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## **Completion of the Common Internal Market of Recycling in the EU - Position of New Member States**

### **Abstract**

*In the paper will be presented the analysis of ecological competitiveness in the EU (“old” and “new” Member States) recycling market within the process of the establishment of common standards related to the Prevention and Recycling of Waste. The paper examined advantages of common standards for Europe from the point of view of the completion of the common internal market of recycling within the EU Strategy promoting the sustainable growth.*

### **1. Introduction**

The strategy of sustainable development is promoted by:

1. The enhancing of international cooperation in the production of environmental- friendly technologies and products with special reference to:
  - Pollution Management (air pollution control, wastewater management, solid waste management, noise and vibration abatement and recycling ),
  - Cleaner Technologies and Products (cleaner/resource-efficient technologies and processes),
  - Resource Management (indoor air pollution control, water supply, recycled materials, renewable energy plant, heat/energy saving and

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management, sustainable agriculture and fisheries, sustainable forestry, natural risk management, eco-tourism).

2. Restructuring of the economy with special reference to sun-setting industries, offering old technologies of coal-based products, heavy metals, heavy chemicals etc.)<sup>1</sup>.

We can consider the strong correlation between economic policy and environmental protection and the relationship between the adaptation to the international environmental standards and the competitiveness and better access to global and regional markets<sup>2</sup>.

The total market size of the environment industry was estimated at US \$ 600 billion by 2010. Most of the growth will continue to take place in developing countries and economies in transition, at an annual rate of 8 to 12 per cent<sup>3</sup>. In relative terms, this environmental market is not as big as the steel or agriculture markets, but roughly the same size as the pharmaceuticals and information technology markets<sup>4</sup>. The European eco-industries sector plays an important role in the global eco-market. The EU is estimated to have round one third of the world share of eco-industries and a 50% share of the world market in the waste and recycling industries<sup>5</sup>.

In the recent years as world economies continue to expand, natural resources are being increasingly depleted, energy is becoming a key issue, and proper and effective waste management is an increasing challenge. Moving

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<sup>1</sup> Wysokinska, Z., "Foreign Trade in Environmental Products; The WTO Regulation and Environmental Programs, *Global Economy Journal*; Volume 5, Issue 3, Article 5, USA 2005, p. 2-3. <http://www.bepress.com/gej/vol5/iss3/5>; comp. also: Wysokinska Z., The International Environmental Goods and Services Market: an Opportunity for Poland, *Polish Journal of Environmental Studies*, Vol.18, No. 5 (2009), pp. 941-948 [http://www.pjoes.com/index.php?s=abs\\_id&id=2009180522](http://www.pjoes.com/index.php?s=abs_id&id=2009180522)

<sup>2</sup> Wysokinska Z., Adaptation to European and international ecological norms and standards in the Czech Republic, Hungary, and Poland, Ecological competitiveness of Polish enterprises - results of a questionnaire research, IT&FA Proceedings, Bangkok, 2000, pp 3-12; comp. also, Wysokinska Z, Witkowska J.; International Business and Environmental Issues - Some Empirical Evidence from Transition Economies, *Polish Journal of Environmental Studies*, Vol. 14 No. 3 (2005), pp. 269-279.

<sup>3</sup> Trade and Environment Review 2003, UNCTAD, New York and Geneva, 2004, p.36; WTO, (2003); Report to the 5<sup>th</sup> Session of the WTO Ministerial Conference in Cancun, WT/CTE/8, 11 July, 2003, p. 7.

<sup>4</sup> As above.

<sup>5</sup> Accelerating the Development of the Market for Recycling in Europe, Report of the Taskforce on Recycling, Composed in preparation of the Communication "A Lead Market Initiative for Europe" {COM(2007) 860 final}, p. 2.

towards sustainable patterns of consumption and production are the cornerstones of development that is sustainable – not only in terms of energy but in terms of *all* resources we produce, consume and dispose.

