

THE NECESSITY OF ENVIRONMENTAL GOODS TRADE LIBERALIZATION

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Abstract:

The environmental degradation presents a real global challenge from the causes and effect point of view. Undeniable role of environmental goods for the mitigation of environmental issues has persuaded many of economies to switch their industrial patterns towards production and consumption of this type of goods. This paper aims to highlight the key issues surrounding the debate over environmental goods and the liberalization of trade in environmental goods.

The objective of this article is to emphasize the importance of environmental goods for the sustainable development and the people's life, by analyzing the necessity of the international trade liberalization of this category of goods.

This study analyses pragmatic issues involved in the identification and promotion of environmental goods in developing countries. Also, this overview illustrates a picture about the evolution and achievements of trade with environmental goods in Romania.

Key words: environmental goods, environmental goods' lists, non-tariff barriers, trade barriers, trade liberalization.

JEL classification: F18, Q56, Q57

INTRODUCTION

Nowadays, the environmental sector presents a distinguished importance in the terms of globalization and trade liberalization. This sector is considered to be “*with great growth potential, generating wealth and creating jobs as well as playing a major role in the transition of economies towards sustainable development*” (EC, 2009).

The new environmental issues and the necessity to mitigate them have led to an increase in the demand of environmental goods. This awareness has generated a huge interest in evaluating the opportunities for trade in environmental goods (EGs), because the complexity of these issues presents challenges not touched by other global problems. Due to trade liberalization, EGs can open the ways for new environmental technologies which can promote the decrease of polluting and resource-intensive production.

Taking into account that liberalization of EGs trade depends of many factors, the trading partners should be aware while forecasting the future economic benefits, because these products require a distinct segment on a viable consumer market. Besides this, the EGs can have positive effects in one country, but may exacerbate environmental problems in other countries. Moreover, today's environmental goods may worsen environmental performance tomorrow.

In this purpose, it is necessary to consider and explore simultaneously the environmental and economic indicators, as well as the key drivers which impact the trade of environmental goods. (Jha, 2008)

1. WHAT ARE ENVIRONMENTAL GOODS?

Although, they cover a wide range of products across many different industrial sectors, environmental goods are not defined. In 1995 OECD/Eurostat agreed the definition of environmental industry as: “*The environmental goods industry consists of activities which produce goods to measure, prevent, limit, minimize or correct environmental damage to water, air and soil, as well as problems related to waste, noise and eco-systems. This includes cleaner technologies, products and services that reduce environmental risk and minimize pollution and resource use*”.

In other words the environmental goods have to: prevent, reduce, eliminate, treat and manage pollution, degradation and natural resources depletion or restoring environmental damage to air, water, biodiversity and landscapes; carry out other activities such as measurement and monitoring, control, research and development, education, training, information and communication related to environmental protection and/or resource management. (EC, 2009)

There are two broad classes of environmental goods:

- Type A EGs, which includes all chemicals and manufactured goods used directly in the provision of environmental services;
- Type B EGs, which includes all industrial and consumer goods not primarily used for environmental purposes but whose production, end-use and/or disposal have positive environmental characteristics relative to similar substitute goods. These are considered environmentally preferable products (EPPs), defined by UNCTAD as “*the set of goods possessing inherent environmentally superior qualities compared to substitute goods used in identical applications*” (UNCTAD, 2005).

The Class A EGs are considered to have a multiple-utilization and a multiple-disposal which make them sliding from one subclass to another in dependency of the destination. The Class B EGs have single-use and due to the fast technological progress, these goods can be viewed as very clean and performed today and not at the same rank, tomorrow, due to the permanent development and evolution.

The lack of a international recognized definition have directed the countries and international organizations to propose EGs classification under lists form. The most representative lists are the OECD and APEC lists.

The OECD list includes goods spanning 132 6-digit Harmonized Commodity Description and Coding System (HS) codes. Of these, 25 are minerals and chemicals used in water and waste treatment, and in renewable energy systems, and 97 are manufactures that serve as components of the systems and infrastructure used to provide environmental services. Also included in the OECD list are some Class B EGs in the form of environmentally sound technologies or *clean technologies* such as cleaner/resource efficient production and power generation systems.

