



MONITORING REPORT 2019

European Declaration on Paper Recycling 2016-2020



Table of Contents

1. Increase in the Recycling Rate due to strong and lasting PfR demand in Europe	2
2. Recycling Rate 2019: 72%.....	3
3. Progress in Qualitative Targets	4
4. European Paper Recycling Rewards 2019	6
5. 4evergreen: The new forum for the fibre-based packaging value chain	7
6. Data Quality: 2019 data	7

INCREASE IN THE RECYCLING RATE DUE TO STRONG AND LASTING PAPER FOR RECYCLING (PFR) DEMAND IN EUROPE

1

Since 2000, the European paper value chain has been committed to the two-fold aim of improving 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 2019, 72% of all paper and board consumed in Europe was recycled. The collection of paper for recycling decreased by 2.5% compared to 2018 and reached 57.5 million tonnes. Paper and board consumption has decreased more strongly compared to 2018 and dropped to 79.8 million tonnes. The recycling rate therefore increased from 71.7% in 2018 to 72% in 2019. Compared to the base year of the Declaration (2015), the amount of paper and board collected and recycled decreased by 1.6 million tonnes.

In Europe, the paper industry was constant in its use of paper for recycling. The drop in collection can be explained by a further reduction in Chinese demand for paper for recycling in line with the Chinese government's decision to reduce its dependency on secondary raw materials originating from third countries by 2020.

China has also introduced strict quality requirements on imported paper for recycling. As a consequence, for the first time in many years, China is not the first export destination of European paper for recycling, but has been overtaken by India. Other countries such as Turkey and Thailand have increased imports of European paper for recycling, too, but overall net exports of paper for recycling outside Europe have contracted by 16.2%.

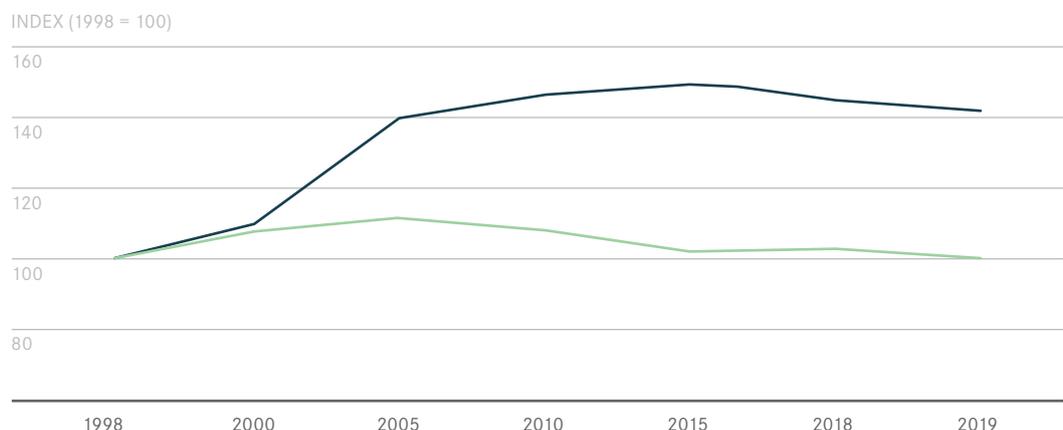
Whether or not the 74% recycling rate target by 2020 can be reached will depend on the development of paper and board consumption which will be impacted by the Covid-19 outbreak and general economic downturn. New recycling capacities are being built, but not all of them will come on stream due to the economic consequences of Covid-19.

The structural change in paper consumption patterns continued in 2019: decline in the consumption of newsprint accelerated in 2019 at a rate of 6.5%, while consumption of case materials, the other most recycled paper product, declined only slightly by 0.6%.

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 a regional level, the number of countries with a recycling rate below 60% was 8 in 2019, up from 7 in 2018. Over the past year, the number of countries exceeding recycling rates of 70% was 15, up from 14 in 2018.

At 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 3.6 times on average, while the world average is 2.4 times.

