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Original Research

The International Environmental Goods and Services Market: an Opportunity for Poland

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Abstract

The aim of this paper is to present some methodological aspects connected with the evaluation of the growing market of goods facilitating protection of the natural environment. This is a positive phenomenon in this age of ever increasing attention paid to the implementation of principles of sustainable development as well as decreased barriers for improving access to developing markets in the case of both economically highly developed countries and in developing countries. The elimination of trade barriers in foreign trade for goods and services also increases the efficiency of the global economic system by enabling countries to specialize in those sectors in which they possess economic advantages, including those sectors in which they possess favorable natural environmental conditions. The analysis of these goods and services is related also to some regulations of the Committee for Trade and Environment of the WTO, with special reference to conclusions of the Fourth and Fifth Ministerial Conferences in Doha and Cancun. As a member of the European Union, Poland should side with an acceleration in negotiations relating to the quick opening of environmental services markets within the framework of the Doha Round.

In the sphere of what is known as development assistance, companies from the "old" and "new" members of the EU may undertake investments in developing countries and provide consulting in this realm, as well as deliver capital goods for improving the state of the natural environment, mainly aimed at working against excessive greenhouse gas emissions into the atmosphere and against unfavorable climate changes.

Keywords: goods facilitating environmental protection; environmental services, foreign trade, WTO, Poland

Introduction

This paper presents aspects related to the Multilateral Trade Regulations and transnational and national environmental programs regarding their implications for foreign trade in goods facilitating environmental protection. The elimination of trade barriers also increases the efficiency of the world economic system by enabling countries to specialize in those sectors in which they possess economic advantages, which includes those sectors in which they possess favorable natural environmental conditions. In the latter half of the 1990's one can observe a rapid and dynamic increase in the environmental protection industry's share in the world economy. It is estimated that the OECD countries (with special reference to the USA and EU) possess 90% of the environmental protection industry.

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The environmental policy in the "old" and "new" EU countries contributes to the achievement of the main goals of global sustainable development strategy by the development of cleaner production[1] and by support for foreign trade in goods facilitating environmental protection. The analysis of these goods and services is related also to some regulations of the Committee for Trade and Environment of the WTO, with special reference to conclusions of the Fourth and Fifth Ministerial Conferences in Doha and Cancun [1].

The analysis presented in the paper demonstrates growing Polish interest in international trade in goods facilitating protection of the natural environment. This is a very positive phenomenon in this age of ever increasing attention paid to the implementation of principles of sustainable development, as well as decreased barriers for improving access to developing markets in the case of both economically highly developed countries and in developing countries.

The Concept Behind Investigating Goods Related to Environmental Protection and Environmental Services and Their Significance in International Production and Trade

The Importance of a Market for Goods Supporting Environmental Protection and the Liberalization of International Trade in Environmental Goods in Light of the Concept of Sustainable Development

The global value of industry working for environmental protection has been estimated at:

- USD 453 billion in 1996,
- USD 483 billion in 1998,
- USD 518 billion in 2000, and
- USD 610 billion as projected for 2010 [2, comp. also 3].

The market of goods facilitating environmental protection in OECD countries holds an approximate 90% share in the global environmental protection industry worldwide. The primary infrastructure for recovery of the polluted environment as well as for improving the management of water resources accounts for over one-half of equipment resources applied in industry targeted at protection of the natural environment [4].

In the year 2000 the value of the environmental services market, as disclosed by GATS/WTO, amounted to approximately USD 518 billion. Its range encompassed a broad gamut of economic activities in various fields tied directly or indirectly with environmental protection.

