OPINION
of the
European Economic and Social Committee
on the
Access to secondary raw materials (scrap iron, recycled paper, etc.)
(own-initiative opinion)

Rapporteur: Mr Zbořil
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On 13 July 2010, the European Economic and Social Committee acting under Article 29(2) of its Rules of Procedure, decided to draw up an own-initiative opinion on the

*Access to secondary raw materials (scrap iron, recycled paper, etc.)*.

The Consultative Commission on Industrial Change, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 13 January 2011.

At its 469th plenary session, held on 16 and 17 February 2011 (meeting of 16 February), the European Economic and Social Committee adopted the following opinion by 88 votes with 1 abstention.

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1. **Conclusions and recommendations**

1.1 The Committee greatly appreciates the analyses of the individual industrial associations that explain the current situation and likely future scenarios that could lead to serious supply and demand imbalances on the secondary raw materials market.

1.2 The Committee also points to the fact that raw material availability as such is regarded and treated as a strategic issue in some countries (USA, China). Of course, *secondary* raw materials are not excluded from a similarly stricter regime in these countries. The EESC therefore welcomes the fact that material efficiency has become DG Environment's key priority.

1.3 Access to their particular raw materials differs considerably from one industry to another, as do the material flows themselves according to their nature and the traditional uses of the required raw materials. In some cases, such as the glass and steel industries, the goal of material efficiency could be served simply by fine-tuning and balancing existing systems and production processes with the help of well-defined incentives. The EESC warns that neither the number nor quality of jobs in the recycling and process industries should be compromised by such incentives.

1.4 Large volumes of collected secondary raw materials are currently being exported although they are badly needed in the European basic and process industries. This trend seriously jeopardises employment in all the process industries.

1.5 The pressure of excess volumes of collected waste from the existing dedicated collecting systems is often relieved by simply selling off those collected categories of waste indiscriminately, without any additional processing and without securing final utilisation within the EU.
1.6 Unfortunately, illegal trading practices are often used in order to circumvent direct control of important secondary raw material flows. For instance, false customs declarations classifying waste as second-hand goods are used to avoid the Waste Shipments Regulation for specific secondary raw material flows.

1.7 In this way, waste streams collected on behalf of EU tax-payers do not secure the intended benefits, but rather reduce the competitiveness of the respective industries by curtailing and/or making the supply of secondary raw materials unnecessarily more expensive.

1.8 At the same time, it is obvious that numerous specific regulations governing recycling have not been framed coherently. They tend to focus on individual, isolated aspects of collection and recycling and do not take account of the market forces at work in the systems and processes.

1.9 The REACH Regulation is also causing problems in some recycling industries because there is no clear distinction between end-of-life goods (waste) and second hand goods. Therefore, this well-intentioned concept has unfortunately missed its target. Some affected industries, such as paper, have found a way out of the deadlock while others are still looking for workable solutions. This is a serious example of incoherence in the legal framework against which industry had warned of beforehand!

1.10 The conflict between market forces and the existing regulatory framework should be analysed in detail to achieve better balanced results. One possible suggestion could be to apply export duties to protect against the risk of losing valuable materials. Such measures would obviously have to comply with WTO rules. The EU should possibly negotiate emergency terms with the WTO, setting clear and transparent conditions for export restrictions/duties on wastes of strategic importance.

1.11 Another option would be to agree on flexible recycling targets depending on actual market developments, i.e. during market downturns (reduced demand), the recycling targets could be lowered, while during boom phases of high demand, they would go up. At the same time, thought must be given to intelligent ways of ensuring that critical employment levels are maintained throughout the business cycle along the entire value chain in relevant sectors such as packaging waste, paper, etc.

1.12 Yet another option would be to make recycling targets/quotas equivalent only to volumes of waste that could be re-used within the EU, not including waste sold abroad that could not be used in EU facilities. However, such a measure should be accompanied by resetting targets/quotas to match actual EU recycling capacities.

1.13 The EESC strongly supports the industry's call upon the EU to develop a comprehensive and consistent policy on long-term sustainable access to raw materials and use of resources.
policy should support European industry in its efforts to use resources from cradle to cradle. Recycling should be supported by improving collecting infrastructure, creating legal certainty and an equal level playing field and by removing unnecessary administrative burdens. This essential requirement needs a good balance and consistency across the entire spectrum of regulations, directives and decisions.

