Effective Management Of Resources for Environmental Protection - Using Taxes In The Environmental Policy

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Abstract

Establishment of environmental taxes, called green taxes or eco-taxes, are ways to internalize the environmental costs in the prices of goods or services, causing producers and consumers to use resources more efficiently and sustainably.
Green taxes or Pigovian taxes, named after their inventor, Arthur Pigou are known as sin taxes and when are applied to the "sin" of pollution they may be called environmental taxes or eco-taxes.
Sustainable development can not be sustained without the existence of adequate measures and effective for protection of the environment. The polluter pays principle is a principle embraced by all countries from the desire do not deplete environmental resources, some of which being non-renewable resources, to be used by future generations.
Polluters are both individuals and legal entities who must to respond in one way or another for their irresponsible actions, compensating damages, protecting the environment and paying damages for any casualties.
Green taxes can generate a tax reform. Any responsible person will try to manage in another way the resources when has to bear consequences. In this regard, the environment can be protected more effectively and more cost effective for citizens. The effects of irresponsible actions of some of us not only affect the environment but also all animals and vegetable bodies inclusive people.

Key words: modelele de creştere, abordare neoclasica, deficit de resurse, sustenabilitate

INTEGRATED POLICY ON ENERGY AND CLIMATE CHANGES

Climate changes are one of the greatest dangers we face today, their occurrence being determined mainly by human activities. These activities enhance the natural greenhouse effect that contributes to the increase in temperature on Earth and the emergence the inevitable climate changes.

Better use of natural resources means reducing global emissions of greenhouse gases, especially carbon dioxide. Also, fossil fuels - oil, gas and coal for electricity, heating, cooling and transport are major sources of emissions of greenhouse gases, the fossil fuels causing about 75% of anthropogenic CO2 emissions.

The European Union (EU) practices an integrated policy on energy and climate changes, given the fact that burning fossil fuels is the main factor that causes climate changes. In this context, it is noteworthy that in 1972 the OECD launched the principle "polluter - pays", which actually means the costs assumption by the polluter to prevent environmental pollution and to remedy the damage caused.

An integrated policy on energy and climate changes translates into transformation methods of production and use of energy and the types of energy used. The objective is that the economy to respect the climate, by combining modern technologies and energy sources low in carbon. As a first step, the EU believes that the industrialized countries should collectively reduce emissions of greenhouse gases till 2020 by 30% below their level in 1990. The EU also agreed to reduce its emissions of greenhouse gases by at least 20% by 2020, regardless of the actions of other countries in this field, the reducing of the emissions from motor vehicles being essential to combating climate changes.

The monitoring and the actions to reduce pollution are discussed in a series of events with international character, which later materialized through treaties and agreements in this field.

One of the biggest successes in terms of international environmental agreements is the Montreal Protocol (1987), at which joined by 160 countries, including Romania, the main theme being the ozone depleting substances[1].

Also, in June 1992 in Rio de Janeiro held United Nations Conference on Environment and Development, in which was officially recognized the need to integrate economic development and environmental protection in the concept of sustainable development.

1. Trică, Carmen (2004) *Environmental Economics*, ASE, Bucharest, p. 53

At EU level, the 7th RTD program for 2007-2013 focused particularly on the environment, clean energy and low carbon emissions and climate changes. The EU has committed to reduce emissions by an average of 5.2% (15 countries have committed to reduce emissions by 8%) in the period 1990-2012, through the so-called Kyoto Protocol (1997) at the Framework Convention of United Nations Organization on the climate changes.

The Protocol created also flexible mechanisms based on the principles of market economy, including emissions trading, to assist industrialized countries to reduce emissions by a minimum cost and to encourage investments in projects on clean energy in developing countries and in the transition economies.

Subsequently, each state depending on the specific problems of pollution has developed its own policy for the protection and conservation of the environment, in accordance with the Treaties and international requirements. Coercion mechanisms regarding environmental are exploitation taxes of natural resources and pollution, as well as facilities for individuals or legal entities that are part of operating rules, resource recovery and use of green technologies.