The APEC list spans 104 HS codes. In contrast to the OECD list, it excludes minerals and chemicals, while including a more extensive set of goods needed for environmental monitoring and assessment. The two lists have 54 goods in common at the HS 6-digit level.

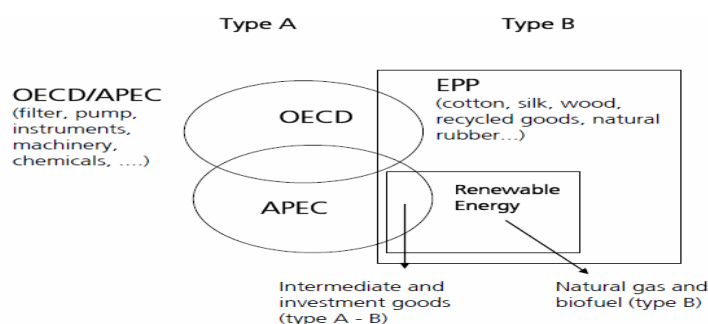


Figure 1. Classification of environmental goods

Source: UNCTAD, 2005

From the figure no. 1 we observe that most of EPPs goods are not included in the OECD and APEC lists, in order to analyze EGs trade flows, these two broad sets of EGs have been decomposed by UNCTAD into 10 homogeneous groups of EGs. [1] In our research, we relayed on the UNCTAD classification to evaluate the dynamic and the structure of the Romanian international trade flows.

2 ENVIRONMENTAL GOODS TRADE LIBERALIZATION

„Gradual trade liberalization and carefully managed market opening in these sectors can be a powerful tool for economic development by generating economic growth and enabling the transfer of valuable skills, technology and know-how embedded in such goods.” (Mytelka, 2007)

The first paragraph of the multilateral agreement establishing the WTO mentions the necessity to use „the world’s resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so” in accordance with the needs and countries’ levels of economic development. It suggests and urges the countries in fact, to limit their effects on the environment through trade liberalization by „pursuing reciprocal and mutually advantageous trade arrangements” (OECD, 2005).

To assure benefits from EGs trade liberalization, the range of EGs supposes to be diverse, wide and focused on the individual issues. In this way it will increase the interest for these products and the consumers would also benefit from lower prices, greater choice and better quality conditioned by the higher competition among suppliers.

The factors which depends the future development of EGs markets are numerous, but the most important are: intellectual property rights, innovation and technology diffusion support, financial support instruments for promoting cleaner technologies, trends in environmental and trade policies, economic performances, population and population growth, state of the environment, pressure from stakeholders, civil society and consumers, multilateral environmental agreements, and related mechanism and institutions, regional trade agreements, domestic market of EGs.

It is well known that the greatest impediments for trade development and liberalization are the tariff and non-tariff trade barriers. Despite the growth of international trade in EGs, considerable trade barriers exist, among these are identified: restrictive technical standards and certification requirements; disproportionately onerous labeling, packaging and documentation requirements; subsidies provided to the domestic environment industry; non-transparent government procurement and contracting procedures; restrictions on professional services, investment, and ownership; and, product design/life cycle and recycling issues.

The average import tariff applied by most OECD countries on products included under the pollution management group was less than 3%. Tariffs applied by OECD members Korea, Mexico and Turkey were closer to 9% on average. However, for a group of emerging economies (Argentina, Brazil, Chile, India, Indonesia, Malaysia and Thailand), applied tariffs averaged almost 20%. In the low- and middle-income countries the tariffs reach more than 8%. However, this average disguises wide variations, with tariff rates ranging from close to zero in some smaller developing economies, to 15%-30% in other countries, including several larger ones. (OECD, 2005) Besides this, in some developing countries exists a variation of tariffs’ level, due to the difference between the applied level of tariffs and the maximum allowed level, which confuses the investors and exporters and encourage them to redirect their capitals to more safe and credible markets. Reducing or eliminating tariff and non-tariff barriers to trade in EGs offers a “win-win” position: stimulating the trade, and mitigating the environmental challenges.

Economists and environmentalist, equally, consider the developing world accountable for the obstruction of EGs trade liberalization. Zhang (2011) addresses an eloquent question concerning this markets “*what is the point of having opportunities if there are no capabilities?*” These capabilities consist in the need to: build supply capacities, adapt regulatory frameworks and develop supportive infrastructure.

