

# PAPER RECYCLING

MONITORING REPORT 2014



European Declaration on Paper Recycling  
2011 - 2015

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## Paper Recycling: Still performing well, despite the challenges

Since 2000, the European paper value chain has been committed to the two-fold aim of increasing recycling and joining efforts to remove obstacles hampering paper recycling in Europe. Consequently, today's situation is transformed relative to what we experienced 15 years ago.

In 2014, 71.7% of all paper consumed in Europe was recycled, totalling 58 million tonnes. Compared to the previous year, that represents an increase of 0.7%. Paper consumption has increased by the slightly higher figure of 1.2% compared to 2013, reaching 81 million tonnes.

Currently, 22% of paper consumption cannot be collected or recycled. We are clearly nearing maximum potential.

This situation is also linked to changing consumption patterns affecting the most recycled paper products. We have seen the continued decline of newspaper consumption in 2014. At the same time, the increased consumption of corrugated boxes has only partly compensated the challenge of declining graphic paper consumption for the overall recycling rate.

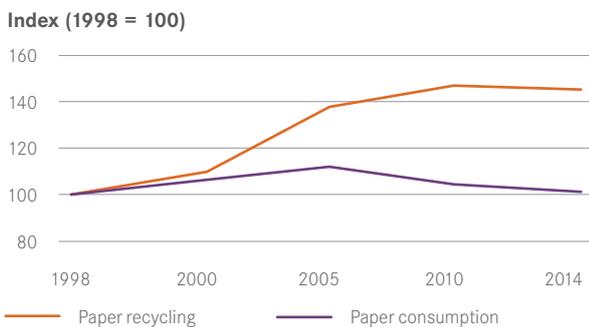
In 2014, we have also seen good achievements at the regional level, despite differences continuing to exist.

The number of countries with recycling rates below 60% has decreased, while the number of countries with a recycling rate above 70% has increased, compared to last year.

On an international level, Europe continues to be the world leader in paper recycling, followed by North America. Other world regions' paper recycling rates have also improved, but starting from lower levels. In Europe, paper fibres have 3.5 loops on average, far above the global average of 2.4.

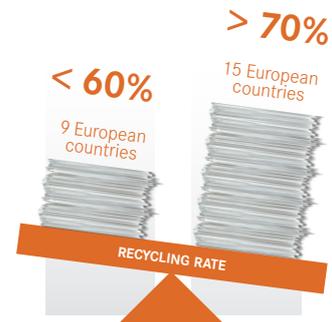
The paper fibre loop offers the current EU-level discussions on the circular economy a clear and workable model to be followed. Paper recycling is an industry "Made in Europe". It prolongs value chains and creates green European jobs based on a renewable resource.

### PAPER RECYCLING VS PAPER CONSUMPTION



### NATIONAL RECYCLING RATES IN EUROPE

15 European countries exceeded the 70% recycling rate (13 in 2013). 9 European countries were below 60% (10 in 2013).  
Source: CEPI 2015



**“Don't worry, it's simple!”** our mascot has been telling people in tens of thousands of offices across Europe over the last two years. We indeed want to keep it simple for citizens and consumers in Europe to recycle paper, both in their homes and workplaces.

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





# Recycling Rate 2014: 71.7%

The recycling rate in Europe reached **71.7%** in 2014, a notable progress considering the changing consumption patterns.

In a year to year comparison, the total amount of paper collected and recycled in the paper sector has increased by 0.7% to just under 58 million tonnes, while paper consumption has increased by 1.2%.