A complete inventory encompassing all types of activities on a world economic scale is, in practice, impossible. This problem is the concern of various international organizations such as the United Nations, OECD, European Union, and WTO that try to define the range of environmental activities. In general, it is assumed that environmental activities are activities or their parts whose ultimate aim is environmental protection. They are subdivided into industrial activity (production), services, and utilization of natural resources (in this case services account for over 50% of the value of production). It is for the analysis of services as well as negotiations that classification systems such as GATS/WTO W/120 were developed. They are encompassed by Section 94 of the Central Product Classification (CPC) nomenclature (analyzed through the system of national settlement – SNA 93). Its counterpart in Europe is Section 90 of the NACE, Rev. 1 nomenclature, analyzed using the ESA95 system, which is applied in Poland. In both cases the respective section embraces seven core environmental services sectors, where only three are analyzed as services while the remaining four (cleaning of fume gases, decreasing noise and vibration, biodiversity and landscape protection, and other environmental protection services) are ranked among a business' own costs as something installed on site that is not a subject of external transactions. In addition to core sectors, "cluster" sectors have been identified that encompass advisory services, environmental engineering, and design services with an ultimate environmental designation, for example.

The encompassing of such a broad area of the world economy is not possible due to very limited statistical data. It is for this reason that the representative (not complete) method was used for the purposes of this study. It involves the selection of CPC section 94, which encompasses approximately 75% of world environmental services on an annual average basis, the compiling of statistical data for all of the world's countries (service production and foreign trade), their summary by economic area, and the undertaking of relevant mathematical analyses.

The World Environmental Product and Services Market: An Attempt at Estimates in Light of Accessible International Statistics

The world market for environmental goods and services was assessed at approximately USD 518 billion in the year 2000, where approximately USD 600 billion is being projected for the year 2010 [4]. World exports in environmental products account for about 20% of their production. In comparison, world exports in environmental services are at a level of barely 0.3% to 0.4% of their production. This points to a low and irregular share in environmental services in foreign trade, as well as high disproportions in the trade of environmental goods between their production and service components.

The environmental industry (working in support of the environment) was characterized by an average growth rate at a level of over 14% over the years 1996-2000. However, its volume in highly developed countries was marked by a

[1]Cleaner production is understood as production-friendly for the natural environment, see http://www.programcp.org.pl/polccp.htm

significantly lower rate of growth that amounted to approximately a mere 1.6% over the years 2000 and 2001 as compared with the rate observed in developed countries, where it was at a level of approximately 7%-8%. Analysts expect the expansion of industry working in support of environmental protection as well as of the environmental services sector to a level of over USD 600 billion by the year 2010. It is predicted that this growth will be particularly characteristic of developing nations as well as countries involved in systemic transformation, where the rate of growth will amount to approximately 8%-12% [4]. Compared with other markets, it may be stated that the environmental goods and services market is not as large as the steel or agricultural markets, but its size is comparable to that of the pharmaceutical and information technology markets [4].

The environmental goods and services market encompasses three main segments:

- Equipment (technical) – approximately a one-quarter share,
- Environmental services – approximately a one-half share, and
- Natural resources – approximately a one-quarter share[2].

Technical equipment encompasses the most advanced technologies. The environmental services sector applies to simpler technologies that are significantly more universal (over 50% of the world environmental protection market), however, and account for a significant factor in the economic development of the poorer countries of the world (significant potential possibilities for reducing unemployment).

The projected more than 15% growth in sales of environmental services over the current decade translates into an additional approximately USD 42 billion increase in world market demand that can provide employment for approximately 1-2 million workers.

The largest providers of environmental services are the highly developed countries (United States – approximately 38% of the world market, Japan – approximately 18%, Great Britain, France, and Italy). Eastern Europe (inclusive of the European part of the CIS) accounts for a mere 2% share, where Poland's share ranges from 0.3% to 0.4%.

The Concept Behind Research into Goods, including Environmental Services: A Description of the Methodology for Measurements in the Structure of Foreign Trade of Goods Tied with Environmental Protection in Light of Methods Recommended by International Organizations (OECD, European Union, WTO) on the Basis of Accessible Statistical Data

Analysis encompassed goods supporting environmental protection in line with definitions recommended by the international organizations OECD, Eurostat, and WTO.

According to the OECD/Eurostat – Informal Group definition, industry supporting environmental protection encompasses goods and services playing a role in environmental protection, including activities that produce goods and render services that measure, prevent, limit, minimize, or ameliorate damage to the environment, especially water, air, and soil pollution, as well as problems relating to waste, noise, and eco-systems[3].