There is significant market potential in recycling to increase efficiency and capacity, by encouraging innovation, and introducing more effective processes and improved technologies. This can help save costs, energy, and natural resources – and help Europe be less dependent on rising raw materials prices. Recycling belongs also to six most important sectors within the Lead Market Initiative for Europe<sup>6</sup>. This Lead Market proposes *a package of policies* (legislation, standards and labeling, public procurement, financing, knowledge sharing, and international action) that acting in synergy can foster recycling markets, increase more and better recycling, yield environmental and economic gains, and in the long run can improve Europe's competitive position<sup>7</sup>.

## **2. Position of Europe in the world market of environmental related technologies**

European Commission proposed recently the new economic strategy for Europe “*Europe 2020*”, including three key drivers for growth, to be implemented through concrete actions at EU and national levels:

- *smart growth* (*fostering knowledge, R+D, innovation, education and digital society*),
- *sustainable growth* (making our production more resource efficient while boosting R+D and competitiveness),
- *inclusive growth* (raising participation in the labour market, the acquisition of skills and the fight against poverty)<sup>8</sup>.

In terms of specialization, patent data show that emerging economies (India, China, Israel, Singapore) and the United States focus their innovative efforts on high-technology industries (computers, pharmaceuticals) while continental Europe concentrates on medium-high-technology industries

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<sup>6</sup> Recycling is one of the lead market among: *e*-health, protective textiles, sustainable construction, recycling, bio-based products, and renewable energies, compare: Lead Market Initiative for Europe; <http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/#2#2>.

<sup>7</sup> Accelerating the Development of the Market for Recycling in Europe, op cit, pp. 3-4.

<sup>8</sup> EUROPE 2020 A strategy for smart, sustainable and inclusive growth, Communication from the Commission, COM(2010) 2020, Brussels, 3.3.2010

(automobiles, chemicals)<sup>9</sup>. Europe followed by Japan is the world leader in environment-related technologies. The United States and Japan have a comparative advantage in biotechnology and nanotechnology patenting and in the relevant scientific fields, while the EU is the world leader in environment-related technologies (solid waste, renewable energy and motor vehicle abatement), with Germany playing a very active role. Japan is second to the EU in all three environmental technology fields<sup>10</sup>. However, while patenting in renewable energy and motor vehicle abatement has been increasing rapidly since the mid-1990s, patenting in solid waste technologies has declined<sup>11</sup>.

### 3. Recycling market as one of the lead market in the EU

Recycling, understood as proper and effective waste management, and renewable energy, CO<sub>2</sub>-neutral energy sources is one of the crucial lead market of the European Union<sup>12</sup>. This sector plays an underpinning role by:

- reducing waste going to disposal,
- reducing consumption of natural resources,
- improving energy efficiency.

The eco-industries sector in the EU has a turnover of around € 227 billion, corresponding to 2.2% of EU GDP. This includes waste treatment (€ 52 billion) and recycling (€ 24 billion, over 500,000 jobs). The recycling sector is made up of over 60,000 companies; the profile of which is: 3% large; 28% medium; 69% small. The demand and price for raw materials are increasingly affected by global forces, and there are indications that international trade in recycled material continues to grow. The EU is estimated to have round one third of the world share of eco-industries and a 50% share of the world market in the waste and recycling industries. There is significant market potential in recycling but barriers to market development need to be addressed. There is also potential to significantly improve efficiency and capacity, by encouraging innovation, and introducing more effective processes and improved technologies. This can help save costs, energy, and natural resources – and help Europe be less dependent on

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<sup>9</sup> OECD Science, Technology and Industry scoreboard 16 2007 – ISBN 978-92-64-03788-5 – © OECD 2007, pp. 9-16.

<sup>10</sup> As above.

<sup>11</sup> As above, p. 14.

<sup>12</sup> Source: Lead Market Initiative for Europe,  
<http://ec.europa.eu/enterprise/leadmarket/leadmarket.htm>

rising raw materials prices. The EU has a range of regulatory measures dealing with waste: a strategic approach to waste and resources; legislation regulating waste treatment; and management of specific waste streams such as end-of-life vehicles, and electrical and electronic equipment. European legislation plays a strong role in driving development and markets – for example, 2015 targets for vehicles will be 85% reuse/recycling and 95% reuse/recovery<sup>13</sup>.