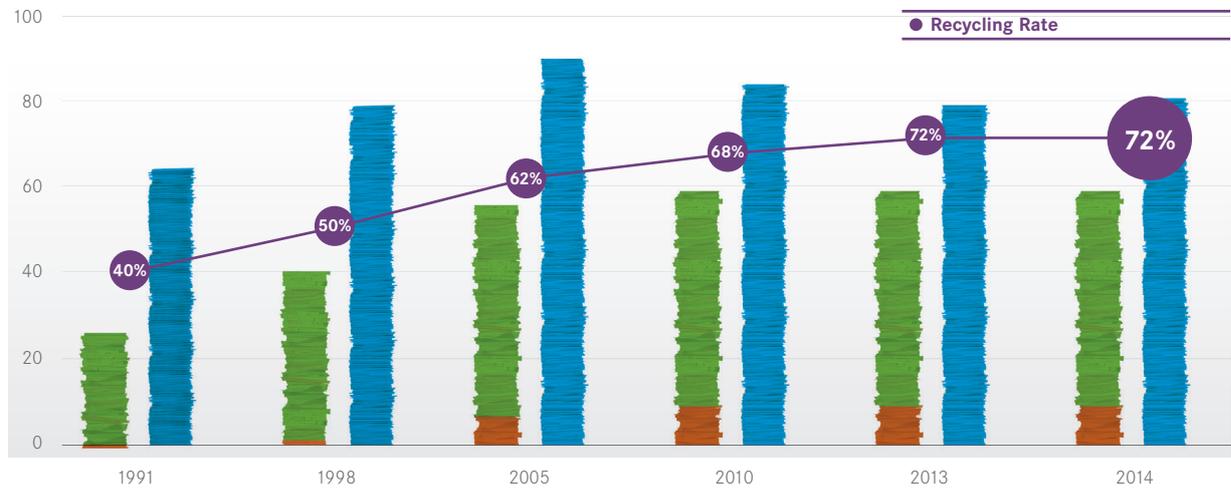
In a longer term perspective, recycling has increased by 45% (18 million tonnes) since 1998, the base year for the first

voluntary commitment set in the European Declaration on Paper Recycling. In strong contrast, although consumption also increased between 1998 and 2007, it has since dropped back to initial levels.

A net volume of 8.6 million tonnes (15%) of the total 58 million tonnes was bought by third countries for recycling outside the commitment region of EU-28 plus Norway and Switzerland, mainly by China.

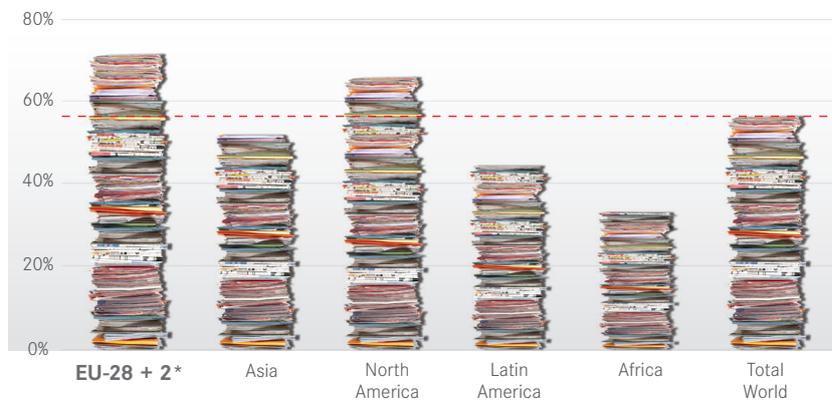
## EUROPEAN PAPER RECYCLING 1991 - 2014

Million Tonnes



Source: CEPI 2015

## EUROPE IS THE PAPER RECYCLING CHAMPION!



### Recycling rate in world regions in 2013

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

Source: CEPI, RISI - 2014 figures will be available in October 2015



# Progress in Qualitative Targets

The ERPC<sup>1</sup> members representing 12 sectors along the paper value chain have committed to improving the recycling rate by 2015. They have demonstrated their commitment to qualitative targets by joining the European Declaration on Paper Recycling. ERPC members are actively involved in initiatives to facilitate the recycling process and increase recycling activity, notably including both collection and applying ecodesign to paper products.

