WP6

Translation of the research into new policy guidelines

Roadmap Report for the Implementation of Project Results into New Policy Guidelines

December 2014

Content

I. Introduction

This document is a core output of the Work Package 6 (WP6) of the EcopaperLoop, "Ecodesign for the Enhancement of the Central Europe Paper Based Products Recycling Loop" project.

A roadmap for the improvement and harmonization of policy rules in the region was developed, based on the identification of obstacles and weaknesses in the current legislation regarding paper for recycling with the highest possible consensus of relevant stakeholders.

An updated state of the art concerning body of rules of paper products was prepared (Output 6.1.1.), including Green Public Procurement scheme (Output 6.2.1.) as a basis for the stakeholders consultation.
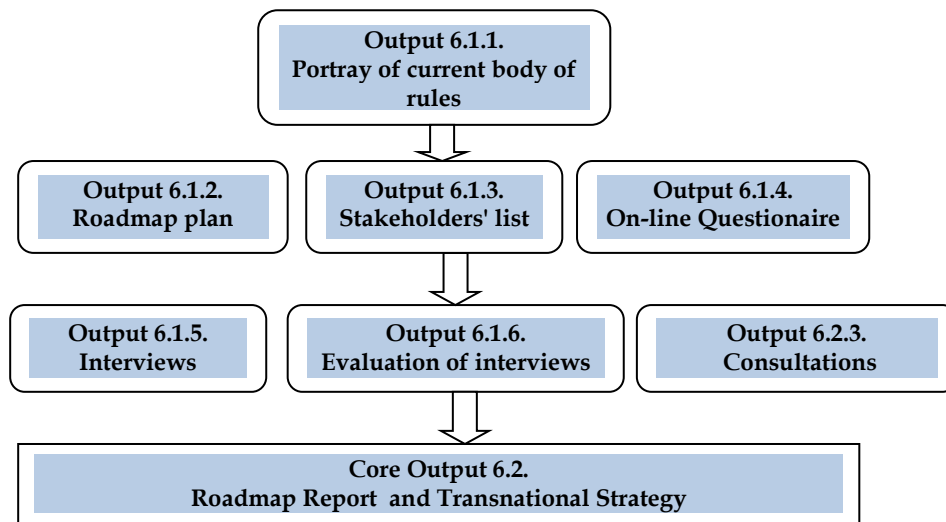
Roadmap plan was developed defining scope and activities for the consultation with the relevant stakeholders in the region (Output 6.1.2). Relevant stakeholders and contacts in each country of the project were identified and organized in joint database (Output 6.1.3.) and common questionnaire on stakeholders' attitude towards present body of rules developed (Output 6.1.4.).

As result, 113 interviews with different stakeholders in the region are available and evaluated (Output 6.1.5.). Collection and interpretation of interviews with stakeholders is presented in transnational context report (Output 6.1.6.), including stakeholders from all project countries, Austria, Germany, Hungary, Italy, Poland and Slovenia.

Stakeholders consultation is organized in each country of the project and two international roadmap brainstorming meetings implemented (Outputs 6.2.3, 6.2.4.).

Based on the analyses of the body of rules and the conclusions from the stakeholder's consultations draft Roadmap is elaborated as a set of policy guidelines and recommendation for the improved legislation on paper recycling. Roadmap is discussed with the project advisory board members and paper associations of the CE region and final version adopted by the project partners.

The proposed guidelines target European, national, regional and local policy makers designing regulatory environment for waste management and paper recycling.

II. Summary of the results of previous outputs

II.1. Roadmap consultation plan

The aim of the consultation is to identify the main constrains in the present body of rules on paper recycling and set recommendations for the policy strategies to improve recovered paper quality, with the highest possible consensus of the key stakeholders.

Strategic policy objectives and targets represent the starting point for the discussion. Circular economy is one of Europe's key strategic objectives ("Towards a circular economy: a zero waste program for Europe"). Comprehensive strategy and framework program is established for the promotion of higher resource efficiency that will reduce demand for scarce resources and thus contribute to the competitiveness of the EU economy. Legislative proposal to review recycling and other waste-related targets in the EU was adopted to ensure increased recycling and re-use of valuable materials, stimulating new business models, eco-design and industrial symbiosis that can lead towards zero-waste.

High and effective paper recycling contribute to the overall objectives, saving renewable raw materials, reducing energy consumption and emissions. Paper and paper converting industry is supporting the overall objectives. However, re-use of recycled paper and thus long term sustainability of the paper loop depends on the

quality of paper for recycling. Although it is still potential to increase the rate of recycling EU is nearing capacity in this respect. Policy measures are needed to improve collection and thus quality of paper for recycling. Keeping recovered paper in Europe and ensuring quality fiber for the industry is the challenge (CEPI, The Road to 2050).