In developing countries, where the implementation and use of many EGs can solve many of the environmental issues, it is observed that the tariff level is very low, but there are weak environmental regulatory regimes. Additions to this, there are markets access barriers consisting in the inexistence of environmental markets or in the insufficiency and weakness of these. The development of environmental markets it is necessary but it requires high investments from local

and foreign enterprises. These investments would have a positive effects leading to competitiveness and hence to transfer of environmentally sound technologies, etc.

In recent years, few of the developing countries significantly expand their EGs trade flows. This ascendant dynamicity is due to the awareness of the industrial diversification of their economies with EGs, necessary for further economic development and integration into global supply chains.

The examination of statistics shows the top 10 global EGs exporters account for almost 70 percent of global EGs exports and are concentrated in Europe, Asia, and North America. Among top global EGs exporting countries, China has experienced the most dramatic growth, with exports increasing by 490 percent between 2004 and 2008 to \$27.4 billion. Germany is the largest exporter of environmental goods, accounting for 16 percent of global EGs exports in 2008, followed by China (13 percent), Japan (9 percent), the United States (9 percent), and Italy (6 percent) (figure 2).

The fastest growing exporters in terms of percentage growth between 2004 and 2008 include Peru (increase of 540 percent), China (493 percent), Norway (352 percent), the Czech Republic (239 percent), and Korea (220 percent). In terms of value growth over the period, the fastest growing exporters include China (increase of \$22.7 billion), Germany (\$19.6 billion), the United States (\$7.7 billion), Italy (\$5.5 billion), and Japan (\$4.4 billion).

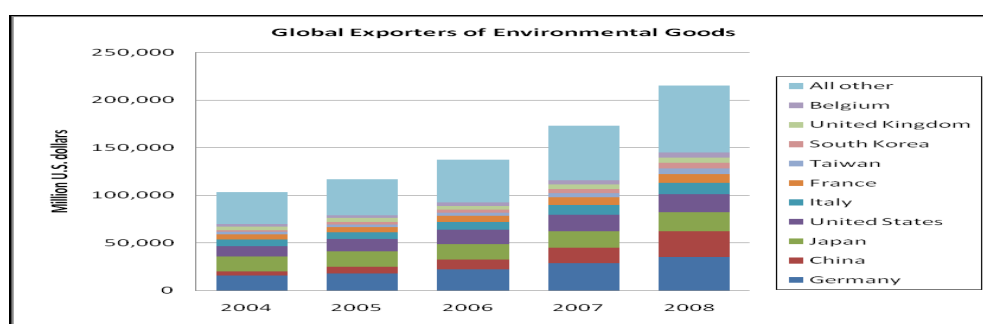


Figure 2. Global exporters of Environmental Goods

Source: OECD at www.stats.oecd.org

In figure no. 3 are represented the export flows by country categories. The supremacy of exports is still held by the developed countries, but the developing countries record ascension. The 2009 recession of the world trade it is a consequence of the economic crisis, which affected more of the exporters from developed than developing countries.

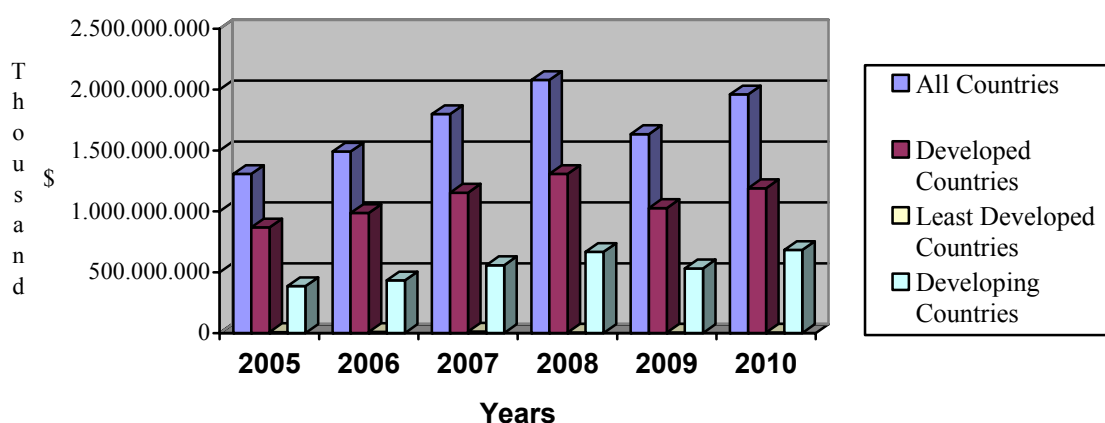


Figure 3. World Exports of EGs

Source: Authors' calculations based on trade data from UN COMTRADE database (accessed through the WITS)