## COLLECTION

**Three main elements have helped improve collection in Europe: the revision of European standard EN 643, securing its correct implementation and the EU projects EcoPaperLoop and IMPACT.**

CEPI<sup>2</sup>, ERPA<sup>3</sup> and INGEDE<sup>4</sup> have continued promoting the revised EN 643, the “European list of standard grades of paper and board for recycling” published in February 2014. They have actively participated in the European-level CEN<sup>5</sup> working group to develop a sampling standard for paper for recycling. This new standard will allow further testing of moisture and non-paper components, providing further opportunities to improve recycling targets.

FINAT<sup>6</sup> and the companies within the self-adhesive label industry have initiated a number of programmes to collect release liner material for recycling. New partnerships were established in 2014 between paper collection companies and label suppliers to handle the complex logistics.

CEPI, INGEDE and a range of organisations from municipalities, paper producers, and research organisations have created IMPACT, a commitment on paper collection under the European Innovation Partnership on Raw Materials. The European Commission has endorsed this commitment as one of the European Raw Materials Partnerships.

IMPACT aims to introduce and improve separate paper collection to eliminate landfilling and strongly restrict incineration by 2020. It places special focus on EU-28 countries where less than 60% of paper is collected for recycling and where commingled collection schemes predominate.

## ECODESIGN

**Three important developments have taken place: the revision of the ERPC Deinking Scorecard<sup>7</sup>, the monitoring of the EU Ecolabel for printed products and the new German Blue Angel ecolabel for printed products.**

The Deinking<sup>8</sup> Scorecard revision, initiated in 2013, took an important step towards completion in 2014 with the ERPC approving the revised scorecard. As a final step, the annex is expected to be approved soon.

INGEDE and EuPIA<sup>9</sup> were closely involved in the German Federal Environmental Agency’s activities to develop a new Blue Angel ecolabel for printed products. The ecolabel with the official name “RAL UZ 195 – Printed matter” was released in January 2015.

INTERGRAF<sup>10</sup> participated in the discussions for the elaboration of the EU Ecolabel on printed paper, published

in August 2012. This ecolabel goes beyond existing high environmental standards and promotes environmental excellence.

The European flower appears on printed products that meet these strict environmental criteria, including paper for recycling and recyclability.

Regarding recyclability, printed paper applying for the EU Ecolabel should be recyclable, with its non-paper components being easily removable. In parallel, applicants have to prove deinkability according to the ERPC Deinking Scorecard.

INTERGRAF has been monitoring the uptake of the label by European printing companies. Currently, almost three years after its publication, 79 licences have been granted to a total



**PAPER  
FIBRE HAS  
3.5 LOOPS  
IN EUROPE**

European fibre loops 2014

Source: CEPI 2015

of 260 printed products in 13 different countries.

FEPE actively supported the creation of an EU Ecolabel for converted paper products, covering paper envelopes and paper stationery products such as folders, notepads, exercise books and paper carrier bags. This ecolabel was published in May 2014 and certification of respective products has started across Europe. FEPE is encouraging envelope manufacturers to apply for the ecolabel and facilitates contacts with national certification bodies and the European Commission where clarification of criteria is still required.

<sup>1</sup> European Recovered Paper Council

<sup>2</sup> Confederation of European Paper Industries

<sup>3</sup> European Recovered Paper Association

<sup>4</sup> International Association of the Deinking Industry

<sup>5</sup> European Committee for Standardization

<sup>6</sup> World-Wide Association for Self-Adhesive Labels and Related Products

<sup>7</sup> <http://www.paperforrecycling.eu/publications/erpc-publications>

<sup>8</sup> Deinking: A step in the recycling process which consists of removing ink and/or toner from a printed product to a high extent

<sup>9</sup> European Printing Ink Association

<sup>10</sup> European Federation for Print and Digital Communication

## PAPER AND BOARD IS THE MOST RECYCLED PACKAGING IN EUROPE



2014 packaging recycling rates in the EU

\* 2013 data

\*\* 2012 data (2014 data not available)

Source: European steel, glass and aluminum packaging associations, CEPI 2014

In order to be certified, all products must be recyclable. In addition, the use of recycled paper in the converted products is encouraged since certified products must contain 70% of recycled or certified fibre substrates.