The scope of the discussion is enhancement of the paper for recycling quality in the region. The topics are defined in the following statements.

- Paper for recycling (PfR) quality is affected by two main issues: recyclability performance of paper based products on the market and collection strategies of paper based products.

- EU member states are committed by Waste Framework Directive to set up collection schemes for different materials to promote high quality recycling. EU legislation is not implemented at the same level in all countries therefore the RP quality is highly dependent on local collection systems. The topics are:
- What are the best strategies and policies to improve the collection systems and achieve the targets?
- How to ensure harmonization of the legislations and systems in the CE region?

- The present body of rules on paper for recycling covers several areas. Eco-design, voluntary certification schemes (i.e. eco-label) and also green public procurement are parts of the Packaging and Packaging Waste Directive as well as other legislation. Key questions are related to the definitions and criteria for recyclability performance of paper-based products and the stronger promotion of eco-design in the overall policy.

II.2 Current body of rules on paper recycling

A legislative overview was conducted, the objective of which was to recognize legislative requirements with regard to their relevance to paper for recycling. Emphasis was placed on general waste legislation and packaging and waste packaging legislation as well as recommendations pertaining to products and eco-design of products such as green public procurement guidelines and the development of EU ecolabel specifications for different grades of paper products. Finally a desk study was conducted to compare the implementation of waste legislation and product guidelines in the individual project partners' countries.

As any other waste stream, paper waste is covered by the waste framework (2008/98/EC) directive and is included in the list of waste (European decision

2000/532/EC), where it is named in five waste origins sections (3 - the paper industry, 15 - packaging; 18 - health and sanitary, 19 - residues from waste management treatment and 20 -municipal waste). Paper was one of the waste material streams from household and small business origin, which was targeted by the demands, set in article 11 of the directive, requiring separate collection by 2015 and preparing for reuse and recycling to a minimum of overall 50% by weight by 2020.

Paper for recycling originating from packaging is covered additionally by the packaging and waste packaging directive 94/62/EC. This directive introduced the concept of extended producer responsibility linked to eco-design through the definition of essential requirements for packaging that include the EN standard 13430 for recyclability of materials and free movement of goods. Though EN 13430 does not cover paper packaging specifically, its general rules for better material recycling apply also for paper products.

Eco-design recommendations for packaging and waste packaging have been elaborated in the packaging standards (EN 13427, EN 3428, EN 3429, EN 13430, EN 13431 and EN 13432). As mentioned, EN 13429 is devoted to material recovery i.e. recycling aspects of packaging materials and general good practice guideline to secure recycling of different packaging materials.

Paper product environmental criteria are covered by the criteria for awarding the ecolabel for; copying and graphic paper (Commission Decision 2011/332/EU), for newsprint paper (Commission Decision 2012/448/EU), for printed paper (Commission decision 2012/481/EU amended by 2014/345/EU), for tissue paper (Commission decision 2009/568/EC prolonged by Commission decision 2013/295/EC) and the latest criteria for converted paper covering envelops, paper carrier bags including packaging and stationery paper products (Commission Decision 2014/256/EU).

In 2008 the European Commission adopted a Communication (Public Procurement for a Better Environment, 16 July 2008), which set a target for Member States to achieve a level of 50% green public procurement (GPP) by 2010 (defined as complying with the priority GPP core product criteria). GPP is an opportunity to increase awareness of product environmental aspects and the uptake of sales of goods with a lower environmental impact through criteria set down in public procurement tenders, which are usually based on criteria set in ecolabel awarding decisions.

Under the current waste framework directive a study and regulation proposal were prepared for paper end-of-waste status. The proposal was rejected as it was considered an end-of-waste status for paper would expedite the loss of waste paper

recycling resources in the EU. Waste shipment regulation (EC) No 1013/2006 is an important safeguard to prevent this loss, though supervision does need to be improved in this area.

Twenty years after the initial packaging and waste packaging directive was put in place and five years since the waste framework directive was modernized, both directives are again under discussion, especially with regard to circular economy targets, where paper plays an important role. Along with new targets current deficiencies have been emphasized to improve waste management efficiency. It has been recognized that major differences regarding waste management practice, waste service coverage and efficiency exist between countries.

Desk study proves that all project partners' member states strive to achieve compliance with common EU rules but differences exist in their practical implementation, with some countries struggling to achieve target values and others exceeding them significantly. This can be attributed to how long rules have been applied, i.e. Germany has a very good and transparent track record concerning waste paper management, with relevant statistical data easily accessible through the web. It is also the country with the longest tradition in extended producer responsibility with regard to packaging and waste packaging and it has a waste law which is linked to product life cycle.

