

PAPER RECYCLING

MONITORING REPORT 2012



European Declaration on Paper Recycling
2011 - 2015

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Don't worry, it's simple: Paper is for recycling

Since 2000, the European paper value chain has been committed to increasing recycling and to joining efforts to remove obstacles that would hamper paper recycling in Europe.

In 2012 paper was recycled in Europe at a rate of 71.7%. This achievement is remarkable considering that since the pre-crisis peak year of 2007, paper consumption in Europe has dropped by 13% whereas recycling decreased by only 3.5%. The current paper consumption is at the level of 1998 but the recycled amount is 1.5 times higher than in 1998 – before the industry's commitment to paper recycling.

It is clear that the rate is starting to level out and keeping it at a high rate is becoming challenging. It is not only the quantities in consumption that are changing but also the patterns: the sharp decline in newspaper consumption will affect the overall paper recycling levels as newspapers are traditionally one of the best recycled paper products along with corrugated boxes. On the other hand, tissue and sanitary papers are increasingly consumed but are not accepted for recycling due to hygiene reasons.

10 years ago it was estimated that 19% of paper consumption was not recyclable or collectable and we believe that this share is much higher now; this is another reason why paper recycling rates will level out. This can hardly be compensated by increased packaging recycling as paper-based packaging is already the most recycled packaging material and further increases will be hard to achieve.



“Don't worry, it's simple!” our mascot is telling people in offices. We indeed want to keep it simple! As our annual report highlights, huge efforts are made year after year by the paper value chain to make it easy and simple for citizens and consumers in Europe to recycle their papers, in offices and at home. We are pleased to see the results!

Since last year, the renewed reporting template offers more indicators giving insight into the wider context of paper recycling as well as the already established figures on the recycling rate and related recycling volumes. New achievements can be reported with a reduction in the number of European countries not achieving a 60% recycling rate from 12 to 10, whereas the number of countries exceeding a 70% recycling rate remains as high as 13. The number of times a paper fibre is collected and recycled reaches, on average, 3.5 (compared to 3.4 in 2011 and the world-wide average of 2.4, based on a calculation method developed in France).

We are also pleased to welcome a new sector representing beverage cartons, ACE, to the ERPC as a signatory. ACE is no stranger to promoting the recycling of used beverage cartons and we believe the new collaboration will offer important lessons and more support to all ERPC members. ERPC is ready to welcome Croatia, the 28th EU member state, and reporting will be adapted accordingly in the 2013 annual report.

Secure access to resources has become an increasingly strategic economic issue, while possible negative social and environmental impacts on third countries constitute an additional concern in EU policies. Paper recycling is truly an industry “made in Europe” and – in line with EU policies – should be safeguarded to remain so.



Recycling Rate 2012: 71.7%

The recycling rate in Europe reached **71.7%** in 2012.

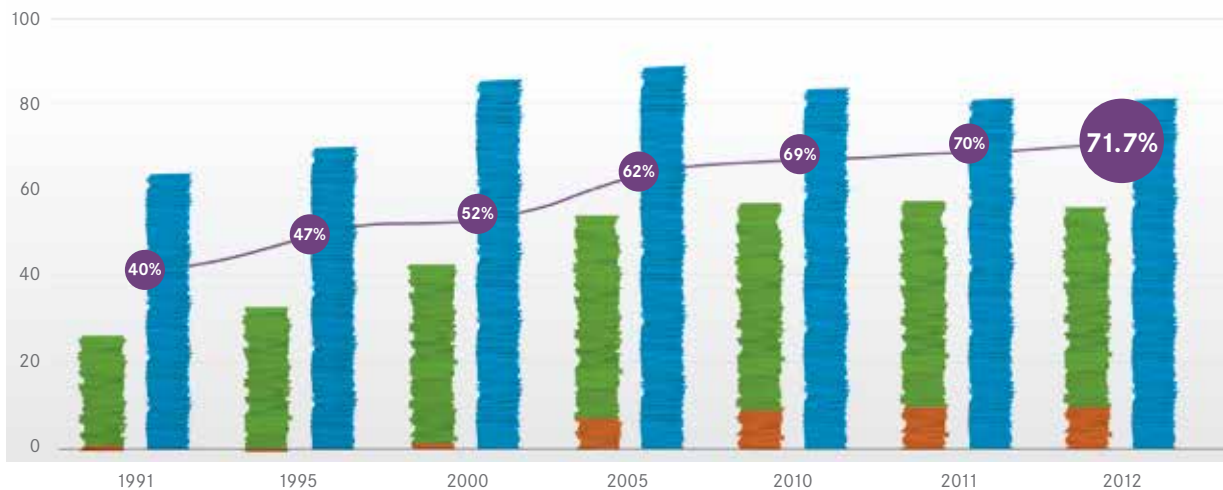
In contrast to the sharply decreasing consumption of paper in Europe, the total amount of paper collected and recycled in the paper sector remains stable at just under 58 million tonnes. Recycling has increased by 18 million tonnes (+45%) since 1998, the base year for the first