Recycling creates also a part of the most important environmental services' sectors in the European economy and it is observed its dynamic development especially since the year 2003, after the Eastern European enlargement in the year 2004<sup>14</sup>. Ecological competitiveness<sup>15</sup> in the recycling sector is created by firms from the EU-15 and from new members (EU 12). The highest position among the Eastern European new members achieved Poland, Czech Republic and Romania. It was about 6-7 times lower than the positions of leaders from the following "old" member states: United Kingdom, France, Italy and Germany, but comparable to the position of the Netherlands and Sweden- comp. graphs at. p. 9 of the paper. As it is presented on graphs at page 10 Poland, Czech Republic and Romania belong to countries in Europe with the highest emissions of carbon dioxide (CO<sub>2</sub>) to the atmosphere. These three CEE countries are followed by "old" members of the EU: Germany, United Kingdom, Italy, France and Spain- comp. p. 10.

As European society has grown wealthier it has created more and more rubbish. Each year in the European Union alone we throw away 3 billion tones of waste - some 90 million tones of it hazardous. According to *Eurostat* data this amounts to about 6 tones of solid waste for every man, woman and child. Most of waste is either burnt in incinerators, or dumped into landfill sites (67%). But both these methods create environmental damage. Landfilling not only takes up more and more valuable land space, it also causes air, water and soil pollution, discharging carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>) into the atmosphere and chemicals and pesticides into the earth and groundwater. This, in turn, is harmful to human health, as well as to plants and animals. By 2020, the OECD estimates,

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<sup>13</sup> Accelerating the Development of the Market for Recycling in Europe, Report of the Taskforce on Recycling, Composed in preparation of the Communication "A Lead Market Initiative for Europe", {COM(2007) 860 final}, p. 2-3.

<sup>14</sup> Based on *Eurostat* data. Compare also graphs at p. 9 of the paper.

<sup>15</sup> Ecological competitiveness: *Ability of a firm or a nation to offer environmental products, especially technologies and services that meet the quality and environmental standards of the regional and world markets at prices that are competitive and provide adequate returns on the resources employed or consumed in producing them.*- Own modification of the definition based on:<http://www.businessdictionary.com/definition/competitiveness.html>

we could be generating 45% more waste than we did in 1995. Obviously this trend must be reversed if we are to avoid being submerged in rubbish. But the picture is not all gloomy. The EU's *Sixth Environment Action Programme* identified waste prevention and management as one of four top priorities. Its primary objective was to decouple waste generation from economic activity, so that EU growth will no longer lead to more and more rubbish, and there are signs that this is beginning to happen. In Germany and the Netherlands, for example, municipal waste generation fell during the 1990s<sup>16</sup>. The EU is aiming for a significant cut in the amount of rubbish generated, through new waste prevention initiatives, better use of resources, and encouraging a shift to more sustainable consumption patterns.

The European Union's approach to waste management is based on three principles:

1. **Waste prevention:** This is a key factor in any waste management strategy. Waste prevention is closely linked with improving manufacturing methods and influencing consumers to demand greener products and less packaging.
2. **Recycling and reuse:** If waste cannot be prevented, as many of the materials as possible should be recovered, preferably by recycling. The European Commission has defined several specific 'waste streams' for priority attention, the aim being to reduce their overall environmental impact. This includes packaging waste, end-of-life vehicles, batteries, electrical and electronic waste.
3. **Improving final disposal and monitoring:** Where possible, waste that cannot be recycled or reused should be safely incinerated, with landfill only used as a last resort. Both these methods need close monitoring because of their potential for causing severe environmental damage<sup>17</sup>.