They encompass treatment, goods and services limiting risk to the natural environment and minimizing pollution and raw material use.

The OECD/Eurostat ranks three groups among goods supporting protection of the environment:[4]

I. The pollution management goods group, which encompasses goods and services produced exclusively for environmental protection services that have a significant impact on reducing pollution and are easily identifiable in statistics.
II. The treatment technologies and products group, which encompasses goods and services that reduce or eliminate the negative impact of pollution on the environment, but are often applied for other purposes and their statistical classification and identification is difficult, debatable, and expensive.
III. The prevention management group, which encompasses goods and services that can facilitate environmental protection, but whose primary designation is different (e.g. energy savings, energy production from renewable sources, air–conditioning), where to a great extent this group may only optionally be included among industries supporting environmental protection on the basis of applied policies and potential for statistical identification.

Macroeconomic Analyses of Results

Changes in the Polish foreign trade goods structure (total and as compared with the European Union) over the years 2000-05, taking into account the international environmental goods and services classification system as developed on the basis of OECD/Eurostat guidelines (treatment technologies, goods and services limiting environmental risk, and the minimizing of pollution and raw material usage) were subjected to macroeconomic analysis.

The analysis encompassed goods supporting environmental protection in Polish foreign trade. The analysis was conducted pursuant to the Harmonized System (HS) nomenclature. Trends in export and import growth over the years 2000-05 as well as the share of these groups of goods in total Polish exports and imports and in trade with the European Union were examined.

[2]According to Environmental Business International, Inc., San Diego, California, 2003.

[3]Interim definition and classification of the environmental industry, prepared in conjunction with [5].

[4]The method of analysis was based on the most up-to-date recommendations of the OECD as published in [6].

Table 1. Comparison of imports and exports of goods facilitating environmental protection and their share in total Polish imports and exports, as well as to and from the European Union.

Imports/Exports	2000		2001		2002		2003		2004		2005	
	Total	from/to EU/15/	Total	from/to EU/15/	Total	from/to EU/15/	Total	from/to EU/15/	Total	from/to EU/15/	Total	from/to EU/15/
Imports to Poland – total (mln of USD)	48,940.0	29,950.8	50,275.1	30,865.1	55,112.7	33,998.4	68,003.9	41,573.9	88,156.4	52,533.2	101,539.0	57,791.0
Imports of goods facilitating environmental protection (mln of USD)	2,630.5	2,001.5	2,890.7	2,283.5	3,189.4	2,520.7	4,016.3	3,097.0	5,466.5	4,371.2	6,058.2	4,766.2
in %	5.4	6.7	5.7	7.4	5.8	7.4	5.9	7.4	6.2	8.3	6	8.2
EXPORTS from Poland total (mln of USD)	31,651.3	22,143.6	36,092.2	24,986.8	41,009.8	28,180.9	53,576.9	36,842.5	73,781.2	40,219.1	89,378.1	58,146.1
Exports of goods facilitating environmental protection (mln of USD)	1,046.2	0,682.9	1,236.5	0,880.7	1,428.9	1,028.0	1,943.9	1,385.3	2,629.7	1,813.7	3,498.9	2,404.4
in %	3.3	3.1	3.4	3.5	3.5	3.6	3.6	3.8	3.6	4.5	3.9	4.1

Source: Own calculations based on Eurostat database.

To meet the needs and objectives of this analysis and in line with the definition provided by international organizations, it was assumed that industry supporting environmental protection encompasses treatment technologies as well as goods and services limiting risk to the natural environment and minimizing pollution and raw material usage.

Polish foreign trade in total and to the European Union was examined pursuant to the international classification system presented at the beginning of this paper in line with three groups[5].

Collective results of the analysis as conducted for Poland are presented in Table 1.

Conclusions that may be drawn from the table are that the export of goods facilitating environmental protection over the analyzed 2000-05 period increased from USD 1,046 billion to USD 3,499 billion in total trade with Poland. while in the case of the European Union it grew from USD 683 million to USD 2,404 billion. At the same time a significant increase was noted in the share of exports of goods facilitating environmental protection in total Polish exports from 3.3% to 3.9%. and from 3.1% to 4.1% in the case of the European Union.