CEPI has accepted the invitation to participate in one of the three pilots in "Project Mainstream" by the World Economic Forum, Ellen McArthur Foundation and McKinsey. This pilot has been looking into setting guidance for design for circularity, with initial results expected in early 2016.

### RESEARCH AND DEVELOPMENT

**The main developments include: work to improve the previously adopted ERPC scorecard on deinkability and work to identify difficulty to deink print products before they enter the recycling process.**

The joint efforts of our industries prove that the print value chain is working to improve on the sustainability profile of printed products.

INTERGRAF worked with INGEDE and EUPIA on improving the workability of the ERPC deinking scorecard.

Currently, they are developing an annex listing exemptions from testing for specific products with good deinkability properties. Some combinations of paper, ink and printing processes will be exempted from testing as they have proved over time that they are already performing generally very well in deinking.

INGEDE launched a research project at Darmstadt Technical University, Germany to determine printing and finishing technology at the quality inspection of paper for recycling through Infrared Spectroscopy. The project aims to identify print products which are difficult to deink before they enter the recycling process.

CEPI has continued its involvement in the REFFIBRE project<sup>11</sup>, initiated in November 2013 for a three-year period. This project develops tools to provide information on the effects of new production processes, new raw material input and new product innovations on the value chain, e.g. on product recyclability.

CEPI has also continued promoting the Two Team Project<sup>12</sup>, an innovative approach to find breakthrough technologies for the pulp and paper industry to reduce its fossil-based CO<sub>2</sub> emissions. The winner of the project, Deep Eutectic Solvents, has recently received funding from the new European Joint Undertaking on Bio-Based Industries (BBI) launched in July 2014.

### EDUCATION AND INFORMATION

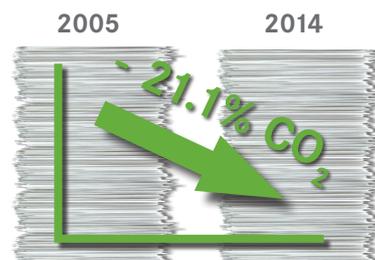
At the renowned PTS<sup>13</sup>-CTP<sup>14</sup> Deinking Symposium, INGEDE presented a paper on the effects on the quality of paper for recycling, focusing on the design of a paper product, printing and converting as well as collection and handling of paper for recycling.

FINAT launched its inaugural recycling awards in 2014 to raise awareness of the recyclability of release liners and acknowledge the efforts of industry players. The award brought 11 entries from leading converters and end-users. In addition, the recycling programmes agreed on reporting for recycling figures from 2015 onwards to permit more effective measuring of progress.

CEPI organised a conference on separate collection in Poland, targeting local and regional decision makers. It aimed to raise awareness of the environmental and economic benefits involved in improving collection systems and collecting paper separately from other recyclables.

CEPI also published a collection of resource efficiency stories from the pulp and paper industry to help raise awareness of the contribution of recycling for resource efficiency in the paper industry. These stories describe innovative approaches in industrial symbiosis and the use of recycling residues and other waste flows for new applications.

## -21.1% CO<sub>2</sub> PER TONNE OF PAPER



1 TONNE OF PAPER

Reduction of specific emissions of CO<sub>2</sub> per tonne of paper production in Europe 2005-2014

Source: CEPI 2015

<sup>11</sup> <http://reffibre.eu/>

<sup>12</sup> [www.unfoldthefuture.eu](http://www.unfoldthefuture.eu)

<sup>13</sup> Papiertechnische Stiftung

<sup>14</sup> Centre Technique du Papier



# EcoPaperLoop: Enhancing the quality of paper for recycling

The EcoPaperLoop project primarily aimed to improve the paper recycling loop and so contribute to establishing the circular economy.

Ten organisations and institutes from Germany, Hungary, Italy, Poland and Slovenia cooperated from September 2012 to December 2014 on this initiative, co-funded by the Central Europe programme of the European Regional Development Fund.