voluntary commitment set in the European Declaration on Paper Recycling, whereas consumption has dropped back to the level of 1998.

A net volume of 9.4 million tonnes (or 16%) of the total 58 million tonnes was imported from Europe for recycling by third countries outside the commitment region of EU-27 plus Norway and Switzerland.

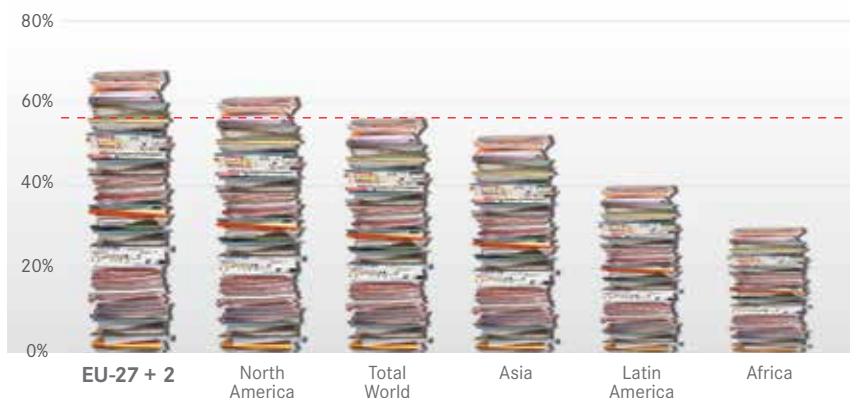
EUROPEAN PAPER RECYCLING 1991-2012

Million Tonnes



Source: CEPI 2012

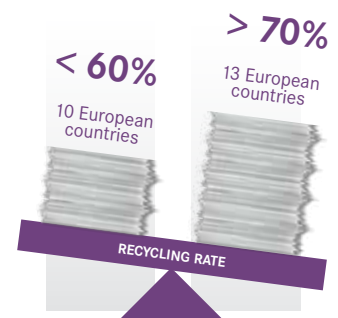
EUROPE IS THE PAPER RECYCLING WORLD CHAMPION!



Paper recycling rate in world regions in 2011

Source: CEPI, RISI 2012

13 EUROPEAN COUNTRIES EXCEEDED THE 70% RECYCLING RATE; 10 EUROPEAN COUNTRIES ARE BELOW 60%, TWO COUNTRIES LESS THAN IN 2011



Comparing National recycling rates in Europe

Source: CEPI 2012



Progress in Qualitative Targets

By joining the European Declaration on Paper Recycling, ERPC members committed themselves to carrying out qualitative actions to improve the recycling rate by 2015. These include, in particular, applying ecodesign for paper products. ERPC members represent 15 sectors along the paper value chain. In 2012, as in previous years, ERPC members dedicated a substantial amount of their time to several initiatives that facilitate the recycling process and increase recycling activity.