The EU has increased its targets for the recycling of municipal and packaging waste; it is clear that the functioning paper recycling chain is a key driver for meeting these targets. Paper recycling is a “Made in Europe” industry. It prolongs value creation and job opportunities in Europe from a renewable and 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 2019: 72% 2

The recycling rate in Europe reached **72%** in 2019.

In a year to year comparison, the total amount of paper and board collected and recycled in the paper sector decreased by 2.5% to 57.5 million tonnes, while consumption of paper and board decreased by 3% to 79.8 million tonnes.

Looking back at the progress made since 1998 – the base year for the first voluntary commitment set in the European Declaration on Paper Recycling – recycling has increased by 43.6% (17.5 million tonnes). In strong contrast, consumption since 1998 increased up until 2007 and dropped back to the initial level in the following years.

The net trade of paper for recycling is included in the European paper recycling rate (72% in 2019). 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 6.8 million tonnes (11.9%) of the total 57.5 million tonnes was bought by third countries, outside the commitment region of the EU-28, Norway and Switzerland. China has long been the country importing most European paper for recycling. But it has announced its intention to become self-sufficient in supplying its industry with paper for recycling and has consequently significantly reduced imports. In 2019 it was no longer the biggest third country importing paper for recycling from Europe, but was overtaken by India. Other countries such as Turkey and Indonesia have increased their imports. In the European paper industry, the use of paper for recycling was stable at 50.7 million tonnes. Without taking into account the net trade of paper imported by third countries for recycling outside Europe, the European paper recycling rate 2019 would have been 63.5% (up from 61.8% in 2018 and up from 60.4% in the base year of the Declaration (2015)).

EUROPEAN RECYCLING 1991-2019

Source: Cepi 2019

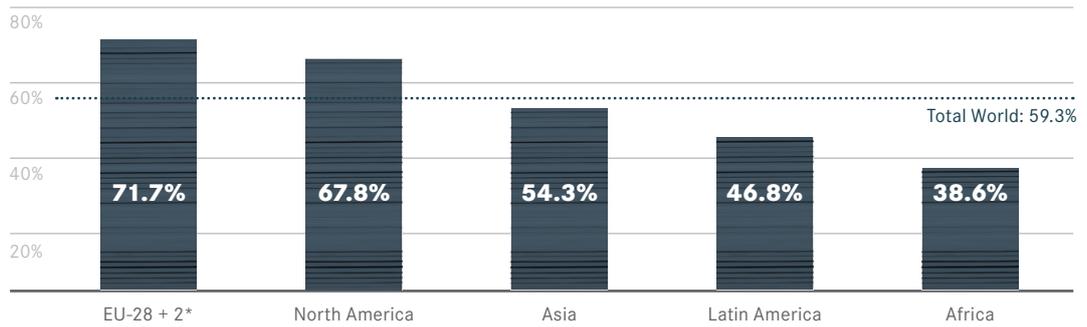
- Recycling outside Europe
- Recycling inside Europe
- Paper and Board consumption in Europe
- Recycling Rate



RECYCLING RATE IN WORLD REGIONS IN 2018

Source: Cepi, RISI – 2018

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



Europe is the paper recycling champion!

NATIONAL RECYCLING RATES IN EUROPE

15 European countries exceeded the 70% recycling rate (14 in 2018).
8 European countries were below 60% (7 in 2018).

Source: Cepi 2019

PROGRESS IN QUALITATIVE TARGETS

3

The European Paper Recycling Council (EPRC) members, representing 15 sectors along the paper value chain, committed to improving the recycling rate by 2020. By joining the European Declaration on Paper Recycling they demonstrated their commitment to qualitative targets. EPRC members are involved in initiatives to facilitate the recycling process and increase recycling activity. These include collection and applying ecodesign to paper products.

COLLECTION

ERPA

ERPA (European Recovered Paper Association) has encouraged its members and local authorities to adopt single stream collection and better quality control in collection and acceptance processes.

