Europe

Recycling

inside Europe

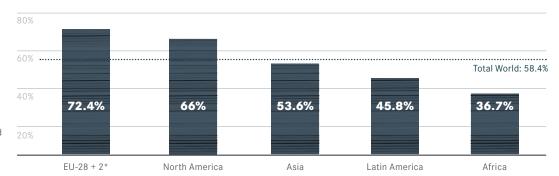
Paper and Board consumption



RECYCLING RATE IN WORLD REGIONS IN 2017

Source: CEPI, RISI - 2018

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







NATIONAL RECYCLING RATES IN EUROPE

14 European countries exceeded the 70% recycling rate (15 in 2017). 8 European countries were below 60% (7 in 2017).

Source: CEPI 2019

PROGRESS IN QUALITATIVE TARGETS



The EPRC members, representing 14 sectors along the paper value chain, had committed to improving the recycling rate by 2020. By joining the European Declaration on Paper Recycling they demonstrate their commitment to qualitative targets. EPRC members are involved in initiatives to facilitate the recycling process and increase recycling activity. These notably include collection and applying ecodesign to paper products.

COLLECTION

ACE

ACE called on Member States to ambitiously implement the Packaging and Packaging Waste Directive's requirement to collect packaging waste separately. Collection is a fundamental prerequisite for recycling. What is not collected cannot be recycled!

ACE is confident that the recycling rate for Beverage Cartons will increase thanks to the separate collection of all packaging as mandated by the new Packaging and Packaging Waste Directive and the industry's new platform – EXTR:ACT – that aims at supporting collection and recycling of beverage cartons in Europe.

CEPI has published the European Paper industry's position on separate collection of paper and board. As the EU Waste Directive was revised recognising separate collection as a prerequisite for good quality recycling and a functioning circular economy, CEPI clarifies in its position what separate collection means for the different paper fractions.

On behalf of INGEDE, project partner PROPAKMA finalised the IMPACTPapeRec project on separate paper collection and continued to communicate and promote the outcomes in technical committees of the paper value chain.

INGEDE continued to work establishing standards for sampling from and quality assessment of paper for recycling. Standardisation in this field will help improve the quality of collected and sorted paper.

ECODESIGN

The EPRC has further improved its scorecard on the removability of adhesive applications from printed products. In 2018 it defined a number of exemptions from testing for certain hotmelt applications. There is sufficient experience of their recyclability. The new annex added to the scorecard can be found here: (link)

CEPI, CITPA and ACE have started developing guidelines on paperbased packaging recyclability. They will give recommendations to retailers and brands about how to design new packaging solutions while improving their recyclability. These guidelines will be finalised by the end of 2019. ACE developed its own recyclability guidelines for beverage cartons that highlights the recyclability of beverage cartons and the dos and don'ts.

FINAT engaged with downstream user associations to discuss how to ensure the recyclability of a labelled product and remove any possible obstacles.

INGEDE conducted a study on the deinkability of high volume printed products and several individual tests for deinkability and removability of adhesive applications. INGEDE and one of its member companies established bilateral cooperation with two ink manufacturers on the deinkability of UV cured prints. INGEDE continued its activities in international standardisation of deinkability testing and assessment.

EUPIA, FEPE, INGEDE and INTERGRAF became active in the revision process of the European Ecolabel for printed matter. The environmental criteria for this European Ecolabel are currently being reviewed. The new criteria are expected to be applicable as of end 2020.

EUROPEAN ECOLABEL

The European Ecolabel is granted to printed products that meet strict environmental criteria, in particular on the ecodesign of printed products. These include a criterion on Paper for Recycling and a recyclability criterion. Regarding recyclability, printed paper applying for the European Ecolabel should be recyclable and the non-paper components easily removable. It also has to prove deinkability according to the EPRC deinking scorecard. The European Ecolabel for printed paper goes beyond existing high environmental standards and promotes environmental excellence. More than 90 licences of the European Ecolabel for printed paper have been granted at European level, covering more than 330 printed products.

RESEARCH AND DEVELOPMENT

ACE members are involved in innovation on a permanent basis. The beverage carton industry has been instrumental in the development of recycling solutions for multi-layered materials. ACE members also innovate their packaging design, taking into account circularity and design for the environment across the entire value chain.