In the case of Polish imports, growth was event greater. It amounted to an increase from USD 2,630.5 billion in 2000 to USD 6,058.2 billion in 2005, while in terms of the European Union it grew from USD 2,001.5 billion to USD 4,766.2 billion, respectively, over the examined period. The increase in the share of goods facilitating environmental protection in Polish imports was even greater and amounted to a change from 5.4% in 2000 to 6.0% in 2005 in total imports, and from 6.7% to 8.2% in imports from the European Union, respectively.

The presented analysis demonstrates growing Polish interest in international trade in goods facilitating protection of the natural environment. This is a very positive phenomenon in this age of ever increasing attention paid to the implementation of principles of sustainable development as well as decreased barriers for improving access to developing markets in the case of both economically highly developed countries and in developing countries.

The Concept Behind Research into Environmental Services

Analysis of Polish Product and Services Classification (PKWIU) Codes, Central Product Classification (CPC) Codes as Applied by the United Nations and GATS/WTO, and the Classification for Environmental Protection Activities Expenditure (CEPA) Codes Used by the European Union

[5]Comp. also the analysis for 11 OECD Member States in [7-9].

Comparison of PKWIU Codes with the GATS/WTO Codes and European Union Proposal for Modifications Aimed at Establishing Mutual Relations

This paper establishes links among the four nomenclatures in the area relating to environmental protection. specifically:

1. GATS/WTO W/120 (CPC Provisional) – Based on the United Nations Provisional Central Product Classification (CPC) nomenclature, referred to as GNS/120 Services Sectoral Classification List as well as W/120, was introduced in 1988 and approved as the primary classification for negotiations by the WTO forum. The GATS/WTO W/120 classification essentially contains four core environmental sectors encompassed by Section 94 of the CPC Provisional. They make up the following Sectors-Grades of Section 94:

- Services involving sewage effluent (sewage services) – corresponding with CPC Provisional 9401.
- Services involving the disposal of garbage and wastes (Refuse Disposal Services) – CPC Provisional 9402.
- Street cleaning. snow removal, etc., services (sanitation and similar services) – CPC Provisional 9403, and
- Miscellaneous environmental services (other environmental services). encompassing:
  - Fume emission control (cleaning of exhaust gases) – CPC Provisional 9494.
  - Decreasing noise and vibration (noise abatement services) – CPC Provisional 9405.
  - Protection of biodiversity and landscapes (nature and landscape protection services) – CPC Provisional 9406, and
  - Other services in the realm of environmental protection (other environmental protection services) – CPC Provisional 9409.

2. Central Product Classification. Version 1.0 (CPC v. 1.0.) – The first revision of CPC Provisional was introduced by the United Nations in 1998. It is a somewhat expanded version of the CPC Provisional, but Section 94 includes four sectors (grades).
3. Polish Product and Services Classification (PKWiU) – Introduced in 2004, the PKWiU is based on the Statistical Classification of Products by Activity in the European Economic Community (CPA Classification). In this case, Section 94 of the CPC was replaced by Section 90, which includes only three grades. There is no correspondence to CPC v. 1. 9409. The rest has its equivalents with respect to CPC Provisional.
4. Classification of Environmental Protection Activities in the European Community (CEPA 2000) – This is the European Union classification of activities involving environmental protection. It was also introduced into Poland as the Polish Statistical Classification for Environmental Protection Activities and Equipment. It does a good job of supplementing lapses in the PKWiU in the area of environmental protection, and encompasses all core environmental protection and cluster sectors.

The tying together of nomenclature systematized in accordance with what is known as the European Union proposal for modifications to GATS/WTO W/120 involves its modernization so as to include changes that occurred later, as well as its more detailed deaggregation. The European Union proposal divides environmental protection into:

- Core Environmental Sectors (seven sectors). and
- Cluster Environmental Sectors (six sectors).

The European Union proposal is based on European Union environmental nomenclature (CEPA 2000), which facilitates further statistical data processing in the conducting of environmental protection analyses.