Compared to 1990, emissions of greenhouse gases in our country decreased by 57.7% in terms of emissions which include Land Use, Land-Use Change, Forestry (LULUCF) and 52.1% by excluding LULUCF.

In applying environmental planning systems must take into account the following principles (according to Law no. 137/1995): precautionary principle in decision making, the principle of prevention of environmental risks and the damage, the principle of conservation of biodiversity and ecosystems specific to the natural biogeographic framework, the principle "polluter pays" , the removal with priority of the pollutants that directly and severely jeopardize human health, creating integrated national system for monitoring the environment, the sustainable use of all resources, creating a framework for the participation of the non-governmental organizations and the public to the development and their implementation, and development of international cooperation to protect the environment.

The introduction of environmental taxes as negotiable instruments was stimulated by the following factors: the awareness that the environmental regulations are not harmonized with the new realities, the need to develop efficient and flexible tools to ensure the progress, the need to implement the polluter pays principle, the need to reflect the cost of pollution in the cost price of the goods and services obtained[1].

1. Roman, C., Moşteanu, Tatiana (2011) Finances of Public Institutions, Economic Publishing House, Bucharest , p. 542

In our country, environmental costs reflect financial flows allocated for undertaking actions aimed at preventing, reducing or combating of the environmental damages. These actions relate to the reduction of air pollutants, protection of surface water, groundwater and soil, avoiding waste collection and its treatment, noise reduction, protection of natural resources and biodiversity conservation, scientific research in order to obtain products, raw materials or construction of the production processes that do not adversely affect the environment, the overall management of the environment and other activities for reducing the environment pollution. Total expenditure at national level include: investment, internal current expenditure (expenditure executed by unit staff), excluding external current expenses (expenses for environmental services purchased from third parties, and the fees paid with title of environment)[1].

External current expenditures include expenditures for environmental services purchased from third parties and ***environmental taxes*** (payments to the Environment Fund made under the Emergency Ordinance no. 196/2005, approved with amendments by Law no. 105/2006).

The environmental expenditures by producer groups and categories of expenditure

Table no. 1

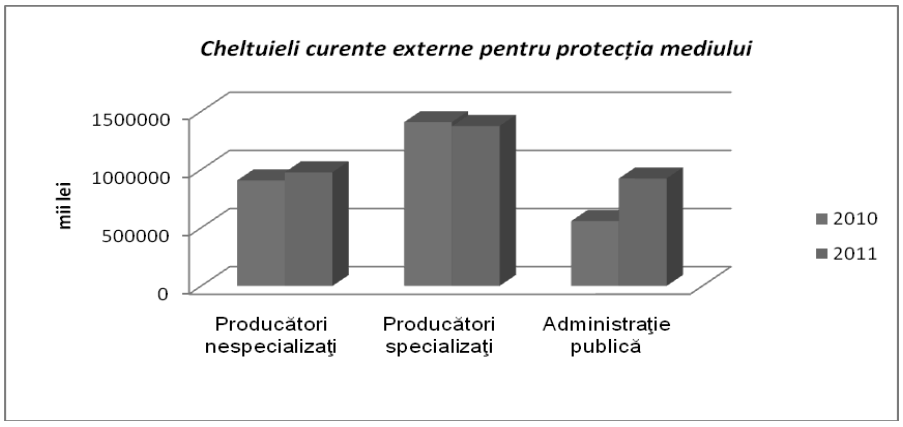
Thousand lei - current prices

Producer groups	Total expenditure		External current expenditure	
	2010	2011	2010	2011
Total	-	-	2870183	3273694
Unspecialised producers	4530101	4790399	906036	976573
Specialised producers	9581683	11765425	1407088	1373984
Public administration	4293033	5367402	557059	923137

Source: INS

1 *** (2012) The costs, production of services and financing the environment protection in 2011, INS, Bucharest, p. 8

Graph no. 1



Source: INS

In 2012, national spending on environmental protection recorded value of approx. 17.6 billion lei (approximately 3% of GDP) and environmental investments represented 23.4% of total expenditure for environmental protection. Moreover, investments in 2012 were mainly concentrated in the field of water protection (54.3%) as well as in areas such as air protection - 17.6% and disposal (16.6%).[1]