COLLECTION

CEPI, ERPA and INGEDE were deeply involved in the revision of EN 643, the European list of standard grades of paper and board for recycling. A representative of CEPI chaired the European working group for the EN 643 revision and an INGEDE representative chaired the German mirror group. ERPA has continued to promote the importance of quality for further use by paper mills, not only in the context of EN 643 but also by developing quality management guidance and working with the European Commission and national experts to finalise the EU regulation on End-of-Waste for paper.

Companies belonging to ERPA national federations have continued to invest in new machinery and equipment to increase both the quantity and the quality of paper for recycling. In 2012 companies belonging to CEPI national federations invested in paper recycling machinery with a new and upgraded capacity of one million tonnes for paper recycling.

INGEDE joined other German industry associations to oppose the German act on closed-loop materials management "Kreislaufwirtschaftsgesetz". They requested help from the European Commission to act against a monopoly of public authorities. ERPA members felt negatively impacted and needed to resist the growing number of collection systems put in place by municipalities without coordinating with the private sector.

The Bavarian Ministry for Environment and Health funded the project "Optimising and Securing of Paper Loops" which investigated the whole life cycle of paper products and in which INGEDE was actively involved.

For six years Swedish paper producers campaigned to raise the level of paper collection, promoting the paper industry's commitment to recycle 100% of what is collected in Sweden. These companies are part of CEPI's member structure via the Swedish National Association. The collection rate for old newspapers and magazines was estimated at 94% - 95% in 2012 in Sweden. The efforts were organised in cooperation with the entire graphic paper chain (www.papperskretsen.se and www.atervinningsgaranti.se).

FINAT continued its efforts to raise awareness regarding the recyclability of release liner and the available release liner recycling programmes on the market. In addition, FINAT members launched pilot projects which could help in rolling out large-scale recycling projects.



"Me recyclable - you able!"

An example of a creative campaign, carried out by a mostly virgin fibre based paper manufacturer, SAPPI Fine Paper North America.

PAPER FIBRE IS RECYCLED 3.5 TIMES IN EUROPE



European fibre loops 2012

Source: CEPI 2012

ECODESIGN

The Technical Committee of Deinking in Germany, a working group of associations in the paper industry and organised by INGEDE, decided on a concept to advance the Scorecard for the Removability of Adhesive Applications. PTC, the company running the INGEDE office, prepared a project to be carried out in 2013 (more under "Research and Development").

INGEDE started a project on avoiding problems caused by residual varnish (known as hickeys) in recycled printing paper. After some preparatory work it is planned to involve more stakeholders from the graphic paper value chain.

FEPE has taken the initiative to propose and lead the development of an EU Ecolabel for converted paper products, including envelopes, to the EU Ecolabelling Board (EUEB) as there were no criteria for this product group. This was considered relevant as the Ecolabel is expected to be an important incentive for envelope manufacturers to further improve the sustainability and recyclability of paper envelopes through waste management, choice of paper, adhesives and inks. The process was launched in March 2012 and the Ecolabel is expected to become valid in 2014.

INTERGRAF participated in the discussions for the elaboration of a new EU Ecolabel on printed paper, which was published in August 2012. The European flower will appear on printed products that meet strict environmental criteria. According to these criteria, printed paper applying for the EU Ecolabel should be recyclable and the non-paper components easily removable. It also has to prove deinkability according to the ERPC scorecard. The EU Ecolabel for printed paper goes beyond existing high environmental standards and promotes environmental excellence.

RESEARCH AND DEVELOPMENT

Companies belonging to ERPA national federations invested in new R&D programmes to improve the quality of the sorted paper and cardboard (automatic sorting systems) in order to potentially increase the volume of materials which would meet the End-of-Waste criteria.

INGEDE financed a project on adsorption deinking and an additional one on recognition of varnished products on conveyors transporting paper for recycling.

CEPI is coordinating two EU funded projects aimed at treating fibre properties for increased strength, making lighter paper products possible with increased resilience in recycling, and improving the recycling process for removing chemical impurities such as mineral oils. Furthermore, recycling is an important part of the CEPI 2050 Roadmap (www.unfoldthefuture.eu) which is currently being rolled out in practice by developing breakthrough technology concepts for the sector.