Italy, Hungary and Slovenia have made huge improvements during the last few years and are on track with targets. The Italian system has a good link to material and cost efficiency stimulating all the stakeholders in the value chain, not only producers, to contribute to greater efficiency. Hungary, Slovenia and Poland are all in the process of refining their national legislation to surpass targets and conform to new objectives being set at EU level. As some legislative and structural changes have occurred quite recently (2010, 2012) official records of their effectiveness are not yet readily accessible through existing public websites.

While some countries have developed national labeling criteria, all countries employ the use of the ecolabel, which currently includes five decisions relevant to environmental criteria of various paper product groups.

Environmental criteria in public procurement procedures are more or less a legislative requirement in all countries with some countries prescribing exact environmental criteria and others relying more on the dissemination of good practice, contract templates and other softer tools.

It is surmised from the EU end-of-waste study that little recyclable paper is lost to incineration, combustion in larger plants or landfill. All of these disposal options are covered by additional existing or pending common legislative acts. More paper is

most likely lost through burning with biomass in household stoves and furnaces, which is an issue needed to be addressed by awareness raising activities.

The conlusions from the anylyses can be summarized as follows. The main barrier to even more efficient recycling lies within the waste paper streams collected from municipal waste. Clean waste streams from industry and larger sources seem to travel and be subsequently processed through recycling activities efficiently, without requiring much additional sorting while mixed sources from households pose the key to more efficient paper reuse and recycling. As households are the target for massive streams of consumer goods it is also where a lot of waste of mixed origin and quality ends up. This paper waste stream is also vulnerable to public awareness and appropriate waste separation from the paper waste stream entry point at household level.

A desire to improve these rates is reflected in the waste directives, where paper is one of the targeted waste streams with efficiency objectives for re-use and recycling. Separate collection is vital to avoid contamination of waste streams, but it would be unreasonable to impose additional bins for separate collection of individual paper waste streams, such as newspapers, paper packaging etc. on households. It is probably most optimal to collect paper from various sources together, as it is currently the practice in most municipalities throughout Europe. It is vital though to prevent cross contamination and mixing of paper with other waste streams.

In most countries it is common for private waste collection companies to collect waste from larger production organizations where resulting waste paper streams are usually of high quality, and public municipal waste service providers are responsible for the waste from households and smaller private entities. The quality of these waste paper streams is not always clearly documented. A fraction of waste paper collected from households inevitably goes to landfill, incineration of biological treatment together with other household refuse or is even burned in stoves and furnaces within the household. The new waste legislative proposals currently in discussion place greater emphasis on country reporting to eliminate the discrepancies between country waste management performances.

Efficient collection and recycling is very much dependant on the awareness and knowledge on the recyclability issues among all the actors in the value chain. Through years of experience a general awareness on importance of recycling to save trees and forests by using recycled paper has been developed within the population. Much less knowledge exists regarding conditions that determinate the quality of paper for recycling. These issues are recognized and covered in the legislation, related to eco-design and green public procurement. Deficiencies in this field are recognized and are being addressed in the legislation package currently in discussion.

In most of the EU countries, strategies are focused on the waste stage of the paper lifecycle and eco-design is not promoted or encouraged sufficiently. Schemes in support of extended producer responsibility are missing both in relation to material as well as financial flows. The minimum requirements for extended producer responsibility have to determine necessary information about the available collection systems for waste holders.

Eco-design criteria included in the ecolabel regulation and green public procurement are technical. Little is done to support and include the societal postulate, like the one included in the 12 facts of ecological design defined by the Industrial Designers society of America in 1992 which states: "Use product design to educate on the environment".

II.3 Evaluation of the interviews with stakeholders

Stakeholder's attitude on the present body of rules on paper recycling was assessed with the common questionnaire "EcoPaperLoop Questionnaire on Policy and Regulations". Questionnaire was structured in three groups of questions related to:

1. Paper recycling policy and goals
2. Respondent's opinion on legislation regarding paper recycling
3. New proposals regarding paper recycling policy and legislation.

All together 113 stakeholders' responses are available and evaluated. Interviews were conducted in all countries of the project in different numbers, the highest from Germany (49), Italy (20), Poland (17), Austria and Slovenia (12), and Hungary (3).

Consultation included all relevant stakeholders, paper and paper packaging producers, waste management companies, local/regional authorities and citizens (associations, institutes, civil organizations…).