1.14 The EU waste regulations set legal obligations for all players in the waste streams, and this responsibility should be strictly checked and demanded by the respective authorities. Their education and training are the key prerequisites in fighting any illegal practice of some indecent players, mainly in the international trade.

1.15 All the individual elements of the EU Climate Change Policy (ECCP) should take into account the environmental benefits of secondary raw materials (SRMs), and inconsistencies should be avoided: for example, the EU-ETS does not reflect energy and carbon savings resulting from the use of recoverable raw materials in other industrial and construction sectors and unnecessarily burdens these sectors with additional costs.

1.16 Finally, the management of such a complex framework should be carried out against the background of a serious ongoing social dialogue to encourage new, quality jobs along the relevant value chains.

2. Introduction

2.1 Sustainable access to raw materials and their sustainable use are key elements of the EU’s sustainability policy. They are the basis for the present and future competitiveness of the EU’s manufacturing industries. Raw material – both primary and secondary – supply chains are genuine economic sectors providing jobs and creating wealth in Europe. Recycling is an economic activity contributing significantly to EU GDP. Collection of used materials and products involves citizens, municipalities and public authorities which have invested in efficient systems to meet growing demand for long-term sustainability.

2.2 The complementarities between primary and secondary raw materials need to be recognised: while secondary materials are an eco-efficient way to reintroduce into the economy valuable resources, they are generally not (yet) sufficient to meet the growing demand for materials (paper, metals and minerals). Both are needed and complement each other. The improvement of collection systems and use of SRMs in the EU will contribute to meeting the aims of the EU 2020 Strategy.

2.3 Industry calls upon the EU to develop a comprehensive and consistent policy on long-term sustainable access to raw materials and use of resources. This policy should support European industry in its efforts to use resources from cradle to cradle. The Raw Materials Initiative

(RMI), the Thematic Strategy on Waste Prevention and Recycling, the Thematic Strategy on Sustainable Use of Natural Resources and Commissioner Potočnik’s flagship initiative on "Resource-efficient Europe" are all inter-related initiatives that should be consistent and integrated. Other initiatives such as the SCP (sustainable consumption and production), the Waste Framework Directive or other recycling and resource-related policies should also be considered.

3. **Identification of the major material flows of secondary raw materials**

3.1 There are traditional recycling commodities such as ferrous and non-ferrous scrap, paper and board waste, and glass that have had a long history and tradition of recycling in a more or less closed loop. These particular industries cannot survive without a consistent supply of recovered materials and used goods. Some others, like plastics, are relatively new to recycling and, compared with the traditional commodities, the process of material re-use here does not necessarily end in a closed loop.

3.2 The recycling characteristics of the major secondary materials pre-determine their particular material flows and the players in their value chains.

3.2.1 **Scrap Iron and Steel**: In general, iron and steel scrap recycling involves collection, sorting, baling, packeting, cutting, shearing, shredding and/or sizing, and finally melting at the steelworks. Ferrous scrap metal is collected either separately or mixed and is then sorted in the scrap yard and sold to scrap treatment plants or is sent directly to a steelworks. Once the scrap arrives at the scrap treatment plant, different types of metals are separated out and prepared for shredding/sizing. Shredding and sizing are often needed for a further stage of separation. In the case of stainless steel, larger pieces are collected separately or sorted in the scrap yard before shredding. Smaller particles of stainless steel are separated by multiple-step separation processes. At the steelworks, iron and steel scrap is usually charged directly into the furnaces.

3.2.1.1 The European steel recovery industry (at the treatment stage) is fairly concentrated, with seven companies providing some 40% of the total steel scrap delivered to the steelworks. According to the Bureau of International Recycling (BIR) and the European Ferrous Recovery and Recycling Federation (EFR), there are around 42 000 scrap yards across the EU 27. The scrap sector estimates that, of those, some 250 have major company status, 9 000 are medium- to large-sized companies processing over 120 000 tonnes per year and the rest, approximately 36 000 companies, are middle- and small-sized.