For the advancement of the removability scorecard which currently covers only the removal of non-soluble adhesives, FEICA is committed to support research on the recycling of paper applications containing re-dispersible adhesives. FEICA's German member association and INGEDE members are involved in a research project in Germany aiming to find alternative test methods, tailor made to the physical properties of water-based systems. The objective is to create reliable tools to test the behaviour of the entire range of adhesives in paper applications during recycling.

See *EcoPaperLoop* - page 6

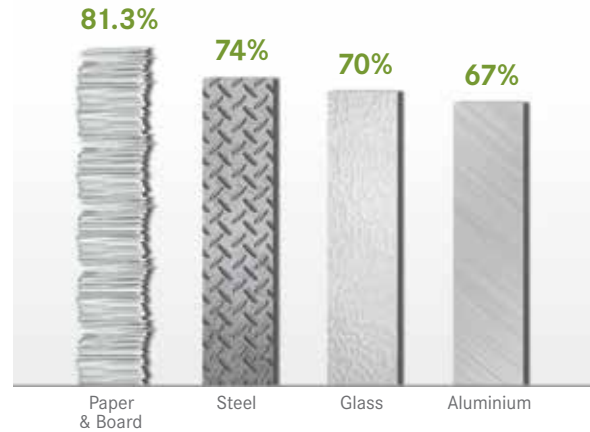
EDUCATION AND INFORMATION

Most ERPC members produced information materials and were active in trade fairs, conferences and public debates making presentations on issues related to paper collection and recycling.

In 2012 ERPC prepared simple rules for increasing the collection of paper in offices. The document was published in early 2013.



PAPER AND BOARD IS THE MOST RECYCLED PACKAGING IN EUROPE!



2011 packaging recycling rates in the EU

Source: European steel, glass and aluminium packaging associations, CEPI 2012

-42% CO₂ PER TONNE OF PAPER



Reduction of specific emissions of CO₂ per tonne of paper production in Europe 1990 - 2012

Source: CEPI 2012



EcoPaperLoop

CREATING AWARENESS IN CENTRAL EUROPE

In Central Europe, paper for recycling is a major resource. Paper recycling rates differ from one country to another and paper is not only recycled in the country where it has been produced. Features such as ecodesign and eco collection are of common interest.

One target of the EcoPaperLoop project is to improve collection systems. A first achievement is a new recyclability test that has been developed for packaging. It will be used to systematically check paper-based packaging in all the participating countries and adopted by the ERPC as a tool for all European countries.

EcoPaperLoop is a project within the transnational programme "Central Europe", co-funded by the EU/ European Fund for Regional Development. CEPI, Intergraf and INGEDE – co-signatories of the ERPC Declaration – are members of the project's Advisory Board.

More at www.ecopaperloop.eu.



