



Awareness

Improving the quality of paper for recycling

Newsletter of the EcoPaperLoop Project

2nd Edition – July 2014

Impressive Figure: 71,7

In 2013, paper was recycled in Europe at the impressive rate of 71,7%. This achievement is doubly remarkable considering that since the pre-crisis peak year of 2007: paper consumption in Europe has dropped by 14% whereas collection and recycling volumes have been retained at a very high level.



The large majority of the 11 countries still under a 60% recycling rate have reported an improved performance. In parallel, 13 countries have already exceeded the target 70% recycling rate. Paper fibre is now collected and recycled an average of 3,5 times in the 30 European countries, far exceeding the world-wide average of 2,4. And: Paper recycling adds green jobs, skills and innovations to the European economy!

Jori Ringman-Beck, CEPI

On the way to a sustainable paper loop in Central Europe: Recyclability Scores for Packaging: How good is your box after use?

What impact does a printed product have on the recycling process? For graphic papers, the "Deinkability Scores" of the **European Recovered Paper Council (ERPC)** are an established instrument for a couple of years. But for pack-

Central Europe can now perform this method", says **Graziano Elegir** of **INNOVHUB-Stazioni Sperimentali per l' Industria** in Milano who is the Project Coordinator for EcoPaperLoop. *More about the test method on the following pages.*



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aging, a reliable routine was not available yet. In the course of the EcoPaperLoop Project, a new test procedure has been developed at **Technische Universität Darmstadt** and verified and harmonised with the project partners.

"I think it is quite important to state that four laboratories in

Awareness is a key issue – and communication is an important element of the project. A variety of presentations has been and will be given, including participation in relevant exhibitions and conferences, such as the **PTS Symposium on Innovative packaging** in Munich and the **Ecomondo Exhibition** in Rimini coming up this November. ●





How to test the recyclability of packaging: Method published

For easy processing of paper for recycling it is essential that packaging products are manufactured with good recyclability in mind. This means the packaging products have to be produced mostly from fibres which have to be easily disintegrated. This increases fibre yield and reduces energy demand as well as the amount of rejects to be disposed.

Alike, adhesive applications used for the packaging products have to be shear resistant to withstand shear forces during stock preparation processes, and to fragment only to adequate particle sizes, which can be removed successfully during the process.

This laboratory method, developed as part of the EcoPaperLoop project, defines a procedure to assess the processing of packaging material. Thereby the content of non-paper components, content of difficult to disintegrate material (the flake content), the macrosticky potential as also the ash content and fibre yield after a disintegration step is investigated. The determined data can be used for the assess-

ment of packaging product recyclability. A general assessment scheme is being discussed but not available yet.



The lab procedure

The main steps are sample preparation, disintegration, coarse screening, flake content evaluation, macrosticky potential evaluation, and finally the preparation of a handsheet. For this, a defined amount of the packaging material has to be prepared and afterwards disintegrated at low consistency.

The generated suspension has to be screened using a hole screen. The reject on the screen has to be evaluated gravimetrically and the yield has to be calculated.

EcoPaperLoop Seminars coming up:

7 October 2014 in Milan

9 October, 2014 in Munich

Which collection system delivers the best quality of paper for recycling? How do you design a paper product to be recyclable? These and more questions will be discussed at the final seminars for everybody in the paper chain: recyclers, printers, publishers or agencies as well as packaging converters.



EcoPaperLoop Project Final Conference
2 December, 2014, Krakow



The screening accept has to be homogenised and analysed for flake content. For the macrosticky area, the determination follows a macrosticky method based on IN-GEDE Method 4. From the accept of the macrosticky screening step, handsheets have to be prepared. Furthermore from the accept of the coarse screening step the ash content has to be measured and the fibre yield to be calculated.

The full method has already been published, and a video demonstrating the procedure is already available in English – soon also in the other project languages at www.ecopaperloop.eu. ●



Round Robin Test done, Recyclability Scores yet to be decided

In order to be able to use the results of the recycling test, parameters have to be found that convert lab results into a practical evaluation. For graphic paper, the “**Deinkability Scorecard**” has been established in 2009 already. A similar scorecard for packaging is currently being discussed and finalised.