In July 2019, Palurec GmbH, a 100% subsidiary of the German association for beverage cartons (FKN), started the construction of a new recycling plant for the recycling of plastics and aluminum from used beverage cartons.

Different projects are being developed in Europe to recycle the polymers and aluminium from beverage cartons and most will be operational as of 2020.

In Germany, a publicly funded project aims to investigate the deinkability of UV prints. The German ink sector association, VdL, is a member of the advisory board to this project. VdL members provide the ink samples to produce the UV prints to be investigated.

EUPIA is actively engaged in defining accurate criteria for the assessment of the deinkability for all types of prints produced by the various existing printing techniques.

INGEDE has a fund for specific projects. In 2018 it mainly dealt with ecodesign of print products and the quality inspection of paper for recycling. In addition, INGEDE monitored research projects on quality of paper for recycling and its inspection, ecodesign of print products and deinking process improvement.

EDUCATION AND INFORMATION

ACE members, via the national beverage cartons associations present in 8 Member States, and Switzerland, or as companies, support awareness campaigns and exchange of best practices on recycling technologies. In some cases, national associations support collection schemes.

EUPIA actively contributed to the current revision of the EPRC Guide to an Optimum Recyclability of Printed Graphic Paper.

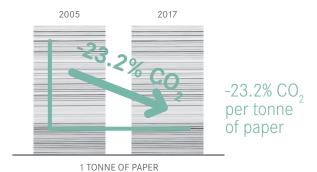
EUPIA provided information to interested stakeholders relating to the suitability for food packaging of paper and board made from recycled fibres. The information is also available on the new EUPIA webpage.

FEPE, the European Federation of Envelope Manufacturers, promoted awareness about paper recycling through active participation in the Two Sides Campaign, including the development of a new information booklet on paper sustainability and recycling.

FEPE actively contributed to the criteria revision of the EU Ecolabel for converted paper products (including envelopes) and promoted the certification to the stationery industry through a communications campaign.

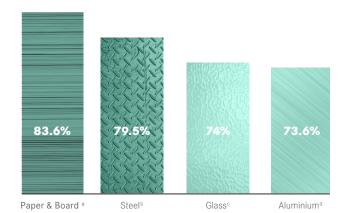
FINAT widened the scope of its award competition to cover all sustainability initiatives, from recycling to using more sustainable raw materials. The winning initiative, a solution for recycling laminates from the self-adhesive label industry, was covered in European media. FINAT participated in and presented at various converter and brand-owner events.

INGEDE spoke at several events of the paper value chain, mainly about ecodesign, recyclability and deinkability. Many additional activities of this kind were also conducted in technical committees of the value chain or at individual companies.



REDUCTION OF SPECIFIC EMISSIONS OF CO2 PER TONNE OF PAPER PRODUCTION IN EUROPE 2005-2017

Source: CEPI 2018



Paper and board is the most recycled packaging material in Europe

2017 PAPER PACKAGING RECYCLING RATES

- ^a Paper & Board: CEPI, data from 2017 ^b Steel: APEAL, data from 2016
- Glass: FEVE, data from 2016
- d Aluminium: aluminium beverage cans, source: European Aluminium, data from 2015

FINAL CONFERENCE OF IMPACTPAPEREC PROJECT

The two-year Horizon 2020 IMPACTPapeRec project was concluded in early 2018. To this end, a final conference was organised at the Committee of the Regions in Brussels, hosted by the Mayor of Coulaines (France), Christophe Rouillon. The conference successfully brought together more than 80 professionals from the waste management and paper industry, as well as policymakers and municipalities.

The conference included prominent speakers such as Kestutis Sadauskas, the Director in charge of Circular Economy and Green Growth at the European Commission, as well as Laurent Thieule, Director at the Committee of the Regions, who applauded the project's practical nature and its "on the ground" applicability for European regions.

The project brought together 19 partners across the value chain from several European countries including those with low recycling rates such as Poland, Romania and Bulgaria. The project offered them a unique platform to find ways to increase separate collection of paper in the EU.

Although the project has ended, the practical tools that resulted from it remain, in particular the "Good and Best Practice Handbook for the Collection of Paper and Board for Recycling". This handbook provides municipalities with practical tools and guidance so that they can improve paper and board collection wherever they are in Europe. A video was prepared explaining this and other tools which can be found on the website.