3.2.1.2 The collection system can vary depending on the type of product and the country. Large-sized end-of-life products and those that are generated in high quantities, such as those from construction and demolition, are usually transported directly to the scrap yard or to scrap

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2 Data mostly from the JRC waste-related studies ([http://publications.jrc.ec.europa.eu/repository/) and from sector statistics.
treatment plants. Both the ELVs Directive and the WEEE Directive place the responsibility of recovering, hence scrap collection, on the producers. Small products such as packaging materials are collected by the local authorities, which means that in this case, collection is not in the hands of the scrap metal industry, though some industry initiatives are taken in the case of UBCs, e.g. collection centre, scrap terminals, where steel and aluminium cans are separated and baled for transportation to treatment plants or refineries.

3.2.1.3 Scrap is one of the few SRMs for which Europe can expect continued availability and even a little surplus, scrap; the trade within the EU, as well as imports from and exports to other countries, has been established for decades. Within the EU, it is difficult to estimate the total quantity of scrap being shipped. The estimated import and export data are (2008) 5.3 mill. tpy and 12.9 mill. tpy respectively, while total scrap consumption reached 112 mill. tpy in the same year.

3.2.2 Non-ferrous scrap and other waste streams containing such metals: Comparing this non-ferrous category with iron and steel, there is much greater variation in (a) the metals involved, (b) the resources available and (c) the methods that must be used for separation and extraction of particular metals from the waste streams. The most important and highest volume metals are aluminium, zinc, lead and copper; there are also metals such as tin and precious metals in the waste streams that can be extracted with the appropriate methods.

3.2.2.1 The collection system are either the same or, similar to those used for ferrous scrap. To obtain good quality recovered metal scrap from end-of-use products (ELVs, WEEE) sophisticated technologies are used. By contrast, the basic non-ferrous metals are "mined" from waste streams at a very high recovery rate and their utilisation rates are also very high.

3.2.2.2 Ash and slag are also important for the recovery of non-ferrous metals which requires special technologies. Vastly untapped resources of the non-ferrous metals can be found in the old mining residuals in the EU ore mining areas. Although this mining waste is exempted from the EU general waste legislation, attention should be paid to these raw materials as well if it is economically feasible.

3.2.3 Recycled paper: The paper industry is a sector based from the outset on renewable resources and recycling, with collected rags providing the first raw material used for paper making. Recycling of paper has been relatively straightforward so far and its material use has been predominating one. There are two typical major resources (as with ferrous metals) – industrial recovered paper (packaging and printing industries inter alia) and post-consumed (municipal) waste. Sorted grades are preferred, thus municipal waste requires separation of used paper and basic sorting operations.

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3 Mining waste is a subject of Directive 2006/21/EC.
3.2.3.1 Material flows have been seriously affected by the recent recession; utilisation of recovered paper decreased by 7.6% to 44.9 million tonnes in 2009. Collection fell for the first time by 3.6%, to 56.6 million tonnes, while paper consumption contracted by 10.1% over the same period. Exports of recovered paper to countries outside the EU, Norway and Switzerland continued to rise, reaching 12.8 million tonnes, with 96.3% of this being sent to Asian markets. Within Asia, the majority of the material went to China (71.4% of European exports). As a result of the developments observed during this exceptional year, the recycling rate jumped to a record high of 72.2% in 2009 after having reached 66.7% the previous year. A temporary swing in the opposite direction may occur temporarily when the economy recovers, as recycling may not be able to match reviving paper consumption immediately. Because of the recent developments in the industry's structure, recovered paper represents 44.2% and wood pulp 40.4% of the fibre used in papermaking in CEPI countries.

3.2.4 Glass: Glass can be 100% repeatedly recycled without any loss of quality to produce another glass container. Collected glass is used to make new glass of the same quality. This makes glass a true "cradle-to-cradle" recycling material. Up to 90% of waste glass can be used to manufacture new glass containers; the only real limit to using waste glass today is the amount of glass recovered and the availability of waste glass in Europe.

3.2.4.1 The glass recovery system is fairly simple – the majority of recovered glass comes from packaging waste (used glass containers) and a small amount is recovered from construction waste (flat glass). The average collection rate for recycling of container glass reaches 65% for the EU 27 countries; nearly 11.5 million tonnes of glass packaging was collected throughout Europe (including Norway, Switzerland and Turkey) in 2008.

3.2.4.2 The challenge in glass recycling is to recycle the remaining 7 million tonnes of glass that was placed on the market in 2008 but which was not recycled. It is of utmost importance to improve recycling and to support proper recycling systems in the European Union.