Cepi (the Confederation of European Paper Industries) has published "[Guidance on how to implement separate collection](#)" of paper for recycling. It builds on the European Horizon 2020 project "IMPACTPapeRec" and the Cepi position on the separate collection of paper for recycling. The document outlines that paper and board should be collected not only separately from residual waste, but also from other recyclables such as metal and plastic packaging. This is both due to European legislation and the desire to reach higher homogeneity and therefore higher economic and environmental value. It optimizes cost in the recycling value chain and is simple and easy for consumers. In addition to examples of recycling routes for specific products, it contains action points for municipalities. The International Association of the Deinking Industry (INGEDE),

Cepi and ERPA are continuously involved in establishing European Standards for the sampling and quality assessment of paper for recycling. EN 17085 – sampling procedures for paper and board for recycling – was finalised and published in August 2019. A new work item is in progress, the "Determination of Composition of Paper and Board for Recycling". The first draft was based on INGEDE Method 14. The discussion about a revision of EN 643 – the European list of standard grades of paper and board for recycling – has gained momentum. As an interim step, a guidance is under development on how to handle stains and minuscule food remains as well as used hand towels (selectively collected and recycled), since these items are listed under prohibited material in EN 643. A further activity is the revision of ISO 638 – the determination of dry matter content – with the objective of extending the scope to paper and board for recycling.

The beverage carton industry has created a new platform – EXTR:ACT – that is aimed at supporting collection and recycling of beverage cartons in Europe. The Alliance for Beverage Cartons and the Environment (ACE) supports an ambitious implementation of the Packaging and Packaging

Waste Directive. It specifically calls for the application of the requirement to separate the collection of packaging waste, which is essential to achieve a circular economy, as it increases the volume and the quality of materials available for recycling. This in turn creates a more predictable, high quality waste stream and a strong incentive for investment in recycling technologies. ACE calls for a mandatory national collection target for beverage cartons as a way to support transparency about collected/recycled materials and accurate reporting of collection and/or recycling rates. Increasing collection requires an efficient infrastructure and this should be a priority.

ECODESIGN

Cepi, ACE and the International Confederation of Paper and Board Converters in Europe (CITPA) together with the European Federation of Corrugated Board Manufacturers (FEFCO) have published [guidelines on the recyclability of paper based packaging](#). The document guides retailers and brand owners when designing new packaging with improved functionality. As well as explaining the reality of European collection schemes and the paper recycling infrastructure in Europe, it raises awareness of the main challenges for paper recycling and gives concrete recommendations on issues such as laminates, alternative barrier solutions, inks, adhesives and special papers.

In Germany, INGEDE prepared the launch of a technical committee for paper and board manufacturers and converters (as a first step) with a view to establishing ecodesign criteria for fibre-based packaging. The concept has subsequently been taken over by Cepi member VDP.

INGEDE continued its activities in the international standardisation of deinkability testing and assessment. Two ISO standards for testing deinkability and decolouration were finalised. It is leading the ongoing revision of the “Guide to an Optimum Recyclability of Printed Graphic Paper Products”, where the European Printing Ink Association (EuPIA) and the European Federation for Print and Digital Communication (INTERGRAF) are actively contributing. INGEDE ran several bilateral activities with companies – ink manufacturers and paper converters – on ecodesign.

In addition to its contribution to the Cepi-ACE-FEFCO-CITPA guidelines on recyclability of paper-based packaging, ACE has prepared a document entitled “Best Practices on beverage carton recycling” issued in May 2020. The document is intended to raise awareness of the recyclability credentials of beverage cartons, whilst highlighting what stakeholders in the value chain can do to facilitate further collection and recycling successes in the future. It is a first step in the industry’s effort to identify best practices relating to beverage carton collection and recycling. The industry will now develop a Design for Recycling Guideline which is expected to be delivered early 2021. It will provide more detailed technical criteria to ensure the recyclability of beverage cartons.

ERPA has spoken with beverage carton designers and asked them for consistent quality in their packaging.

INTERGRAF

Most printers in Europe offer ecolabelled printed products to customers willing to have their products labelled. Existing ecolabel schemes include national ecolabels as well as, since 2012, the European ecolabel for printed paper products.