The IMPACTPapeRec project is financed by the European Union Horizon 2020 Programme and supports the separate collection of paper commitment of the European Innovation Platform (EIP) on Raw Materials.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 690182.







Circular Economy and Green Growth at the final conference





































DATA QUALITY: 2018 DATA

5

The data used to calculate recycling rates is collected by CEPI (the Confederation of European Paper Industries). It comes from a questionnaire sent by CEPI to its national member associations in 18 countries (Austria, Belgium, Czech Republic, Finland, France, Germany, Hungary, Italy, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom). National associations supply the data, collected from their members' mills and companies as well as official sources, where appropriate.

The data in this report includes paper for recycling utilisation and trade plus paper and board production, trade and consumption for non-CEPI members of the EU-28 (Bulgaria, Croatia, Cyprus, Denmark, Estonia, Greece, Ireland, Latvia, Lithuania, Luxembourg and Malta) and Switzerland. This data is obtained from Pöyry Consulting.

After submission to CEPI, the data may be adjusted by the source, in particular the trade data obtained from customs authorities. CEPI takes the adjustments into account, with the figures being considered as final and published in the subsequent report (e.g. 2017 figures in this report).

Following this rigorous process, the 2017 recycling rate has been confirmed at 72.4% as opposed to the initially lower figure of 72.3%.

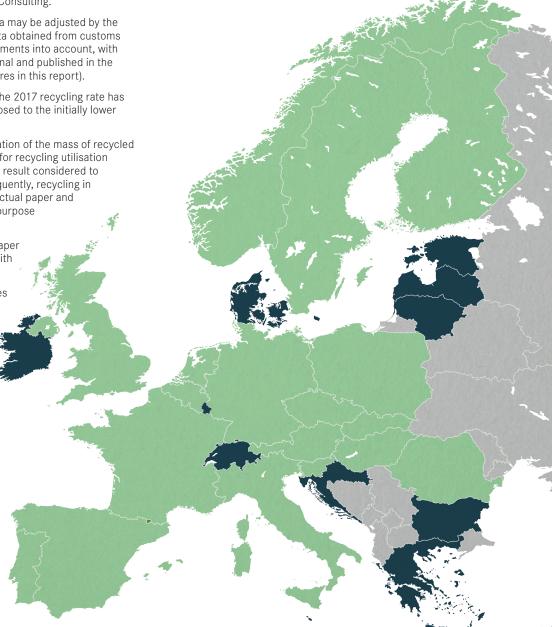
For certain countries¹, the calculation of the mass of recycled paper and board based on paper for recycling utilisation and net trade has not produced a result considered to adequately reflect reality. Consequently, recycling in these cases has been based on actual paper and board collection for the specific purpose of recycling.

Other countries² have adjusted paper and board consumption figures with the opposite impact.

All historical annual recycling rates have been recomputed based on the revised calculation methodology.

CEPI has commissioned an external verification of the recycling rate calculation since 2000 (see Assurance Reports 2011 - 2015 by EY, 2006 - 2010 by PricewaterhouseCoopers and 2000 - 2005 by Pöyry in the respective Annual Reports).

For the ongoing five-year period, CEPI has decided to work with Deloitte to further improve data quality. As an annual exercise, data quality will be assessed using a method recently adopted by the European Commission for organisation environmental footprints and product environmental footprints. Specifically, this will cover geographical representativeness, time-related representativeness, completeness and the uncertainty parameter. CEPI will publish the assessment's results on its website.



Data collected by CEPI members

Data obtained from Pöyry Consulting

¹ Finland, France, Sweden.

² Belgium, Finland, Sweden, UK.

The European Paper Recycling Council (EPRC) was set up as an industry self-initiative in November 2000 to monitor progress towards meeting the paper recycling targets set out in the 2000 European Declaration on Paper Recycling. Since then the commitments in the Declaration are renewed every five years.

The EPRC committed itself to meeting both a voluntary recycling rate target of 74% in the EU-27 plus Switzerland and Norway by 2020 as well as qualitative targets³ in areas such as waste prevention, ecodesign, and research and development.

 $^{\rm 3}$ At the time of the European Declaration in 2016, Croatia was not yet a member of the European Union

Signatories







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