#### **4. The importance of the recycling sector in Europe within the EU Strategy on Prevention and Recycling of Waste-establishment of common standards**

Recycling plays an underpinning role by reducing waste, by reducing consumption of natural resources and in-contributing to greater energy efficiency. In this broad and diverse area, a lead market potential is seen in electrical and electronic waste and the waste from the end-of-life of vehicles.

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<sup>16</sup> <http://ec.europa.eu/environment/waste/index.htm>

<sup>17</sup> As above.

Recycling reduces waste going to disposal, consumption of natural resources and improves energy efficiency. It therefore plays an essential role in the move towards sustainable consumption and production. The recycling sector has a turnover of €24 billion and employs about 500 000 persons. It is made up of over 60 000 companies. The EU has around 50% of world share of the waste and recycling industries<sup>18</sup>. It is estimated that roughly 0.75% of EU GDP corresponds to waste management and recycling<sup>19</sup>.

The Waste Framework Directive of the EU sets out a number of basic concepts that are important for recycling and recovery as a whole. The End-of-Life Vehicles directive 2000/53/EC (ELV), and a directive on Waste Electrical and Electronic Equipment 2002/95/EC (WEEE) are examples of EU product-specific legislation which provide a framework for the market development for a wide range of recycled products, and their associated technologies and industrial processes. The targets contained in these directives will further drive demand for recycling. The Review of the WEEE Directive, due in 2008 may look for ways to promote long term developments of recycling markets<sup>20</sup>.

Promotion of recycling is oriented on: developing material-based recycling targets in conjunction with end-of-life product-based targets; making producers responsible for recycling; encouraging recycling businesses to use the best available technology. Recycling refers to the process of collecting used materials which is usually considered as 'waste' and reprocessing them. In this process these used materials are sorted and processed to be used as 'raw materials' for the production of new products. Some of the most common items that are recycled are plastic, glass, paper, batteries, aluminum etc. Importance of recycling for: saving energy; reduction of pollutions, saving natural resources, increasing economic and social benefits related to the creation of the new markets and new employment opportunities; saving space for waste disposal. Improving waste management is recognized as a major environmental challenge at international level. The European Commission's proposal for a European Union strategy for sustainable development also highlights the need to break the link between economic growth, the use of resources and the generation of waste. The response for this need was the Integrated Product Policy (2003-2012). Promotion of recycling is oriented on: developing material-based recycling targets in conjunction with end-of-life product-based targets; making producers

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<sup>18</sup> [http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market\\_initiative/recycling/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market_initiative/recycling/index_en.htm)

<sup>19</sup> Lead Market Initiative for Europe. Mid-term progress report. Commission Staff Working Document, Brussels, 9.9.2009, SEC (2009) 1198 final, p. 45.

<sup>20</sup> Accelerating the Development of the Market for Recycling in Europe, op.cit., p. 3.

responsible for recycling; encouraging recycling businesses to use the best available technology. In 2005 around 95 million tones of waste have been recycled in the European Union. The amount of municipal solid waste increased in the years from 1996 to 2005 between 1.1% per year for as an average<sup>21</sup>.

*The EU Strategy on the prevention and recycling of waste* is based on two major premises.

- Waste policy should focus on the environmental impact of using resources. Waste policy ties in with resources policy – and it is known from resources policy that the important issue is not scarcity of resources but the environmental impact of their use.
- Waste policy should take a life-cycle approach. Waste policy should also tie in with the Integrated Product Policy (IPP). It aims to reduce environmental impacts from products throughout their life-cycle, where possible using a market-driven approach<sup>22</sup>.

The New Services Directive came into force across the EEA on the 28th December 2009. It is aimed at opening up the internal market for service provision in the EU. It applies to the 27 EU Member States plus Norway, Iceland and Liechtenstein (European Economic Area). The Directive aims to break down barriers to cross-border trade in services between Member States, making it easier for service providers to set up business and offer their services elsewhere within the European Economic Area (EEA). It will achieve this by removing regulatory and administrative barriers that make it difficult for service providers to trade across borders.