Respondents expressed their attitude towards present policy and goals. The most important observation is the demand for change in policy focus. Sustainability, retrieving fibers as natural resources should be the main policy goal and focus, including also reduction of residual waste and waste management. Material recovery should prevail upon energy recovery and composting.

Respondents evaluate present regulation on paper recycling in general, at the EU and national/regional level, as acceptable. The most important EU legislation, directly concerning respondent's activities is Waste Framework Directive 2008/98/EC and

Packaging and Packaging Waste Directive 94/62/EC. Majority of the stakeholders now these directives and they are directly dealing with them. Landfill directive and shipment of waste regulation is also known among the majority of the respondents, but the share of those directly dealing with these regulations is lower.

The most important obstacles and weaknesses in the present regulation were defined. Legislation is lacking comprehensive approach and completeness. Prioritization of material recovery versus energy is needed as well as more emphasis on the closed loop recycling management in general. Clear definitions and quality standards, including certification methods and guidelines, are needed for the collection and sorting of paper for recycling. Quality standards and the promotion of eco-design for paper products are also ranked important. Definition of end of waste and trading rules was outlined.

The status of recycling paper (reject, end of waste), inconsistency between EU and national/regional regulation (conflicting norms), and slow and bureaucratic processes of authorization were outlined as the most important problems stakeholders are facing with within the current legislation.

In their comments respondents were very critical about the communication between authorities and industry. Lack of understanding of real issues on the market among authorities and lack of cost/benefit calculations was mentioned most often as the main cause of the outlined weaknesses.

Improvements of present regulation are needed, but higher awareness of recyclability issues was marked even more important. Stakeholders stressed the importance of education of all concerned actors and the support for technological progress in order to achieve targets.

Respondent's attitude towards present legislation and proposals for the improvement of the paper recycling policy can be summarized as follows.

- Present regulation on paper recycling is, in general, acceptable, but there are rooms for improvement. The status of recycling paper (reject, end of waste), inconsistency between EU and national/regional regulation (conflicting norms), and slow and bureaucratic processes of authorization were outlined as the most important problems that stakeholders are facing with within the current legislation.

- Respondents are supportive to new proposals for regulation of optimal use of paper for recycling. Especially, they support the change of focus, treating paper

for recycling as a resource not waste. For that, improvement in the collection system is needed. Determination of recyclability, including criteria and evaluation methods for certification is of high importance.

- Promotion of the importance of the recycling for the EU circular economy is equally important as regulation. For the future, it is suggested to encourage the paper value chain to increase the production of recoverable and recycled products and for the policy to invest in awareness raising activities and education for all actors involved in the paper loop.

- Regulation should be more market oriented, especially concerning collection strategies and rules, ensuring open and competitive market, simplifying norms and procedures for authorization.

- Higher consistency between EU and national/regional legislation is needed, ensuring equal understanding and level of implementation of EU regulation in the region. Overlapping between EU and national/regional legislation should also be avoided to achieving simplified and transparent rules and norms in the whole region.

- Green public procurement is important tool to increase the recycling. It should be obligation for the authorities and present part of the general policy, stimulating private sector (i.e. by the tax policy).

II.4 Reports from the roadmap consultations

Besides interviews, consultation plan to obtain information and attitude of different stakeholders' groups on present legislation on paper for recycling included also discussion with the stakeholder at international and national meetings. Two brainstorming sessions were organized during the project partners' meetings, with the members of the advisory group and supported institutions as well as invited actors from the paper loop. National conferences and round tables were organized in partners' countries, Germany, Italy, Hungary, Poland and Slovenia. Opinions, thoughts and experiences were shared among different stakeholders and summarized in the key statements.

First roadmap brainstorming session was organized at the project partners' meeting in Ljubljana, Slovenia in January 2014. Session was held as a part of the seminar "How to improve paper for recycling; present regulations and steps further".

Discussion, organized in a form of World Cafe aimed to gather information and attitude of the experts, public authorities and actors in the paper chain (from production, waste management, sorting and recycling) on the present body of rules on paper recycling, analyzed within the project. Four topics were discussed, arising as key issues from the analyses; recyclability, collection strategies, awareness raising and legislation.

Second brainstorming session was organized during the partners' meeting in Sopron, Hungary in July 2014. Discussions followed the presentations on the project results and key statements defined in the previous consultations.

National consultation events were organized around the same topics. In general, they supported the conclusions and suggestions from the previous discussions and add some specific recommendations.