The EU Ecolabel is granted to printed products that meet strict environmental criteria, in particular on the ecodesign of printed products. These include a waste paper criterion as well as a recyclability criterion. Regarding recyclability, printed paper applying for the EU Ecolabel must be recyclable and the non-paper components must be easy to remove. It also has to

prove de-inkability according to the ERPC de-inking scorecard. The EU Ecolabel for printed paper goes beyond existing high environmental standards and promotes environmental excellence. More than 130 licences of the EU Ecolabel for printed paper have been granted at European level, covering more than 330 printed products.

Initiated in 2018, the review of the environmental criteria for the EU Ecolabel for printed paper is due to be finalised before the end of 2020. INTERGRAF, EuPIA and INGEDE are active stakeholders in the review process. This new EU Ecolabel now covers a larger scope. In addition to printed paper, it includes stationary products, paper bags, envelopes and wrapping paper. The new criteria are more ambitious and provide the European Commission with a tool to enforce its ambitious product policy. CITPA member Pro Carton runs two design award schemes that promote ecodesign and the use of carton board:

- Pro Carton Young Designers Award – entries from over 450 students from 21 countries in 2019. Students were invited to submit novel designs made from carton board (which is renewable, recyclable and biodegradable). The “Save the Planet” category challenged students to showcase how recyclable carton board can reduce waste by replacing non-sustainable materials and thus helping to save the planet.
- European Carton Excellence Award – open to the whole supply chain to submit the best carton board products that have been sold on the European market. There is also a “Save the Planet” category where carton board has replaced a non-sustainable material.

The Association of the European Adhesive & Sealant Industry (FEICA) established a dedicated Task Force to discuss challenges and possible solutions for the recycling of packaging containing adhesive applications, thereby pooling and increasing expert knowledge in the industry.

RESEARCH AND DEVELOPMENT

INGEDE funded and monitored several research projects and investigations within the thematic scope of EPRC. These included examining the quality of paper for recycling and inspection, as well as the ecodesign of print products. In general, INGEDE widened its activities on recyclability of fibre-based packaging and co-sponsored research work in that area.

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. Different projects will soon be operational in Europe to recycle the polymers and aluminium used in beverage cartons. Among them, Palurec GmbH, a 100% subsidiary of the German association for beverage cartons (FKN), starts operations in summer 2020.

ERPA has investigated new ways to recycle beverage cartons.

In Germany, a publicly funded project aims to investigate the de-inkability of UV prints. The German EuPIA member, VdL, is a member of the advisory board for this project. In addition, 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 de-inkability of all types of prints produced by existing printing techniques.

EDUCATION AND INFORMATION

The activities of INGEDE, which were partly mentioned in previous chapters, also serve an educational purpose. INGEDE gave several lectures at public conferences and non-public working groups and committees.

The annual INGEDE Symposium, informing participants on the latest developments in recycling and de-inking, evolved from a members only event to a public event.

ACE members support awareness campaigns and the exchange of best practices on recycling technologies. This is done via the national beverage cartons associations present in 7 Member States, the UK and Switzerland, ACE representatives in Iberia, Nordics, South East Europe and Italy, and companies. In some cases, national associations support collection schemes.

ERPA informed institutional stakeholders such as the European Commission on the need to complete the single market for recycling, particularly with many European countries having increased collection, and the fact that Spain and Germany are net importers of recovered fibres.

EuPIA provided information to interested stakeholders relating to the suitability of paper and board made from recycled fibres for food packaging. This information is available on the EuPIA website.

The TICCIT (Trees Into Cartons, Cartons Into Trees) schools' education programme raises awareness of paper recycling for 8-11 year olds. In 2019, the programme was rolled out across Europe by carton converters and carton mills working directly with local schools. TICCIT sessions took place with over 1000 students in schools in Denmark, Germany, Italy, the Netherlands, Spain, Turkey and the United Kingdom.

TICCIT activities in 2019 included:

1. Development of a dedicated web page
2. Newsletters and promotional flyers
3. Social media posts across Twitter, Facebook and Instagram
4. Trade presentations, exhibitions and conferences
5. Translating programme materials into Dutch, Polish, Turkish, French, German, Italian and Spanish from the original English

TICCIT won the 2019 European Paper Recycling Award (EPRC) for Information and Education.