ERPC members CEPI, INGEDE and INTERGRAF together with further representatives of the paper value chain monitored activities and provided their expertise.

In addition, the deinkability assessment of 90 graphic products collected in the project partners' countries did not only serve to enlarge the existing deinkability database geographically. Importantly, the data also contributed to the Deinking Scorecard revision, adopted by ERPC in October 2014.

Hardcopies of the book are available upon request while stocks last, or can be downloaded from the project's website<sup>1</sup>. The project also has a channel on YouTube<sup>2</sup> containing recordings of the final conference and other related events.

Five new tools were developed during project implementation:

- ✔ A new laboratory method for testing paper packaging recyclability. The method and related equipment have been implemented in four laboratories in Italy, Germany, Slovenia and Hungary. The methodology has also been presented at several seminars, conferences and meetings.
- ✔ An electronic database containing the recyclability results of 160 paper-based packaging products together with relevant information on their design.
- ✔ A similar database concept has also been drafted for paper-based packaging and discussed within ERPC, based on the positive experience with the ERPC scorecards for the assessment of graphic product recyclability.
- ✔ An eco-recycling web-based calculator<sup>3</sup>, a user-friendly instrument to calculate the effect of product design on the most relevant environmental parameters of recycling stock preparation. Although it cannot replace a full LCA study, it provides an approximate value of CO<sub>2</sub> emissions based on product categories and/or results of the recyclability assessment.
- ✔ A decision tree<sup>4</sup> dealing with the collection of paper for recycling, designed to support decision makers and local authorities when they want to improve their paper collection systems.



<sup>1</sup> [www.ecopaperloop.eu](http://www.ecopaperloop.eu)

<sup>2</sup> <https://www.youtube.com/channel/UC2k6VjXr-AGNk4T5MZ60qYg>

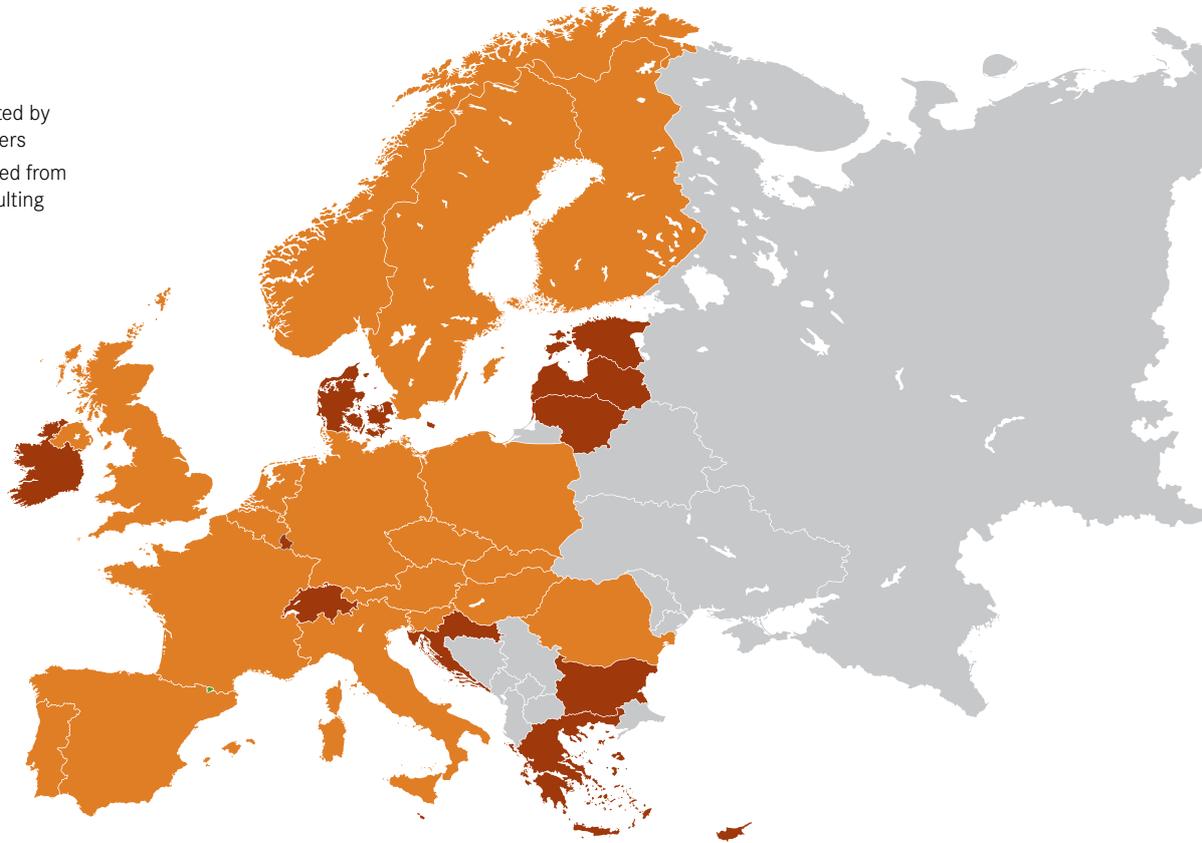
<sup>3</sup> <http://web.ttsnetwork.net/EcoPaperLoop/>