Discussion on the recyclability could be summarized as follows. A general lack of knowledge regarding the most important constrains for the recyclability of paper-based products was highlighted. Education of all actors in the value chain is a prerequisite to achieve higher recyclability. Higher emphasis should also be given to producers' responsibility. Recyclability test is necessary as the umbrella for methods and links with the existing standards. Clear guidelines, design rules and criteria shall be available for all actors involved.

Regarding collection strategies, participants exchanged experiences in different countries. Collection strategies differ from country to country; they even distinguish one from another in the same country. Uniform collection strategies do not and cannot exist, due to the diversity of the countries. To improve the strategies, best practices should be exchanged and adopted. Nevertheless, some basic common principles of key importance for the quality of the paper for recycling were outlined. Paper should not be treated as a waste; sustainability should be promoted as a main objective. For that, collection strategies should follow the objectives of ensuring single waste streams and traceability, sorting at the source and short paper loop.

Discussion was opened on how to achieve higher public awareness on two key issues determining the efficiency of the paper loop; recyclability and collection strategies. The main conclusions, agreed among the stakeholders are that responsibility for the promotion should be on all actors in the value chain, from producers to the customers, and better information and education is needed on the whole paper loop, to ensure higher awareness about key issues and constrains for the quality of paper for recycling. Policy should motivate producers, collectors and customers, using different policy measures and rewarding schemes.

Several issues were opened regarding present regulation on paper for recycling. General opinion of the participating stakeholders is that we should avoid overregulation. They reject new legislation and new bans in the process. Instead, the focus should be given on sound implementation of the existing legislation in all regions and on higher investment in the promotion and education of all actors involved. Again, stakeholders outlined the importance of education, promotion and stimulation for recycling, stating that it is more important and effective as extended legislation. Market should regulate the use of recycled products.

Improvements and additional recommendations on eco-design and collection strategies are suggested. Eco-design is stressed importantly as a way to improve recyclability rate and efficiency of the paper loop. General rules are needed on EU level. Eco-design should be clearly defined and stimulated. The use of ecolabel on publications and paper-based packaging shall also be improved, however not prescribed by the legislation but recommended and stimulated, i.e. by tax and fee policy. Rules of recyclability should be included in the green public procurement. Recyclability of the final product is more important than content of the recycled fibre in paper.

Regulation on collection and sorting should be minimized. Rather than new bans and extended regulation, higher investment in awareness raising and promotion as well as development of additional recommendations and guidelines is proposed.

III. Roadmap report

The roadmap attempts to set guidelines for the policy on how to further improve common strategy and legislative framework on paper recycling loop to reach recyclability targets and to ensure availability and good quality raw material for the paper industry.

EU strategy and framework program for promotion of circular economy defines the community strategic objectives. New targets are foreseen in both the waste framework and packaging and waste packaging directives:

- Waste allowed to be disposed of in landfills will be limited to less than 25% of the total amount of municipal waste generated in the previous year by 2025.
- By January 1st 2020 the recycling and reuse of municipal waste shall increase to at least 50% by waste and by January 1st 2030 recycling and reuse of municipal waste shall increase to at least 70% by waste.

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- By the end of 2020, a minimum of 60% by weight of all packaging waste will be prepared for re-use and recycled with the minimum target for paper and cardboard set at 85%.
- By the end of 2025, a minimum of 70% by weight of all packaging waste will be prepared for re-use and recycled with the minimum target for paper and cardboard set at 90%.
- By the end of 2030, a minimum of 80% by weight of all packaging waste will be prepared for re-use and recycled with the minimum target for paper and cardboard set at 90 %.

Industry has been strongly contributing to the achievements of the overall strategic objectives and targets so far and is supportive to the new proposals, included in the EU framework package, such as the progressive landfill ban on recyclable waste, better reporting of data, new requirements on waste exports to fight against illegal shipments of waste, the link between innovation and ambitious recycling targets, and others. However, key issue for the industry remains improving paper for recycling quality. This should be in the focus, clearly defining recycling as high quality processing/recovery of materials so as to contribute to higher resource efficiency and sustainable access to raw materials.

I.

Set of policy recommendations in regard to the present body of rules and future targets presented here is developed though the consultation process with a high consensus of the key stakeholders involved.

Recommendation No 1

Change of focus of the overall policy regarding paper recycling is needed, prioritizing material recovery and sustainability.

Maintaining and ensuring quality of paper for recycling should be the main objective. Stakeholders involved in the consultation expressed their strong opinion on the need for well-defined policy goals at the EU level, focusing on the sustainability, retrieving fibers as natural resources.