Characterization and Assessment of the Environmental Services Market in Poland Based on Accessible Statistics

Two groups may be identified within the environmental services market in Poland: core environmental services and cluster environmental services. The first group encompasses sewage management and water protection – where this sector identifies services related to the supply of water, (excluding hot water, PKWiU Section 41) – and sewage management (PKWiU category 90.00.1), waste management encompassing the removal of wastes (PKWiU category 90.00.2), contract-based waste metal and scrap processing (PKWiU Section 37), wholesale and retail trading services in waste, scrap, and other recycled materials (51.57.10. ex51.18.12. ex52.48.12), snow removal services (PKWiU category 90.00.3), and storage services (PKWiU subcategory 63.12.12). The second group includes environmental research and development services, consulting, the concluding of contracts, and environmental engineering, analyses, data collection, estimates, construction, transportation, and other services (including spatial planning services).

The participation of Poland in the world services market oscillated in the 0.4% to 0.5% range. The share of environmental services exports, measured using the balance of payment as a base, is on a similar level. For their part, imports are in the 0.15% to 0.20% range. The positive trade balance, calculated only for the core sectors, generated 1-2 billion USD annually. Should the cluster environmental sectors, which lack precise data, be added to this, the positive balance in environmental services turnover might even achieve a level of up to 30% more (estimated), although research and development, design, and engineering services have a clearly negative balance.

Analysis of the Polish environmental services market was conducted in line with the European Union proposal for modifications to the GATS/WTO classification system because it embodies the whole of the classification, forming its modernized version. It makes possible the conduct of subdivision of services by core sector, as in the GATS/WTO W/120 classification, and additionally allows for a more accurate de-aggregation of cluster sectors that account for only a portion of the activities of those sectors

Table 2. Running expenses in five core sectors in Poland that render environmental services in million of Polish zloty.

	2000	2001	2002	2003	2004	2005
Total	10,103.3	10,475.5	10,576.8	8,102.3	8,522.0	7,545.4
I.A. – Atmosphere and climate protection	4,041.2	4,200.8	4,366.5	1,264.0	1,647.8	1,695.8
I.D. – Soil and subterranean water protection	2,145.2	2,200.1	2,086.0	2,880.6	2,749.4	1,883.7
I.E. – Abatement of noise and vibration	2.0	2.1	2.2	38.5	45,6	41.8
I.F. – Biodiversity and landscape protection	299.5	315.9	321.9	635.5	637.5	320.7
I.G. – Other activities	873.8	921.9	939.4	844.8	1,171.9	1,280.7

The methodology of statistical research was changed in 2003, mainly by adding environmental income and expenditures. It is for this reason that 2003 data are not comparable with data from previous years.
Source: Own calculations on the basis of data ordered by the author in the Central Statistical Office (GUS) and National Bank of Poland (NBP).

in the area of environmental designations. The disadvantage of the classification is the significantly greater labor–intensive analysis.

Calculations meeting the needs of this analysis were made on the basis of statistical data provided by the GUS Central Statistical Office on the level of PKWiU sections. A significant part of the positions used in the classification had multi-level designations. This is why data that were inaccessible for such levels were estimated by way of approximate subdivision of values described in the section of the position as applied in the classification on the basis of ancillary data such as growth indicators, employment, investments, etc., allowing for the achievement of a probable approximation error of no more than +20%. Thus data were supplemented for all core and cluster environmental sectors as well as subsectors, with the exception of the de-aggregation of certain cluster environmental subsectors for which it was impossible to procure reliable ancillary data.

The GATS/WTO classification, like the European Union proposal, contains five core sectors for which statistical offices do not measure data in the services sector, but add them to the costs of running a business as operating costs and costs of the use of environmental protection equipment, but not the subject of any transaction. Their qualification is the same in the case of the statistical offices of other countries and international organizations. These costs are qualified as environmental protection running expenses and their value in most countries is at a level twice as high as investment in the given sector.

Running expenses of these sectors in Poland over recent years were in line with data presented in Table 2.