The results obtained on the calculations basis indicated that the EGs exports accounted 14,1% of the world exports in 2008. In 2009 and 2010 the EGs exports held 14,4% of the world exports.

The top global EGs importing countries are among the top global EGs exporters and experienced significant import market growth between 2004 and 2008.

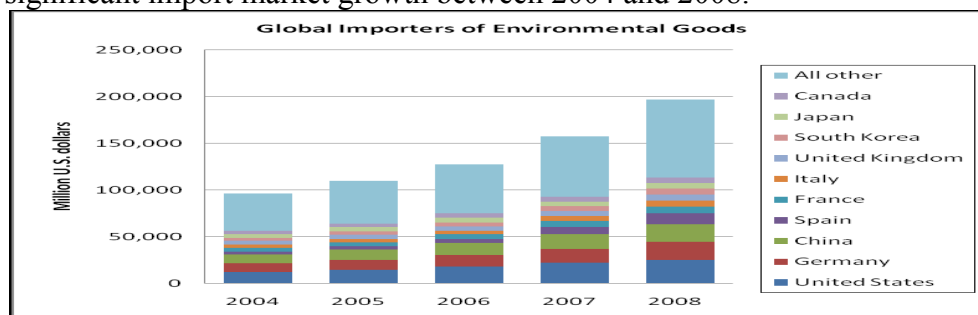


Figure 4. Global importers of Environmental Goods

Source: OECD at www.stats.oecd.org

In terms of EGs imports the leading countries are developed countries. The trade flows of all categories of countries have an ascendant evolution, but the developing countries issues underlined above justify the low level of EGs imports.

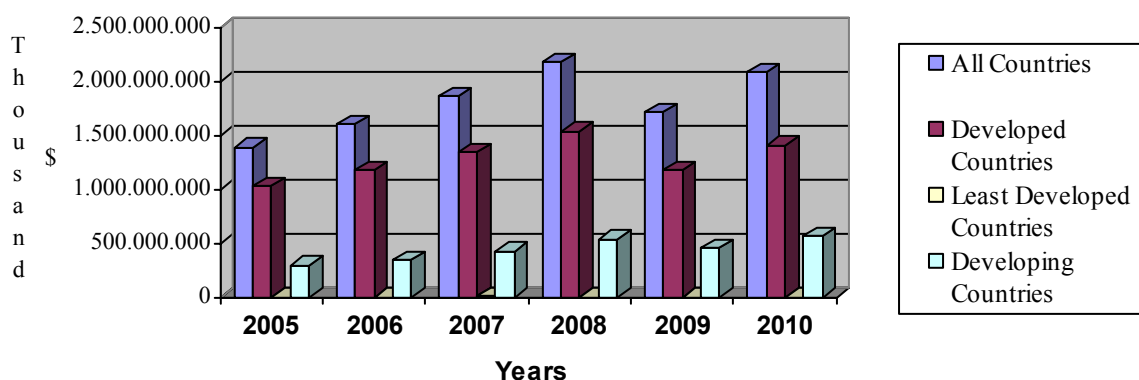


Figure 5. World Imports of EGs

Source: Authors' calculations based on trade data from UN COMTRADE database (accessed through the WITS)

The Results of our calculations denote that the EGs imports held a share of 13,9% of the world imports in 2008. In 2009 the EGs imports increased to 14,4% of the world imports. In 2010 the EGs imports reached 14,6% of the total world imports.

3. ENVIRONMENTAL GOODS TRADE IN ROMANIA

Identified as an emerging class of products, the EGs gamma has begun to evolve in Romania after 90's. Only the big desire to be integrated into the world market has been not enough for the development of EGs market in Romania. The modest economic power, the lack of experience concerning the trade liberalization, the absence of the optimum and effective trade and environmental policies, the lack of reaction of the Romanian industry to global market trends and many other impediments have led to the stagnation of EGs trade development. The difficult transition period has focused the government and consumers' attention on the economic problems rather than environmental.