The need for stronger focus is justified in the market trends. The paper recycling rate in Europe has reached 71.7% in 2013. Recycling has increased by 45% since 1998, the base year for the first voluntary commitment set in the European Declaration on Paper Recycling by the European Recovered Paper Council (ERPC). The total amount of paper collected and recycled in the European paper sector remains stable at just over 57 million tones, despite decreasing paper consumption in Europe. Paper fibre

is now recycled an average of 3.5 times in Europe, far exceeding the world-wide average of 2.4.

CEPI, Key Statistics 2013

13 European countries have already exceeded the targeted 70% recycling rate. The countries which did not achieve the target yet (recycling rates below 60%) are also reporting improvements in recent years.

EU is reaching limits regarding paper recycling rates. It is estimated, that overall 19% of paper consumption is not recyclable or collectable. At the same time, the waste paper streams are changing. Market trends and different consumption patterns are setting new challenges for paper recycling. Decline of the graphic paper markets (esp. newspaper consumption) is casing decrease of the amounts of best quality paper for recycling. The share of paper for recycling collected from municipal waste is growing due to the growing market for paper based multi-functional and multi-material packaging (barrier coatings) and food contact packaging. The quality of paper for recycling from the waste of mixed origin is lower and presents constrain to the higher and efficient recycling.

Taking into account defined targets (increasing quantity of collected paper with growing share coming from households) and market trends (less newsprint, more packaging) maintaining the quality of paper for recycling is becoming more and more challenging.

Policy guidelines:

- Ambitious targets are achievable only, if comprehensive approach to policy design and implementation is ensured, following the objective to maintain the quality of paper for recycling and thus focusing on the key preconditions, being eco-design and better sorting.

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- Sound implementation of the legislation and supervision of efficiency regarding achievements of the targets at all levels is essential.

- More market oriented approach is expected, based on the knowledge of real market issues and cost/benefit analyses, implementing both supply and demand side policy measures.

Recommendation No 2

Present regulation on paper products is generally acceptable. There is room for improvement, but no new bans or expand of legislation is expected. Education, promotion and stimulation of all actors in the value chain are more important and efficient to reach the targets.

Present legislation related to the paper for recycling defines general requirements. No specific environmental obligations apply for paper products. The waste packaging directive gives reference to the EN packaging standards which provide guidelines on how to implement essential packaging requirements for all. When paper enters the waste stream, the general rules covered in the waste framework directive apply, as for all other materials.

Regulation should maintain general and minimized, especially when concern collecting, sorting and use of paper for recycling. To detailed legislation on specific topics would lead to overregulation and could become a barrier to development.

Nevertheless, obstacles and weaknesses in the present regulation exist that need to be improved.

Policy guidelines:

- Legislation is lacking comprehensiveness therefore more emphasis on the closed loop recycling management is needed with clear responsibilities of all actors.

- Recycling is adequately placed in the waste hierarchy of the waste framework directive, but clear definitions and quality standards for determination of recyclability, including certification methods and guidelines, are needed at EU level.

Eco Paper Loop

- Ensuring implementation of existing legislation in all countries and consistency between EU, national/regional regulation should be the priority. Higher transparency is needed to ease the implementation.

- Greater material and cost flow traceability will give feedback to producers to improve the environmental performance of the products with regard to material recovery and to the policy for further improvements.

- Improvement of the legislation is needed, but higher awareness of the recyclability issues was marked even more important. Stakeholders' stressed the importance of education of all concerned actors and the support for technological development.

- More investment in education, awareness rising and promotion of good practice in paper recycling among all actors involved is necessary. This includes improvement of general knowledge among all actors about the whole paper loop, definitions (i.e. the difference between recyclability, recycling, and recycled paper) and the most important pre-conditions for the quality of the paper for recycling.

- A more "life-cycle thinking" approach should be applied, promoting sustainability targets among all actors in the chain; eco-design for the paper value chain to increase production of recoverable and recycled products, and for the waste management to ensure higher collection level, proper sorting and access to quality paper for recycling.

- Both supply and demand side policy measures should be strengthen to stimulate actors in the paper loop for more efficient recycling, i.e. rewarding tax and fees incentives, stimulating investment in technology development, strengthening market development initiatives (i.e. GPP).

Recommendation No 3

New consumption patterns and market trends are bringing new challenges for paper recycling. Improved collection strategies and sorting are needed to maintain and ensure quality of paper for recycling.

Collection systems depend on the individual regional/local environment. In general, there are single stream collection schemes and collection by source separation. Each option has positive and negative implications.

Eco
Paper
Loop

Single stream collection operates on the principle of collection of all recyclables, where they recyclables are collected together and kept separate from other wastes. This greatly reduces the content of impurities from other wastes and includes post cleaning, but does not require public education on what material is recyclable.