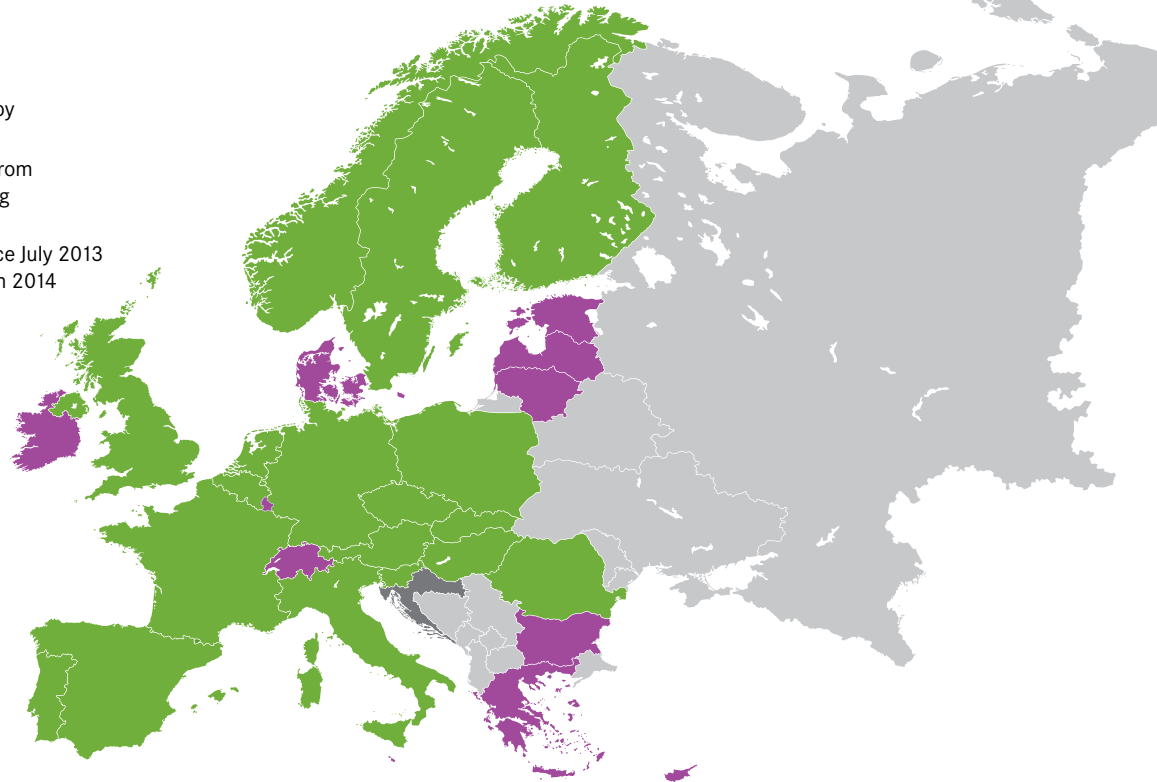
Paper recycling - Who does what?



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Data Quality: 2012 data

- Data collected by CEPI members
- Data obtained from Pöyry Consulting
- New: Croatia!
EU member since July 2013
Data available in 2014



The data used to calculate the recycling rate is collected by CEPI (Confederation of European Paper Industries). The data comes from the questionnaire sent by CEPI to its national member associations (Austria, Belgium, Czech Republic, Finland, France, Germany, Hungary, Italy, the Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, and the United Kingdom). CEPI's national associations supply data, which they collect from their member mills and companies plus official sources where appropriate.

The data, including paper for recycling utilisation and trade plus paper and board production, trade and consumption for non-CEPI members of the EU-27 (Bulgaria, Cyprus, Denmark, Estonia, Greece, Ireland, Latvia, Lithuania, Luxembourg and Malta) and Switzerland 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; CEPI will take the adjustments into account and the figures will be considered as final and published in the subsequent report (e.g. 2011 figures in this report). The 2011 recycling rate is confirmed at 70.3% (instead of 70.4%).

For certain countries¹, where the calculation of the mass of recycled paper and board based on paper for recycling utilisation and net trade has not produced a result which is considered to be an adequate reflection of reality, recycling 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, which complicates the exercise

of distinguishing domestic utilisation from trade of paper for recycling. It should be noted that this change has a reductive impact on the overall recycling rate as the usual calculation method would overestimate actual recycling in the Netherlands. 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 had an external verification of the recycling rate calculation since 2000. See Assurance Reports 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 **Ernst & Young** to further improve the data quality. As an annual exercise, data quality (geographical representativeness, time-related representativeness, completeness and uncertainty parameter) will be assessed using a method recently adopted by the European Commission for organisation and product environmental footprints; the assessment results will be published on CEPI's 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.

¹ Finland, France, the Netherlands, Sweden.

² Belgium, Finland, the Netherlands, Sweden, UK.

Signatories



www.cepi.org



www.citpa-europe.org



www.erpa.info



www.europeantissue.com



www.ingede.org



www.intergraf.org



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