In Romania, revival of the consciousness concerning the environmental issues relies on the external, international drivers. In order to perform the country development and to fulfill the globalization and European Union integration conditions, Romania has been changing the economic and industrial patterns towards environmental sound production.

Nowadays we observe a high interest for the EGs. We should not imagine, now, this interest as a revelation for environmental protection; it is rather the pursuing of financial benefits. The last years ascending trends of EGs trade flows, we perceive it not as consequence of desire to mitigate

the environmental issues on forefront, but as a strategy tool for country development, economic gains and maintaining the competitiveness on the international markets. However, Romania demonstrates opportunities and possibilities for further EGs trade development and liberalization, goods aimed to protect the environment and improve environmental quality

The survey of Romanian EGs trade presented in below graphics indicates an ascending trend of the Romanian exterior trade with EGs. The EGs imports and exports grow in a greater extent in 2005 - 2007 due to the: compliance with the conditions for EU accession, economic stability reached for short period of time, globalization results, liberalization of international trade and not the least the increase awareness of environmental issues and their mitigation.

In 2008 the EGs trade reaches the highest values. We believe the most plausible explanation is that 2008 it is the year immediately following the integration (2007), when Romania has adopted the EU trade and environmental policies, which justifies one more time that Romania has had only advantages from it's entry in EU.

In 2009 the crises consequences have been felt by the EGs market, as well. The Romanian EGs imports have dropped substantially down with the 33% and exports with 21%.

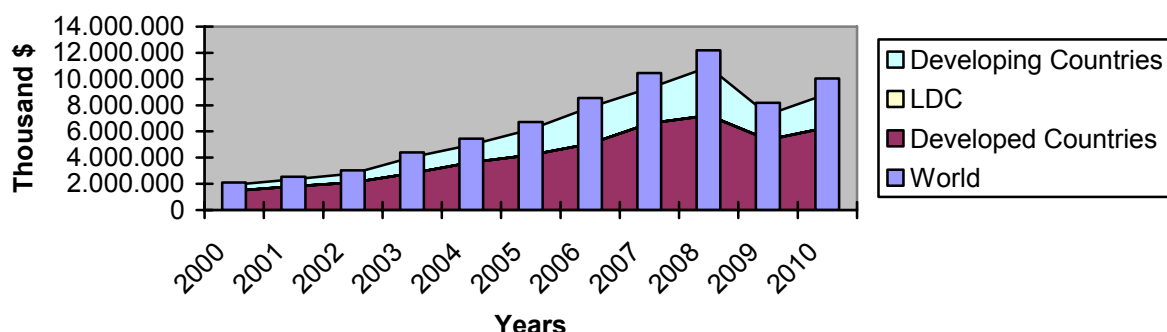


Figure 6. Romanian EGs imports (1000\$)

Source: Authors' calculations based on trade data from UN COMTRADE database (accessed through the WITS)

In 2010, it occur a rapid recovery and a relaunch of the EGs trade; the exports grow recording the same level as before the crisis, while the imports rise only with 22 %, not strong enough to regain the pre-crisis level. From figures no 6 and 7 we conclude that Romania exports mostly to developed countries in proportion of 77% (2010) - 67% (2000) and developing countries 16% (2001) – 23% (2010). The imports have mostly their origin in developed countries in proportion of 63% (2010) - 70% (2000) and developing countries 21% (2001) – 25% (2010). It is still vaguely outlined but Romania is consolidating its EGs trade relations with developing countries, whose potential on this market grows significantly.