Environmental expenditures on producer groups and categories of expenditure in 2012

Table no. 2

Thousand lei - current prices

Producer groups	Total expenditure	*Expenditure at national level*			External current expenditure
		Investments	Current internal expenditure	Other expenditure	
Total	***20834609***	***4116201***	***13142644***	***300774***	***3274990***
Unspecialised producers	*7054426*	*2353193*	*3495240*	-	*1205993*
Specialised producers	*10208965*	*499699*	*8597637*	-	*1111629*
Public administration	*3571218*	*1263309*	*1049767*	*300774*	*957368*

Source: INS

1. *** (2013) *Expenses, production of services and financing of environment in 2012*, INS, p. 1

The distribution of environmental expenditure by development regions and by category of expenditure *)

Table no. 3

Thousand lei - current prices

Categories of expenditure	Years	North-East	South-East	South-Muntenia	South-West Oltenia	West	North-West	Center	Bucharest-Ilfov
Investments	2010	274942	334943	327038	1049615	347307	459922	379860	747029
	2011	453126	419312	560438	365473	441121	529783	475824	977709
	2012	242825	543391	457906	716210	372433	419862	418283	870730
Current expenditure	2010	416369	3326780	1404905	1233181	1297579	933541	1522645	1968584
	2011	583350	4465437	1588370	1574348	2308753	1263607	1357142	1986607
	2012	618791	3532306	1857417	1760819	3080942	1302713	2078278	2022279
Of which Current external expenditure	2010	88536	593857	182423	180223	111431	253434	160085	1289813
	2011	197169	696634	229794	203704	158088	255641	385729	1130733
	2012	160269	509309	359323	409990	84713	363298	303290	1038869
Other expenditure **)	2010	10123	11374	2997	1606	975	7790	4244	498
	2011	40248	3785	5316	1624	6731	9997	996	6271
	2012	12228	7432	4258	61	10055	6343	1933	0

Source: INS

**) – does not include Central Public Administration*

***) – includes grants and other expenses of local government*

In the context of reducing CO2 emissions are expected several types of measures, including a **green tax reform**, through which is desired the uniformity of not only countries emission, but also the efforts provided to it, and the internalization environmental costs in the price of the pollutant product, according to the "polluter pays". This requires use of the laws to achieve a reduction in the emission of pollutants by minimizing the consumption and alternative use of the various energy sources based on reduced carbon content.

To protect the environment, Member States have adopted tax policies on excise and other taxes on petroleum products, the excise taxes being higher at petroleum products with lead, than at the lead-free petroleum products (thus promoting the "polluter pays" principle).

With regard to mineral oils, Directive 92/82/EEC governs the excise duty rates applied to these products. For environmental protection, the Commission promotes the use of renewable energy products, in this sense being the promoting of two proposals, one for reducing excise for fuels produced from agricultural sources (biofuels) and the second for the harmonization of indirect taxation of energy products.

In our country, before 1990, there was neither an Environmental Fund nor the taxes on pollution; because of this, the Environment Fund has emerged as an entirely new institution.

Since 2000, when the Environmental Fund was established, it is consisting on European principles, as polluter pays and the responsibility of the producer being regulated by GEO. 196/2005, and finances environmental projects proposed by companies, local authorities, NGOs, schools, being the public fund consisting of fees and contributions.

The environmental fund income are from contributions paid by operators from selling ferrous and nonferrous waste or hazardous substances to the environment, from selling standing timber, from fees for emissions of pollutants into the atmosphere, from per tire fee, fees for issuing permits and environmental permits and others. [1]

The tax on energy and on carbon dioxide has been proposed by the Commission in 1991, due to the increasing rate of environmental degradation. This tax on energy and on carbon dioxide and even on fuel (leaded or unleaded gasoline, diesel, natural gas used for transport) takes into account by the externality criterion, since the pollution passes beyond national borders, but questions arise in terms of respect the equality principle (if companies or economic sectors that are considered to have an innovative action in the energy savings research domain will be exempt from this tax).