3.2.4.3 Collecting and recovery systems of flat glass and glass from end-of-life vehicles (ELVs) have not been sufficiently developed yet, thus, this valuable resource still remains more an environmental burden.

3.2.5 Plastic waste accounts for about 25% of all solid wastes accumulated in landfills. Because of the resistance of plastic materials to degradation, the decomposition process takes a long time after they are placed in landfills. Burning plastic for recovering energy needs to be controlled in proper facilities, due to the high level of hazardous emissions.

3.2.5.1 The major sectors that consume plastics, which are also the main sources of waste plastics, are: packaging (38.1%), household and domestic (22.3%), and building and construction (17.6%). Packaging generated by the distribution and retail sector represents more than 80% of the collectable waste plastics (potential). Collecting and processing waste plastics from
mixed household waste appears to be one of the most difficult waste fractions to manage. Most of the plastics used in construction are for long-term applications.

3.2.5.2 Some parts of the waste plastic are not appropriate for recycling, e.g. food packaging or plastics mixed with other materials, because cleaning the contaminated plastic in this case would be more expensive than the value of the products, due to the large amount of energy consumed. However, they can be used for energy recovery.

3.2.5.3 The EU 27 is a net exporter of plastic waste, parings and scrap. Since 1999, the gap between imports and exports has increased constantly. After a slight rise between 1999 and 2002, exports shot up to 2.1 Mt between 2002 and 2006. From 1999 to 2006, imports rose from 55 000 tonnes to 256 000 tonnes.

3.2.5.4 For polyester staple (fibre), recycled PET represents 70% of the raw materials processed in the EU. Availability of polyester bottles is, therefore, crucial. However, producers in Europe are now facing serious problems because of the growing tendency of traders to ship PET, either in the form of flake (chopped-up fragments of bottles) or as baled bottles, to the Far East and especially China. This country is, currently, lifting import restrictions on PET waste to facilitate even stronger outflow of this important SRM from the EU.

4. Legal framework for recycling

4.1 Direct regulation in the EU

4.1.1 Recycling should be supported by improving collecting infrastructure, creating legal certainty and an equal level playing field and by removing unnecessary administrative burdens. This essential requirement needs a good balance and consistency across the entire spectrum of regulations, directives and decisions. Although the Waste Framework Directive (2008/98/EC) has set off in the desired direction, it must be considered as a first stage that will require regular reality checks and subsequent fine-tuning.


4.2 Indirect regulation: Recovery and recycling processes are regulated not only by the wide spectrum of waste legislation, but further restrictions and controls flow from the legislation regulating specific industry sectors or the industry as a whole. The most important in this area are the effects of the REACH Regulation (EC 1907/2006) and the EU Climate change policy.
4.2.1 In the case of REACH, waste is not subject to this Regulation, but the recovered substance or mixture could become subject to REACH as soon as it crosses over the "End-of-Waste" border line. The Commission has addressed this problem and the relevant technical working groups have come up with more or less satisfactory suggestions for breaking this deadlock. Nevertheless, uncertainties still remain and there are very useful studies available at the Commission's JRC-IPTS in Seville, along with information available at ECHA that could help to solve the problems. Nevertheless, the threat of registration is not fully averted, even in cases where registration can have no benefit at all.

4.2.2 The EU climate change policy should facilitate a range of incentives resulting in a consistent and sustainable shift for global society from primary fossil energy sources to alternative energy sources. The ECCP consists of individual elements, which claim to be integrated, but unfortunately integration is a more of a statement than a reality. Some of the components seriously affect recovery and recycling processes: the updated EU-ETS for the post-Kyoto period handicaps operators of production facilities by its administrative approach to setting allocations for the 2013–2020 period. In addition, a gradually introduced system of auctioning would drain the financial resources of operators who would have even less money for future carbon reduction processes. On the other hand, the EU-ETS does not reflect energy and carbon savings resulting from the use of recoverable raw materials in other industrial and construction sectors.

4.2.3 Further problems arise from the renewable energy directive. Due to the major drive for renewables and their massive, imbalanced support there is a serious risk of leakage of large quantities of recovered SRMs (all kinds of biomass, recovered paper) from the material reuse for energy - power and heat generation. All these risks should be properly analysed and adequately minimised if access to SRMs is to be maintained and even improved wherever possible. The "biomass" definition must be observed and if needed, strengthened to avoid its misuse for the sake of the renewable energy generation. In some cases, because of market distorting subsidies, even primary raw materials (wood) are simply burned!