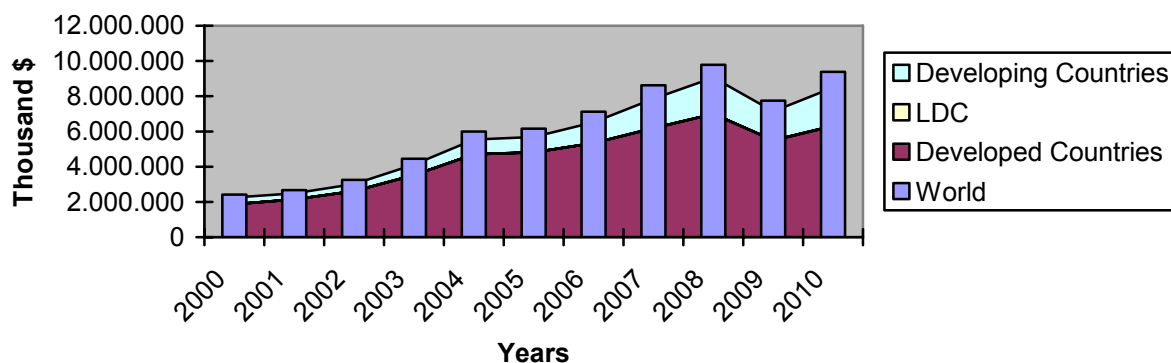


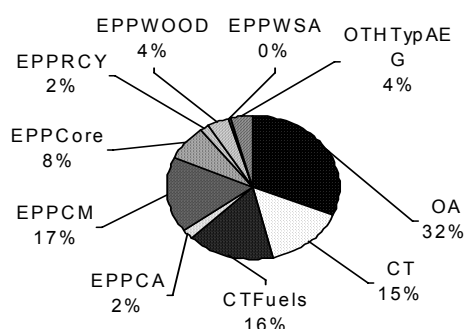
Figure 7. Romanian EGs exports (1000\$)

Source: Authors' calculations based on trade data from UN COMTRADE database (accessed through the WITS)

Between 2000-2005 EGs trade balance have been positive, the highest excess of 548 mil \$ has been recorded in 2005. From 2005 the EGs trade balance has reversed, in 2008 it has experienced the 2.427 mil \$ deficit. The leading causes of this reversal are the world crises and the Romanian economic precarious situation. In 2010 the deficit has decreased to 655 million \$.

Concerning the structure of exterior EGs trade of Romania, it has faced continuous changes (Figures no 8, 9, 10). The EGs imports have been predominated by the goods from OA list increasing from 32% (2000) to 37% (2010) and CT list increasing from 15% (2000) to 25% (2010). Among the EGs exports the highest percentage it is held by the goods from EPPWOOD list 30% (2000) decreasing to 21% (2010) and OA list growing from 9% (2000) to 20% (2010).

Romanian EGs imports 2000



Romanian EGs exports 2000

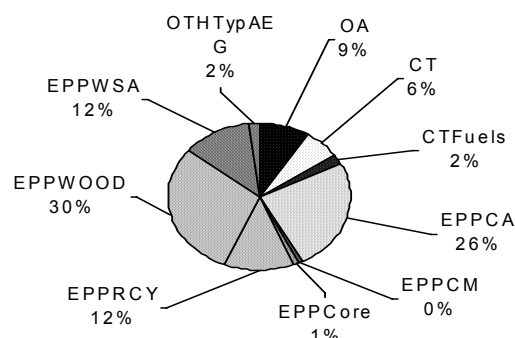
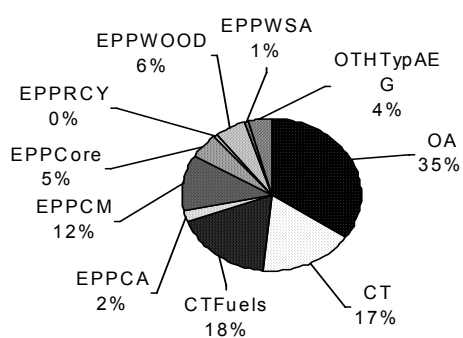


Figure 8. Structure of EGs Romanian trade by Lists of EGs in 2000

Source: Authors' calculations based on trade data from UN COMTRADE database (accessed through the WITS)

In 2000 the Romanian EGs imports have been 2.113 million \$. The largest share have had the OA category goods, 663 million \$, followed by EPPCM category with 368 million \$ and category CT Fuels with \$ 345 million \$. The imports of EPPWSA category goods have been only 8 million \$. Regarding the Romanian exports, which amounted 2.422 million \$, predominantly have noted the EPPWOOD list goods with 714 million \$ and EPPCA with 602 million \$. We observe a positive EGs trade balance which has recorded a surplus of 309 million \$.