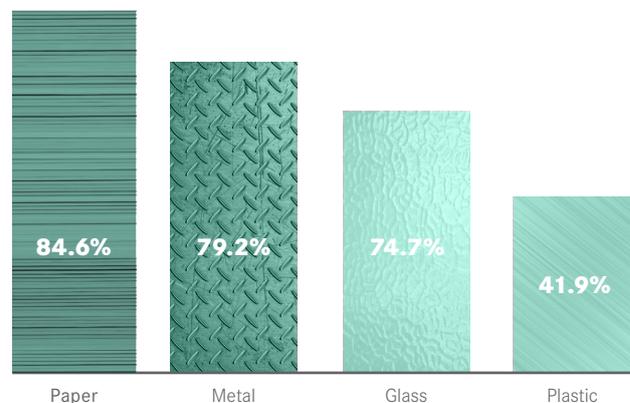
THE CARTON CAMPAIGNERS AND RICKI RECYCLE

In November 2019, a series of animated superheroes, made from carton board, were launched to showcase Pro Carton's "5Rs of Responsibility" – Reduce, Reuse, Recycle, Renew and Replace.

Ricki Recycle, one of the five Carton Campaigners, promotes recycling and shows us that boosting recycling rates – through an increase in the recyclability of packaging materials and improved recycling services for both consumers and businesses – can help us to protect our environment.

The Carton Campaigners are actively promoted across all Pro Carton's social media channels and have their own dedicated YouTube playlists in English, French, Italian and Spanish.

Paper and board is the most recycled packaging material in Europe



2017 PACKAGING RECYCLING RATES

Source: EUROSTAT

EUROPEAN PAPER RECYCLING AWARDS 2019

4

The European Paper Recycling Awards have the specific goal to highlight and reward European projects, initiatives or campaigns that change the way we recycle paper in Europe and help us achieve our ambitious goal of a 74% paper recycling rate by 2020.

The latest edition of the awards took place in the European Parliament and were hosted by Jytte Guteland (MEP) who thanked the winners for presenting excellent and game-changing projects in two categories: "Innovative Technologies and R&D" and "Information & Education". The winners of the 7th edition were the German company Repulping Technology GmbH & Co. KG for its technological developments and the international association Pro Carton for its educational work on recycling and its part in the circular economy.

Winner of the Innovative Technologies and R&D award, Repulping Technology, invented a new technology making the extraction of pulp fibres from products made from paper and other materials, a lot easier and more energy efficient. The company's new invention, the cavitation pulper, a machine exploiting the physical principle of cavitation, allows for an almost 100% recovery of the fibres from these products with around 50% better energy efficiency compared to other technologies.

Pro Carton set up a European-wide educational programme aimed at 8-11 year olds called TICCIT (Trees Into Cartons, Cartons Into Trees). The programme allows businesses across the paper value-chain to explain to children the many benefits of recycling, in the ideal educational context of a classroom. Appreciation by the children was high with an expected spill over effect in families, leading to a broader awareness of the importance of paper recycling.

“With the Green Deal, the EU has developed an ambitious plan to become the world’s first climate-neutral continent. The Green Deal sets a path for a just and socially fair transition that leaves no one behind. But the involvement in climate action from all sectors is crucial. The European Paper Recycling Award is a great way to shed light on innovative, best-practice projects and initiatives in the field of paper recycling and I am very glad to see the strong interest and the innovative applications that we have received” commented Jytte Guteland, Swedish politician, Member of the European Parliament Committee on the Environment, Public Health and Food Safety, host of the EPRC Award 2019 and member of the jury.



A [video](#) was prepared explaining this and other tools which can be found on the [website](#).

4EVERGREEN: THE NEW FORUM FOR THE FIBRE-BASED PACKAGING VALUE CHAIN

5

4evergreen is an ambitious cross-industry alliance created by Cepi, the Confederation of European Paper Industries, in November 2019. It currently counts 52 members across the fibre-based packaging value chain, from paper and board producers to packaging converters, brand-owners and retailers, technology and material suppliers, waste sorters and collectors.