Energie/CO2 fee, fee proposed by the Commission in May 1992, is the first step in fostering more efficient use of energy and to accelerate the use of fuels with lower carbon content or carbon free.

ENVIRONMENTAL TAXES

Environmental protection and improving its quality involves the use by public authorities of the environmental policies, and of ways and economic and financial instruments, the use of legal regulations, standards etc. Within these, the financial instruments (taxes, fees, and loans) have an important role in influencing of the polluters behavior, and on the other hand produce a range of financial resources that enable the funding of the actions of environmental protection.

To protect and preserve the environment is necessary to allocate more financial funds, and training of specialists in environmental management and the development of special programs for research and monitoring of the state of the environment and educate the public to understand the need for environmental protection.

1. Văcărel, I. And colab., (2007) *Finanţele Public finances* - sixth edition, Didactic and Pedagogic Publishing House, Bucharest, p.332

Environmental tax idea was first developed in 1990, and was approached by the European Community in an environmental action program. This program was supported by the European Environment Agency to strengthen the economic laws.

The main economic motivation to use the taxes in the environmental policy is to include the cost of pollution and other costs of using the environment called external costs in the cost price of goods and services. [1]

An environmental tax allows the polluter to decide whether it is more efficient to reduce pollution or pay the relevant fee and its level must be proportional to the seriousness of the environmental issues at that concern.

Essentially, environmental taxes stimulate producers and consumers to abandon environmentally harmful practices. However, currently, these fees increase the tax burden on people who do not produce environmental alteration, breaching the principle of the uniqueness of taxation (a good, deed, act, income etc. can not be taxed more than once).

Identified environmental taxes imposed by some EU countries are: the tax on lead emission, the tax on sulfur emissions, the tax on smoke emission , tax on vehicle age, the negative tax for use of catalysts in exhaust gases, and noise tax, wheel tax, the tax to regulate waste, the tax on fluids and sewage, battery tax, the tax on cleaning urban and for other settlements, energy tax, the tax on the emission of particles and pollutants, tourist tax, fee vicinity of nature reserves, agricultural taxes, taxes for licenses on fishing and hunting, etc.[2]

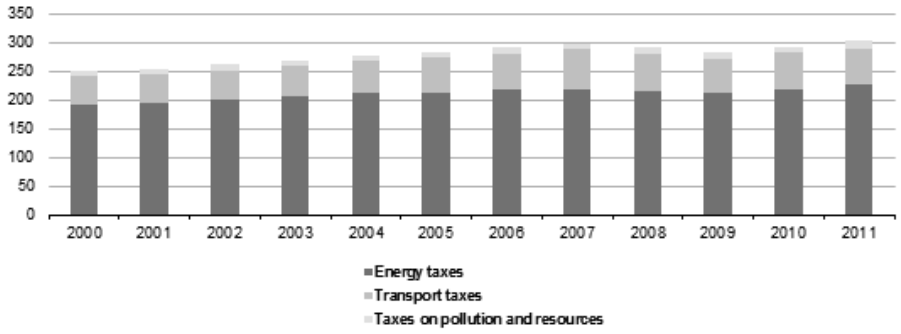
Pollution reduction targets are sometimes difficult to achieve because of the difficulties of quantitative assessment of environmental effects. Also offsetting the negative effects of the taxes must be performed in accordance with European structures, to do not drop Romanian economic competitiveness.
From the statistical analysis it appears that the total revenue from environmental taxes in the EU -27 in 2011 was approximately 302 900 million, a figure equivalent to 2.4% of gross domestic product (GDP) and with 6, 2% of total revenues from total of taxes and social contributions.