Romanian EGs imports 2005



Romanian EGs exports 2005

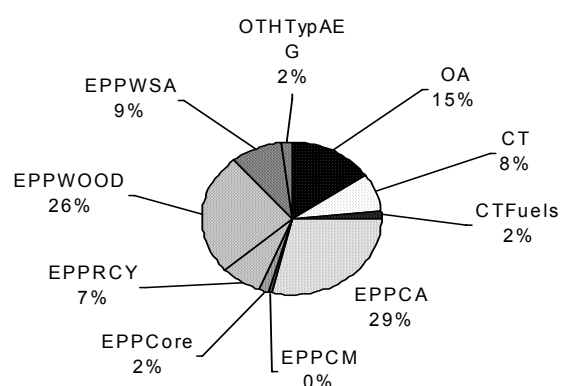


Figure 9. Structure of EGs Romanian trade by Lists of EGs in 2005

Source: Authors' calculations based on trade data from UN COMTRADE database (accessed through the WITS)

Romanian EGs imports have reached in 2005 a value of 6.707 million \$, 3 times more than in 2000. The most representative have been the EGs imports from OA list with 2.304 million \$ and CT Fuels list with 1.189 million \$. We observe an upward trend of EGs imports value with a constant maintaining of their rankings. Thus, the most dramatic value increase has recorded the EGs

imports from the EPP WOOD list by 4.6 times. The EGs imports from EPPCM list have had a decrease of 5 percentage points. In the same time the EGs exports have increased by 2.55 times compared to 2000 reaching \$ 6,172 million \$. The EGs from OA list have topped with 938 million \$, 4.3 times more than in 2000, while the EGs exports from EPPCA list with a worth of 1.772 million \$ have had the largest share in the total EGs exports from 2005.

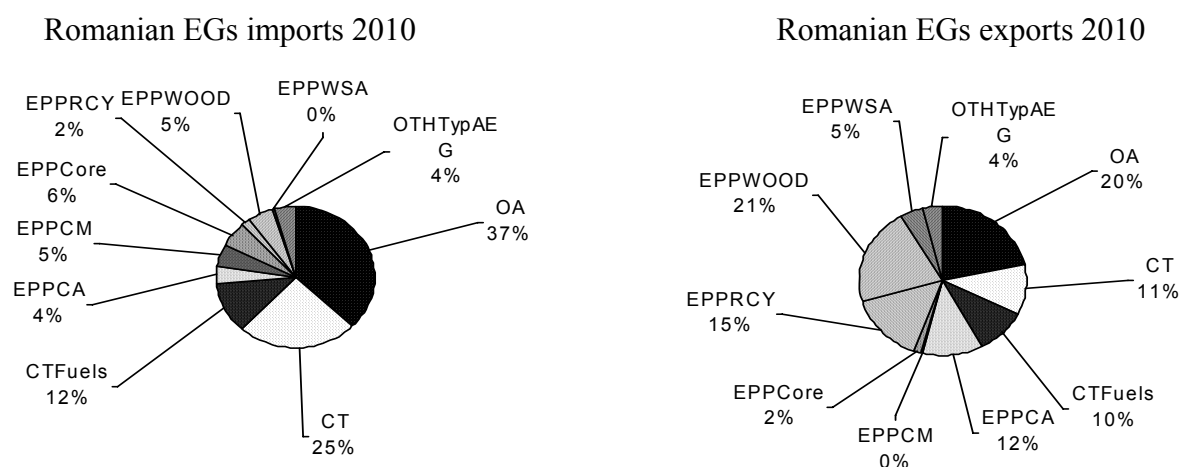


Figure 10. Structure of EGs Romanian trade by Lists of EGs in 2010

Source: Authors' calculations based on trade data from UN COMTRADE database (accessed through the WITS)

In 2010 the value of EGs imports have amounted 10,031 million \$, increasing by 50% compared to 2005. The largest share of 37% has been owned by EGs from OA list with a worth of 3.726 million \$, followed by EGs from the CT list with 25%. The share of EGs imports from CT Fuels list has fallen by 6 percentage points, recording a value decrease as well. A significant increase by 5.43 times have been observed at the EGs from EPPRCY list ranging from 32 million \$ in 2005 to 178 million \$ in 2010. The Romanian EGs exports in 2010 have had an upward trend reaching 9,377 million \$, 52% higher than in 2005. The largest share of exports has belonged to EGs from EPPWOOD list, with a 1.975 million \$ value, increasing by 25% compared to 2005. Followed by the EGs from EPPRCY list, which have increased 2.97 times compared to 2005, have reached 1,373 million \$ value. EGs exports from CT Fuels list have had the highest increase of 8 percentage points reaching 924 million \$.