<sup>4</sup> <https://umfragen.psych.tu-dresden.de/sozsci/decisiontree>



# Data Quality: 2014 data

- Data collected by CEPI members
- Data obtained from Pöyry Consulting



The data used to calculate the recycling rate is collected by CEPI via a questionnaire sent to its national member associations in 18 EU countries. These national associations supply data collected from their member mills and companies as well as official sources where appropriate.

All other data in this report has been obtained from Pöyry Consulting. It includes paper for recycling utilisation and trade together with paper and board production, trade and consumption for non-CEPI members of the EU-28 and Switzerland.

After submission to CEPI, the data may be adjusted by the source, in particular the trade data obtained from customs authorities. CEPI takes these adjustments into account, with the figures being considered as final and published in the subsequent report e.g. the 2013 figures in this report.

Following this rigorous process, the 2013 recycling rate has been confirmed at 72% as opposed to the initially lower figure of 71.7%.

For certain countries<sup>1</sup>, 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.

This alternative methodology is mainly needed in the case of the relatively high trade volumes in the Netherlands, complicating the exercise of distinguishing domestic utilisation from trade of paper for recycling. Importantly, this

change has a reductive impact on the overall recycling rate as the usual calculation method would overestimate actual recycling in the Netherlands. Other countries<sup>2</sup> have adjusted paper and board consumption figures with the opposite impact.

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

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

For the ongoing five-year period, CEPI has decided to work with Ernst & Young 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 and product environmental footprints. Specifically, this will cover geographical representativeness, time-related representativeness, completeness and the uncertainty parameter. CEPI will publish the assessment results on its public website.

At the end of the commitment period, Ernst & Young will verify the achievement of the 2015 target using an international standard for commitments.

<sup>1</sup> Finland, France, Hungary, the Netherlands, Sweden

<sup>2</sup> Belgium, Finland, the Netherlands, Sweden, United Kingdom

## The European Recovered Paper Council (ERPC)

The ERPC 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 have been renewed every five years.

In 2011, the ERPC committed itself to meeting and maintaining both a voluntary recycling rate target of 70% in the then EU-27 plus Switzerland and Norway by 2015 as well as qualitative targets in areas such as waste prevention, ecodesign and research and development.

### Signatories



[www.cepi.org](http://www.cepi.org)



[www.citpa-europe.org](http://www.citpa-europe.org)



[www.emfa.eu](http://www.emfa.eu)



[www.erpa.info](http://www.erpa.info)



[www.europeantissue.com](http://www.europeantissue.com)



[www.fepe.org](http://www.fepe.org)



[www.ingede.org](http://www.ingede.org)



[www.intergraf.org](http://www.intergraf.org)



[www.beveragecarton.eu](http://www.beveragecarton.eu)

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This is a durable and recyclable paper product. When you no longer need it, please recycle it.

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