Worth noting is the fact that the running expenditures of those sectors are also approximately twice as high as the value of the services of the remaining sectors.

The conducted statistical analysis demonstrates that the share of core sectors in sales revenues over those years has been systematically growing (by 8.6 percentage points between 2000 and 2003). However, in 2004 it fell significantly (by approximately 14 percentage points). It subsequently increased in 2005 by approximately 10 percentage points. The result is a fall for 2005 as compared with 2003 by merely 4.4 percentage points.

The share of cluster environmental sectors in sales revenues had a similar level in 2005 to that of 2000. The highest indicator was the 22% share in sales revenues achieved in 2004. The share of costs of generating revenues grew in the core sectors approximately as much. Thus, there were no major changes in the economic situation of entities rendering services in the realm of environmental protection over the start and final years of the 2000-05 period.

Services export sales is an interesting item. For the discussed years its position in total sales was as follows:

2000	2.6%
2001	3.1%
2002	4.2%
2003	5.9%
2004	4.7%
2005	4.4%

This signifies that environmental services in businesses grew systematically to 2003, with a fall noted over the successive years – 2004 and 2005. However, the volume of environmental services over the whole of the analyzed period was small.

The rate of growth of environmental services sales dynamics was relatively high and amounted to approximately 14% in 2001 as compared with the previous year, and respectively 5.7% in 2002. It was the highest in the successive year – 2003 – amounting to 12.5%. In the wake of the collapse in 2004 it fell to -23.5% to once again show strong growth in 2005, achieving almost 15%.

An even greater level of growth, albeit irregular, may be observed in the cluster environmental sector (6.6 percentage points over 2002/2001 and 18.1 percentage points over 2003/2002). The highest growth in sales revenue dynamics took place 2003/2004, achieving a level of 256%. However, 2005 saw a great fall to a negative level of -56%. A somewhat greater rate of growth was noted in the costs of environmental and cluster environmental sales (by approximately 3-6 percentage points, with the exception of the 2003/2002 period when they grew by almost 15 percentage points) as compared with sales revenues, which may suggest a fall in the profitability of their sales.

Legal and Economic Analysis of Enterprises Rendering Environmental Services, including an Appraisal of Their Quantity, Size, and Financial Condition

Enterprises Rendering Environmental Services in Poland: Economic Analysis Results

The analysis encompassed the three primary sections of the PKWiU that account for approximately one–half of environmental services sales for which precise statistical data were available. Analyses of the financial achievements of the examined enterprises were conducted by applying the representative method, but the almost 50 percent share of representatives guarantees correct analysis.

The PKWiU sections in question are as follows:

1. Section 37 – Waste material recovery services (recycling).
2. Section 41 – Purified water and services involving its distribution, and
3. Section 90 – Sewage management services and collection and management of wastes, sanitary and related services.

Entities in these sections were subdivided by size (number of employees) – enterprises employing over 49 and those with from 10 to 49 employees. A subdivision by ownership sector – public and private – was also conducted.

Analysis of shares of individual enterprises in total financial achievement demonstrates that the largest number of enterprises points to Section 90 (over 50%), especially in the area of small enterprises. The largest role of the public sector is played by enterprises in Section 41 (over one-half of companies), but approximately 25% of companies in the public sector are Section 90 entities. Medium-sized companies (those employing more than 49 people) deliver almost 85% of sales revenues, but their financial results are less favorable than those of small enterprises. On average, approximately 60% of revenues are generated by the public sector, but its financial results, especially Section 41, are clearly worse than those achieved in the private sector. Approximately 50% of companies with net losses were categorized in Section 41 in the year 2000, but by the end of the examined period their number fell to approximately 37%. Moreover, from 34% to 45% of companies with net losses over the examined period belonged to the public sector of that section.

The greatest number of workers was employed by Section 41 (40%-46%), followed by Section 90 (41%-48% with a clear growth tendency in share), while Section 37 accounted for only 5%-6%. Large and medium companies from Section 41 employed approximately 40% of workers each. The public sector of the same section employs over 40% of all workers.