The rise of environmental awareness has prompted companies to accelerate their demand for and development of alternative packaging materials, including fibre-based packaging, with a view to help consumers make more environmentally and climate-friendly choices. The European Directive on Single Use Plastics (2019/904) was an additional catalyst for taking action regarding coatings and barriers used on paper and board packaging articles.

With these concerns at heart, and as a circular economy leader, the fibre-based packaging industry created 4evergreen to

further improve circularity at every stage of the packaging life cycle. 4evergreen seeks innovation in packaging performance and packaging functionality as well as improving performance in recycling systems to reach the full potential of the circular economy. Fibre-based packaging is already a strong contributor to the European circular bio-based economy: 84,6% of paper and board packaging is recycled. This means that, in volume, we recycle more than all other packaging materials combined. The wide participation along the entire packaging life cycle allows us to identify and advance systemic improvements.



DATA QUALITY: 2019 DATA

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The data used to calculate recycling rates is collected by Cepi. It comes from a questionnaire sent 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. 2018 figures in this report).

Following this rigorous process, the 2018 recycling rate was confirmed as 71.7% in line with the initial results published in the 2018 Monitoring report.

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.

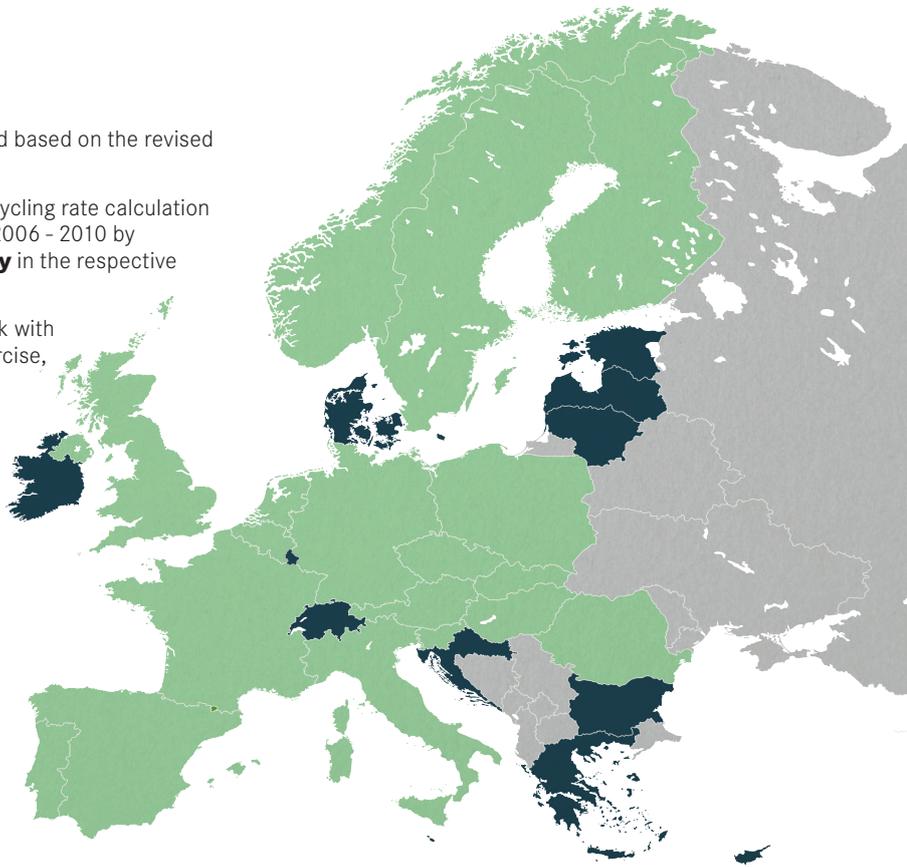
Other countries² have adjusted paper and board consumption figures with the opposite impact.

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 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 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-28 plus Switzerland and Norway by 2020 as well as qualitative targets in areas such as waste prevention, ecodesign, and research and development.

Signatories



www.cepi.org



www.citpa-europe.org



www.emfa.eu



www.euric-aisbl.eu



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