Analyzing the trends we observe in 2000 that Romania has imported the CT Fuels list goods from Developing countries and OA list from developed countries, maintaining the same strategy over time. Concerning the exports, in 2000 Romania has exported most of EPPCA and EPPWOOD lists goods to developed countries, while in 2010 the EPPRCY list goods to developing countries and OA and EPPWOOD lists goods to developed countries.

CONCLUDING OBSERVATIONS

The above overview has attempted to capture the general guidelines on environmental goods and international trade in these goods. Although the environmental goods don't have a unique definition and a single list with EGs, the demand, the production and the trade with EGs will evolve permanently. The environmental issues, continuing to worsen, require new resources and means to control, monitor and solve them. The necessity of EGs it is recognized and acknowledged by the entire international community which consider the use of environmental goods as one of the approaches to protect the environment. In order to pursue this goal, the EGs should be based on how they will contribute to addressing the global challenges ahead of us; otherwise, there is no justifiable reason to produce and trade them.

Trade liberalization in environmental goods can not be accomplished if it is not assisted complementary measures to encourage and support this international and long-term process. These

measures provide the removal of limits and inhibitions. The most common and most widespread obstacle for EGs trade liberalization, especially in developing countries, it is considered to be the lack of optimal regulatory institutional and policy frameworks. Besides these there are many other impediments and barriers which compromise the EGs trade liberalization.

The EGs world trade is dominated by the developed countries, which have longer experience in environmental sector. Their specialization in EGs has allowed them to preserve the widest shares of trade flows. Developing countries are still facing dramatically EGs trade deficits. Their position on the world trade top can be improved through trade liberalization, which requires the elaboration of a flexible country individual strategy accordingly to the country's profile and specificity. Taking patterns from other countries do not ensure the success, sometimes leading to downturn.

The Romanian EGs trade is developing, but there are still economic, political, social factors which don't allow the harnessing of its total capacity and potential. The necessity to set well-managed trade liberalization in EGs is still persisting in Romania. Although it is a long way, the expectancies that the efforts will be rewarded with success are very high.

ENDNOTES

[1] (UNCTAD, 2005)

Type A EGs have been subdivided into 2 groups:

An **O+A list** comprised of the group of all EGs included on the OECD and APEC lists while avoiding double-counting of goods appearing on both lists.

An **Oth-TypeA-EGs list** comprised of several goods used to provide environmental services which have not been captured by the OECD and APEC lists. This list contains, for example, plastic gloves and protective eyewear which are used in environmental clean-up and remediation activities.

Type B EGs that have been subdivided into 8 groups:

A **CT list** comprised of clean technologies used for power generation. This list includes energy efficient natural gas based power generation and renewable energy technologies and their components.

A **CT-fuel list** include fuels for CT, and some conventional (i.e., fuel-switching), power generation technology applications. This list includes natural gas, propane and butane, as well as ethanol and a range of agricultural feedstock – biogases and oilseeds – used respectively to produce ethanol and biodiesel fuels.

An **EPP-core** list comprised of consumer and industrial non-durable and semi-durable EPP goods. Goods on the EPP list have been selected based on environmentally superior end-use and disposal characteristics only (i.e., not based on PPMs). This list includes a wide variety of goods including natural fibers for industrial uses and in the form of textiles; natural rubber; natural vegetable derivatives, colorings and dyes. An **EPP-RCY** list comprised of recoverable materials that are reintegrated into the production cycle. This list includes scrap and waste paper, wood, plastics, rubber and various scrap metals.

An **EPP-WOOD** list comprised of wood and wood-based products including building supplies and furniture.

An **EPP-WSA** list comprised of apparel manufactured from natural wool and silk fibers.

An **EPP-CM** list comprised of raw cotton materials and cotton textiles.

An **EPP-CA** list comprised of apparel manufactured from natural cotton fibers.

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