Source separation is the other scheme where each material is cleaned and sorted prior to collection. This method requires the least post collection sorting and produces the purest recyclables, but incurs additional operating costs for collection of each separate material.

Collection strategies differ from country to country, they can even distinguish from one another in the same country. Uniform collection strategies do not and cannot exist due to different local conditions, landscape and population, legislation and similar. Nevertheless, collection strategies should follow the objectives of clean waste streams, efficient sorting and traceability.

The key challenge to higher recycling rates and quality of paper for recycling lies in efficient communal waste collection systems. The quality of this waste streams are lower and in general not well traced and documented. The systems are the subject of the regional/local regulation and are also much more dependent on public awareness.

Through years of experience a general awareness on importance of recycling to save trees and forests by using recycled paper has been developed within the population. Much less knowledge exists regarding conditions that determinate the quality of paper for recycling.

Guidelines:

- Improvements in collection and sorting system is also proposed to be achieved with the investment in awareness raising and promotion, development of additional recommendations and guidelines, rather than the new bans and extended regulation. Guidelines for proper collection and sorting at the consumer level are needed to maintain pure paper waste streams.

- Requirements in relation to recyclability in eco-design and producers responsibility to inform and guide consumers for proper collection should be strengthened. Producer needs to communicate to the consumers and end-users information on the recyclability of the product in a simple and understandable manner so that they are informed enough to make the appropriate choice of discarded. Instructions must be available according to the local sorting systems and recycling technologies in use.

- Smart« regulation is needed, combining demand and supply side measures to stimulate collection and recycling. Regulation should be designed based on the knowledge of the real market issues and stimulated through prices, paper stream should be market oriented.

Recommendation No 4

Promote eco-design and recyclability
"Use product design to educate on the environment"

Policies are more focused on the waste stage of the paper life cycle; eco-design is not promoted and encouraged sufficiently. Schemes in support of extended producers' responsibility are missing both in relation to material and financial flows.

Eco-design is supported and encouraged by the new waste framework and packaging and waste packaging directives. The Eco-design Directive (2009/125/EC) does not address paper products and they are not included in the plan of products for which minimum criteria will be produced in the near future. The eco-design directive determines minimum environmental requirements while eco-label caters to the top 5% of products concerning environmental performance on the market. The Packaging and Packaging Waste directive refers to EN standard 13430 which determines general requirements for packaging recoverable by material recycling, applicable to all recyclable packaging materials.

Eco-design of packaging is a trade-off with regard to many product requirements relevant to the packaged product. In view of this the final choice of packaging parameters is left to the packer. Extended producer responsibility and other packaging standard requirements are reinforcing the packaging recyclability.

Various practices for extender producer responsibility exist in Europe, with different grades of producer responsibility limited to responsibility for final waste management or enhanced to include all stages of waste management with collection and sorting.

Policy guidelines:

- All stakeholders in the paper and waste paper value chain have the power to improve the quality of recycled paper. It is therefore appropriate that responsibilities of each stakeholder are clear and proportional to their range of influence to the quality of recycled paper.

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- General rules for eco-design in regulation on EU level are needed. Eco-design should be stimulated through waste and cost traceability of post-consumer waste management and recommendations for product designers and producers should available.

- Determination of recyclability, including evaluation methods and criteria for certification is of high importance. Recyclability test should represent an umbrella and link to the existing standards and certifications.

- It is expected that a common approach to the operation of producer responsibility will be implemented. This should entail complete coverage of waste product management costs; higher cost for more complicated product management, which is more difficult to recycle, reduced costs proportionate to the extent of materials recycled. For that, greater transparency of material and financial flows within the producer responsibility need to be ensured.

- Encouragement of the use of ecolabel and purchase of products with eco certification that include recyclability criteria is important.

Recommendation No 5

Green public procurement

"Recyclability of the product is more important than content of recycled fibres in paper products"

Common criteria for green public procurement in EU are defined, linked to ecolabel recommendations. Though the product ecolabel is proof of compliance with environmental criteria, it must not be requested per se from the supplier in the tender procedure. The GPP criteria are in constant development and improvement.

Environmental criteria in public procurement procedures are more or less a legislative requirement in all countries; with some countries prescribing exact environmental criteria and others relying more on the dissemination of good practice, contract templates and other softer tools.

With regard to paper products a good level of awareness exists regarding the importance of the content of recycled fibres in the product. This aspect prevails too much, as the closed paper loop will only be established and maintained if adequate attention is also given to the recyclability of the product.

Policy guidelines:

- GPP should focus on sustainability. A shift needs to be made from the attention given in GPP to the share of recycled fibres contained in the product to the recyclability of the product.