4.2.4 The EU waste regulations set legal obligations at all players in the waste streams, and this responsibility should be strictly checked and demanded by the respective authorities. Their education and training are the key prerequisites in fighting any illegal practice of some unscrupulous players, mainly in the international trade.

5. Value chains and players in the major flows of SRMs

It is obvious from the identification in Chapter 3 that there are large differences between SRM streams. Some of them are almost self-operating on the natural basis of historically functional systems of collection, pre-treatment and treatment (including sorting) of waste before the recovered material is supplied to a major operation facility. Several characteristics can be compiled to identify and avoid potential risks in the recovery and recycling processes.
5.1 The commercial value of the SRMs is one of the key factors which affects the final accessibility of the material. Collection and pre-treatment of the waste stream are fairly cheap stages in the case of concentrated waste streams (iron, glass, and paper) and the resulting SRM remains fairly accessible at a reasonable cost. Market conditions apply throughout the entire closed loop. On the other hand, there is an ever-growing segment of recycling which is not operated at the market price for materials, but to comply with EU waste policies. Most of the packaging waste, electronic and electrical waste or biodegradable waste is processed to meet the targets of various directives.

5.1.1 Production of such SRMs from these waste streams is not economically sustainable on the global market. Waste collection, sorting and processing takes place either to implement extended producer responsibility rules or because of direct public funding. In both cases, it is the European citizen who pays for the conversion, either as a taxpayer or as a consumer.

5.1.2 Europe generates a reservoir of SRMs, which can be easily accessed by any global player at any time, when global market demand for material is increasing. Vast volumes of collected, unprocessed waste are exported, mainly to Asia. Since the global market is volatile, the price levels are also very volatile. When the global market is depressed, the recovered SRMs pile up, since the recycling targets must be met. This situation creates very critical market distortions inside the EU.

5.1.3 EU recyclers have to invest much more than their Asian competitors when building recycling plants, because they have to maintain both overcapacity and higher technological standards. Then, when global raw material markets rise, their expensive capacities are not utilised since collected waste is leaving Europe unprocessed. Hence there is a critical need to match the global raw material forces and waste regulatory framework to avoid market disruptions and to facilitate access to SRMs for EU industries.

5.1.4 Restrictions on illegal or semi-illegal trading of SRMs could be based upon the strict request of internationally recognised quality certificates such as certificates based on ISO standards from the SRMs' receiving partners outside the EU. Member States should also take all legal measures when checking the legal origin of the collecting waste wherever it could be a problem.

5.1.5 Since raw material policy is a strategic security issue in many parts of the world, Community support along the entire value chains, particularly with regard to high quality SRMs ("premium quality") could solve many problems concerning access to SRMs. Obviously it is necessary to review the European specification of secondary raw materials to define a "premium quality" for SRMs.

5.2 The environmental impact of sensible recycling must be beneficial for all major industries utilising large volumes/shares of SRMs. Even employing sophisticated processing technologies for demanding waste streams does not alter this general statement. Usually, total
energy consumption is reduced, sometimes to a fraction of standard consumption in the case of processing mined/harvested raw materials. That also means lower emissions of carbon dioxide, mostly lower gaseous emissions etc. Because of impurities in waste streams, there are new wastes which must be taken care of and, in some cases, efficient waste water treatment facilities must be employed as well. Such difficult waste streams also have increased pre-treatment and treatment costs that make the processes more expensive.

5.3 Competing utilisation of SRMs outside of the particular industry presents a big risk for such industries (see 4.2.3). The competitive environment is heavily distorted by finance aimed at serving an entirely different purpose, and it could cause major distortions of the raw materials markets. The paper industry cannot compete for both pulpwood (as the main raw material) and recovered paper (the second major raw material) with renewable power and heat generation facilities enjoying subsidies for renewables. Appropriate protective measures must be taken to secure access to basic raw materials. If such measures fail, one of the key EU industries comes under serious threat. Support for producing "premium quality" SRMs will raise demand for labour with a positive social impact in periods of crisis in the consumption of SRMs.

Brussels, 16 February 2011.

The President
of the
European Economic and Social Committee

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