The removing of barriers in the recycling market in Europe is deeply connected with **the establishment of common EU waste standards and an common EU recycling market**. The issue of the development of common standards for recycling and recovery is central to tomorrow's waste policy in Europe.

Several Member States, and regional or local authorities, tend towards protectionism in the area of waste. This is why the blocking of shipments relates mostly to exports rather than imports. This reflex can be attributed to a number of factors.

- Firstly, waste infrastructure is expensive and once built requires fixed minimum volumes of waste to be efficient. Capacities may have to compete with similar but cheaper installations, or with other waste treatment

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<sup>21</sup> Sander K., Climate Protection Potentials of EU Recycling Targets; 2008, <http://www.eeb.org/publication/documents/RecyclingClimateChangePotentials.pdf>

<sup>22</sup> [http://ec.europa.eu/environment/waste/pdf/story\\_book.pdf](http://ec.europa.eu/environment/waste/pdf/story_book.pdf), p. 19

techniques. The diversification of waste recovery and recycling practices in Member States and in industrial sectors, and the effects of enlargement, could increase these competitive pressures. In addition, some investment is based on overestimates of the amounts of waste that will be available in the future, and this creates tensions.

- Secondly, the combination of public and private interests involved in different aspects of the waste business varies from one Member State to another. Environmental arguments are sometimes used to disguise economic motives. The distinction between action to protect the environment and illegitimate economic protectionism is not always clear<sup>23</sup>.

#### **Advantages of common standards**

- Common standards protect the environment in the whole of the EU. National standards apply only in the territory of the few Member States that have them. Any reduction in environmental benefits caused by a few Member States having to lower their high standards would be more than offset by the gain in coverage.
- Common standards could in the longer term enable us to reduce the complexity of the legislation that controls shipments of waste destined for recovery.
- Common standards would help to build a strong internal market for recycling and recovery. As with any economic activity, recycling and recovery activities would benefit from an open internal market.
- For a limited period, in specific cases where large amounts have been invested in facilities state of high environmental quality, it may be legitimate to steer waste towards them to ensure they receive sufficient quantities. But this should be the exception rather than the rule.
- If one fair standard is applied across the EU, there are few advantages to be gained from 'competition' in terms of environmental standards (e.g. Member State A sets a high standard and blocks export to Member State B – Member State B raises its standards in order to regain access to the waste).
- There is no evidence that an internal market for recovery disproportionately increases the environmental impact of the transport of waste. Research confirms that externalities related to transport are a minor fraction of the overall impact of treating the waste. Waste can be transported large

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<sup>23</sup> As above, p. 24-25.

distances, and the efficiency gains from waste going to the 'right' facility can outweigh the externalities of transportation<sup>24</sup>.