The target of the recyclability tests for packaging is to improve the quality of paper for recycling. Due to the high utilisation rate of recovered paper it is necessary to enhance the recycling behaviour of used packaging products. Once the project is finished and the scorecard for packaging products has been established,



the paper industry, the converters, the packaging industry, in principle



the complete paper chain including the designers developing new sustainable packaging will have the opportunity to verify the re-

cyclability performance of their products by using a common method. With the assessment of the recyclability it is possible to optimise the design of packaging products in order to improve the recycling behaviour of recovered paper in general. ●

Professional Day of Packaging Technologists in Budapest

The Professional Day of Packaging Technologists has been organized yearly for 15 years. The last one has been performed at the Sándor Rejtő

ing and Materials Handling as well as Óbuda University, University of West Hungary, and Budapest University of Technology and Economics. From the industry, the paper, printing, and packaging sector were represented; also the Budapest City Archives.



Faculty of Light Industry of Óbuda University on May 23, 2013 in Budapest, Hungary.

Interested participants came from the Technical Association of the Hungarian Paper and Printing Industry, the Hungarian Association of Packag-



Among the 14 presentations of the day, István Lele, director of the Hungarian Paper Research Institute and associate professor of the University of West Hungary, Faculty of Wood Sciences, informed about the goals of the EcoPaperLoop project. ●

EcoPaperLoop in Ljubljana

For the EcoPaperLoop Seminar at the **University of Ljubljana**, in January **Diana Gregor Svetec** was able to welcome a variety of guests from science, trade, politics and industry.



In the opening keynote lecture, **Antonija Božič Cerar** (above) from the Slovenian Chamber of Commerce (Gospodarska zbornica Slovenije) gave an overview over national Slovene and EU regulations. **Hans Putz** of PMV in Darmstadt introduced the recyclability evaluation for packaging (see previous pages) and **Andreas Faul** of erma concepts presented different eco-labels for printed products.



Ilpo Ervasti (above) from the Department of Industrial Engineering and Management of Aalto University in Finland tried to sort the "Chaos in terminology related to recycling in the paper industry", starting with the evolution in the terminology from waste paper to paper for recycling.

All presentations and more information can be found on the website www.ecopaperloop.eu.

EcoPaperLoop Seminar in Ljubljana: "I'll be back", says the newspaper

A "World Café" was conducted to collect the best ideas from branch experts, public authorities and other participants of the Ljubljana event. The "brainstorming" was part of the seminar in order to gather as much as possible information and points of view.

Overall, "The World Café" is a structured conversational process in which four groups of people were discussing a specific topic at separate tables. Graziano Elegir moderated the discussion about "Recyclability", the second table dealing with "Collection strategies" was lead by Harald Grossmann, the third table presented by Andreas Faul discussed "Public awareness", and the fourth topic "Legislation" was managed by Gorazd Golob.

Participants, divided in four groups, switched tables periodically. The leaders of the tables gave short introduction to the previous discussion held at specific table, and then the audience was asked to suggest how to approach in solving the topic from their point of view. At the end of each of the four sessions, stickers were labelled on the sheet of paper so that the next table host's view of what has been already discussed or pointed out.

Some key points of the discussion were:

Recyclability

A general lack of knowledge regarding the most important constrains for the recyclability of paper-based products was highlighted. Lack of information is present along the value chain particularly in the case of converters, retailers and brand owners.

Collection Strategies

Collection strategies do differ from country to country, they even distinguish one from another in the same country. A unique collection strategy does not and cannot exist, namely due to the diversity of national legislation, inhabitants and after all the countries' diversity.

Public Awareness

The paper industry needs a face lift with clearer expressions on the paper product like "Please recycle this product" oder "I'll be back" with possible options like another newspaper or new packaging.

Legislation

There was consensus that there is no need for more legislation oriented towards the end user. Regulation on collecting, sorting and use of paper for recycling should be minimised. ●