The dynamics of growth in sales revenues is downward in its tendency by several percentage points each year. The fact that the number of entities with net losses is falling should be noted as being positive. This is especially true of Section 41.

All companies in Section 41 have been decreasing their employment systematically. However. Sections 37 and 90 have been noting growth in numbers of employees, even by 1-2 percentage points each year.

Analysis of Development Perspectives: Enterprises Rendering Environmental Services

The results of the analyses presented in the report on the empirical study demonstrate that the environmental market, especially the environmental services market, is among the potentially the most developmental on the contemporary world market. This is borne out by the high rate of its development, especially in the countries of systemic transformation and in developing countries. Although presently holding only a small share in a developing and dynamic market, the rate of change visible over recent years makes possible their placement among potentially significant participants.

Analysts of the environmental market project development of industry working for environmental protection as well as the environmental services sector to a volume of over USD 600 billion by 2010, where the growth potential share of the countries of systemic transformation in Central and Eastern Europe as well as CIS countries (mainly Russia), may be of ever increasing significance in the prospective period. What is expected is that this growth shall especially involve developing countries and systemic transformation countries, and the level of growth of these countries shall amount to approximately 8-12% [10].

Better and improving access to the world environmental market is witnessed by the already performed liberalization of trade within the framework of OECD countries in line with WTO requirements, as well as the liberalization of trade in developing countries that, although occurring at a much slower rate, is taking place.

The market volume of developing countries in the area of environmental services may be assessed as accounting for an approximate 8.5% share in the world market, with a continuous growth tendency over recent years. Their share in world exports and imports oscillates in the area of a 6%-7% share in world trade, but in the case of world environmental services production exceeds an 8% share. This bears witness to the growing tendency of involvement of both domestic producers of environmental services in those countries and an even greater growth rate of foreign investments (from highly developed countries). This shows that world environmental services production is becoming one of the most dynamically developing sectors of the world economy.

Economic Policy Conclusions and Recommendations

In recent years the environmental services market has been among the most dynamically developing markets in the world economy. Although compared with other leading

markets with the greatest volume, such as the steel or agricultural markets, its size is smaller, it is comparable in size to the pharmaceutical market and the information technology market, which show an exceptionally high growth in demand.

The environmental industry (working in support of the environment) was characterized by a relatively high growth rate, initially in highly developed countries. The rate of growth in demand for environmental goods and services in these countries has recently weakened (to approximately 1-2%), but for its part demand in developing and systemic transformation countries has begun to show a growing trend (at a level of 7-8%). Analysts are expecting expansion in industry working in support of environmental protection, as well as in the environmental services sector, to a level of in excess of USD 600 billion by the year 2010. It is projected that this growth will be especially characteristic of developing and systemic transformation countries, where the growth rate for those countries will amount to approximately 8-12%.

In light of continued negotiations being conducted within the framework of the Doha Round, further liberalization of the environmental goods and services market is possible. All WTO members may benefit from liberalization–highly developed countries that are the main exporters of environmental services and developing and systemic transformation countries whose needs in the area of development of "clean" production and environmental protection are enormous.

Poland, as a member state of the European Union, should utilize this opportunity to develop production of environmental goods and services and become an increasingly important exporter. This especially pertains to goods and services limiting air pollution, mainly CO_2 emissions into the atmosphere, and the water and sewage economy, in its broad sense, including sewage treatment plants.

As a member of the European Union. Poland should side with an acceleration in negotiations relating to the quick opening of environmental services markets within the framework of the Doha Round.

In the sphere of what is known as development assistance. Polish companies may undertake investments in developing countries and provide consulting in this realm, as well as deliver capital goods for improving the state of the natural environment, aimed mainly at working against excessive greenhouse gas emissions into the atmosphere and unfavorable climate change.

However, this necessitates the creation of institutional structures (on a department level) within the Ministry of the Economy aimed at questions of sustainable development and ties between economic policy and environmental protection policy. Moreover, the dissemination of knowledge on the importance of the environmental goods and services market for Polish business is vital, especially in this day of new possibilities of cooperation offered in developing countries.

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