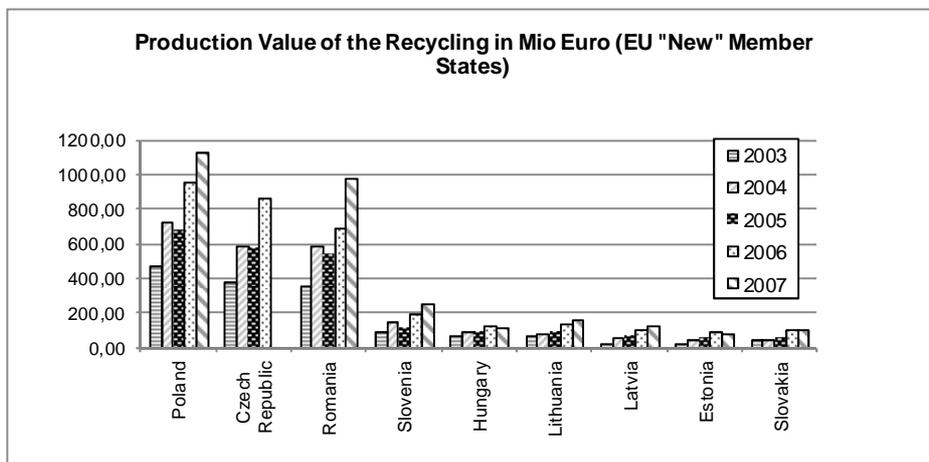
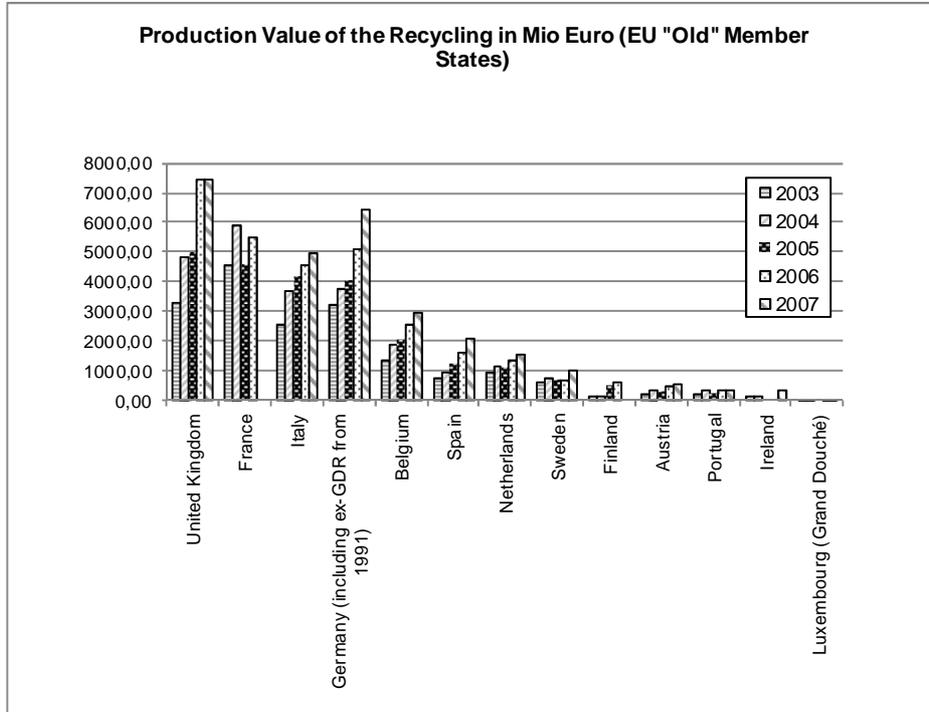
## 5. Conclusion

- Sustainable development and "green economy" are the most important objectives of economic and social development for the nearest 10 years future not only in the European but also in the world economy.
- Europe as a leader in environment related technologies promotes sustainable growth based on effective waste management, and renewable energy sources.
- Recycling plays an underpinning role by reducing waste, by reducing consumption of natural resources and in-contributing to greater energy efficiency.
- Common standards protect the environment in the whole of the EU and play the positive role in the process of the completion of the common market of recycling services.
- Firms from new members of the EU participate very active in the recycling market in the EU and deeply involved in the process of the adaptation to common standards protecting the natural environment.

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<sup>24</sup> As above, p. 25.

Graphs<sup>25</sup>



<sup>25</sup> All graphs are based on own calculations of Author's, prepared on the base of Eurostat data.

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### Streszczenie

#### **BUDOWA WSPÓLNEGO RYNKU RECYKLINGU W UNII EUROPEJSKIEJ – POZYCJA NOWYCH KRAJÓW CZŁONKOWSKICH**

*Artykuł ma na celu zaprezentowanie wyników analizy konkurencyjności ekologicznej w UE (“starych” i “nowych” krajów członkowskich) na rynku recyklingu w procesie tworzenia wspólnych standardów, odnoszących się zarówno do zapobiegania powstawaniu odpadów jak i do rozwoju recyklingu, mającego na celu redukcję zanieczyszczeń.. W artykule poddane zostały analizie korzyści wynikające ze wspólnych standardów w Europie dla utworzenia wspólnego rynku recyklingu w ramach strategicznego podejścia UE zorientowanego na zrównoważony rozwój.*