1. Roman, C., Moşteanu, Tatiana, op. cit.

2. Ibidem, p. 548

Income from the total environmental taxes by type of tax, at the EU level - 2000-2011

Graph no. 2



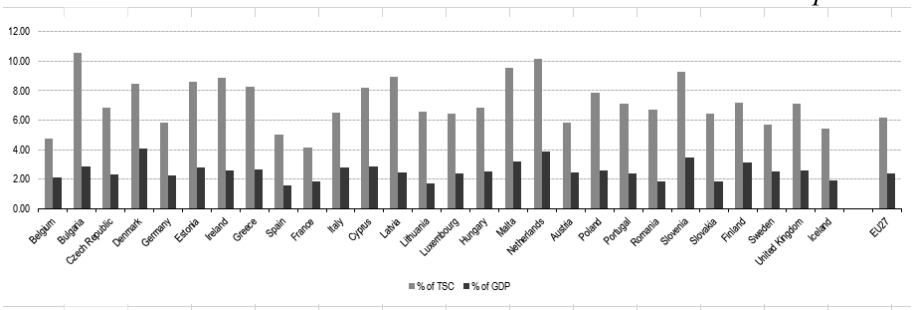
Source: EUROSTAT

The revenue in the environmental tax in the EU-27 increased between 2000 and 2007, before that the financial and economic crisis led to a reduction in economic activity, which resulted in lower tax revenues in 2008 and 2009, environmental tax revenues in 2010 returning to an upward trajectory. In 2011, the average tax revenue was approximately with 5000 million EURO higher than their peak from 2007.

While, in the EU-27, the tax revenue in environment rose in value terms between 2000 and 2007, and in 2010 and 2011, the amount of these taxes in GDP, compared to total revenues from all taxes and social contributions did not followed the same route.

Environmental taxes as a share of GDP and in total taxes and social contributions at EU level in 2011

Graph no. 3



Source: EUROSTAT

The chart no.3 shows the tax revenue, both in relation to GDP and relative to total revenues from taxes and social contributions (TSC). The general trend of tax revenue to GDP decreases, reaching a minimum of 2.39 in 2011 and 2009. From 2003 to 2008 and then again in 2010 and 2011, tax revenues have fallen as a share in TSC.

The legal framework under which environmental taxes are collected in Romania is the Fiscal Code (Law no. 571/2003 updated) for fees which constitute income to the state budget and local budgets, GEO. 196/2005 on the Environmental Fund for those fees which represent revenue for the Environmental Fund Administration.

Environmental taxes and share of GDP and in total taxes and contributions in 2006-2010

Table no. 4

million lei/%

	2006	2007	2008	2009	2010
Total environmental taxes	6699,4	8553,7	9158,8	9392,1	10542,3
Share of environmental taxes in GDP	1,9	2,0	1,8	1,9	2,0
Share of environmental taxes in total tax charges	10,3	10,7	9,5	10,7	11,1

Source: INS

As can be seen from the data presented in the table above, revenues from environmental taxes have increased during 2006-2010, both in terms of total amounts and as a share of tax obtained in total taxes.

In environmental taxes total, energy taxes in 2010 accounted for 89.3%, transport taxes 10% and other taxes on resources and on pollution represented 0.7%.

CONCLUSIONS

The obligations and responsibilities regarding environment pollution can be achieved when there is the possibility to internalize damages, ie the including of the pollution abatement costs within the costs of production. In this way, the producer of a good or service must consider the damages produced to the environment and life in general as part of production costs. In other words, the polluter should pay. This principle underpins environmental policies adopted.

In our country the action programs in this area in the medium term provide the protection and nature conservation, of biological diversity and the sustainable use of its components, water quality, waste management, air quality, climate changes, firm enforcement of environmental legislation, the introduction of economic instruments for environment protection. [1]

In this context, green taxes can generate a tax reform. As long as funding sources for environmental protection expenditure are budget, fund of environment, the external resources, the sources from the state budget could be substantially reduced by applying green taxes. Who will use the water resources will otherwise manage these resources as long as he has to pay if does not comply with environmental legal acts. In this context, the state budget resources which are allocated to environmental protection can be redistributed to other important sectors such as health, education, research and development etc.

Using natural resources implies a responsibility of all factors that contribute to environmental change but the negative effects resulting from human action should have a cost to him.

The environmental duty may reduce or limit the production of materials and goods with strong polluting emissions.

To reduce pollution, environmental taxes are elements - key more effective than regulations, to foster the innovation that determines competitiveness.

Environmental taxes are an important area of future taxation of the states, for environmental protection and for fostering a healthy economy, simultaneously to obtain funds for the budgets of those states.

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