- GPP is important tool to stimulate recycling and represent one of few demand side measures and should therefore be imposed stronger. Common rules defined at the EU level need to be clearly defined and implementation supported with the guidelines, exchange of good practices and education of the users. Implementation is critical therefore efforts are needed to increase the competence of civil servants performing GPP.

- GPP should be obligation for public authorities and at the same time part of the general policy promoting eco-design and recycling. Measures are needed to stimulate private sector to use the same principles and criteria in the procurement.

Recommendation No 6

Ensure access to quality paper for recycling in Europe

It is estimated, a lot of reusable and recyclable waste paper quantities are lost with export outside EU border. EUROSTAT reports the trade volume of paper waste in EU-27 according to trade flows. The EU-27 imports are small and stable, but the exports exhibit strong growth, nearly 50 % increase from 2000 to 2010 (from 3.5 million tons to more than 13 million tons). EU-27 exports account for nearly 20% of the amount of paper separately collected in the EU.

Current end-of waste point for paper is defined when the raw material enters the paper (re) processing mill. Recent proposal for changing the legal definition was rejected due to the fear of compromising the health and environmental standard contains in the Waste Directive and damaging the European paper recycling sector that could reflect in even increased export of paper for recycling.

The waste shipment regulation provides a safeguard to prevent loss of resources. Amended regulation lays down requirements for shipments of waste within the EU and between the EU and third countries, containing stricter requirements for the member states to establish shipment inspection plans, based on risk assessment.

Policy guidelines:

- End-of-waste regulation and criteria already announced in a new directive should be discussed with the focus on sustainability and resource efficiency. Market and cost/benefit analyses should prevail.

- Strict implementation of the waste shipment regulation needs to be ensured, with more practical supervision of actual shipments of paper for recycling from EU.

- Paper and packaging waste traceability till recycling has to be enhanced.

IV. Project partners' contribution and strategy

The overall results from our project clearly show that there is room to enhance the quality of paper for recycling implementing the already existing legislation as well as through strong voluntary commitments in the paper value chain.

It is clear that paper industry mills using paper for recycling as major raw material are only partially satisfied by its quality. So far, the target of increasing the collection rate in all CE countries prevailed versus the concept that quality of the secondary raw material is at least as important as the overall collection rate.

The project partners worked together for more than two years promoting the relevance of the quality of paper for recycling. During the project some relevant tools have been developed and some of them already implemented. Nevertheless, in order to be more effective they will need to be adopted in the whole paper value chain in the near future.

Assessment of paper based packaging recyclability; the method has been developed and presently four laboratories in CE region possess the right equipment and expertise to carry out the recyclability test thus assisting packaging designers in the development of new recycling oriented products.

Scorecard of paper based packaging products; a Scorecard proposal has been developed during the project time frame and preliminary discussed in a web based public consultation. Nonetheless, this instrument will require a deep discussion in the European Recovered Paper Council before being adopted. The project partners involved in this development will ensure their availability even after the end of the

project to ensure a smooth adoption. Due to the complexity of paper recycling process and the huge variety of products present in the market, most likely, additional adjustments and methodological refining will be necessary to ensure the sustainability of the tool in the next future.

Eco-labels and green public procurement; recently, the recyclability criteria has been included in the eco-label of printed and converted products. Similar criteria are present as well in the Blue Angel and Nordic Swan. In several CE countries the public administration is being further developing the national plans for green purchasing. In this context a clear message from EcoPaperLoop project concerns the introduction of the recyclability criteria of the products to complement the already existing criteria of minimum amount of recycled products purchased by public authorities. In order to develop minimum environmental criteria, the project partners in their own countries commit themselves to support public authorities and local environmental agencies with the technical expertise gained in the project.

Sustainability tool for end-of-life performance; a sustainability tool has been developed during the project. Currently, this tool allow to translate the recyclability performance of graphic products tested according to ERPC score card into (i) energy consumption increase/decrease versus an average category product, (ii) chemicals consumption increase/decrease versus an average category product, (iii) CO_2 consumption/savings versus average category product. In the case of packaging products categories the tool has been set up, however, it will properly function once the data base will be fully completed. Project partners working on recyclability of packaging products in their own countries agreed to share future results. The lead partner will maintain and update this tool for at least five years after the end of the project.

Decision tree of paper for recycling collection systems; based on the analysis of CE situation, a decision tree has been developed to support local authorities in charge of waste management collection. The decision tree allow decision makers to clarify what is the best strategy to follow in order to improve paper for recycling collection and quality based on pre-existing situation.