

# THE ROLE OF THE ECONOMIC INSTRUMENTS IN ENVIRONMENTAL MANAGEMENT IN GERMANY

*Scientific researcher III, PhD. PICIU Gabriela Cornelia<sup>1</sup>  
Associate Professor PhD. TRICĂ Carmen Lenuța<sup>2</sup>*

## Abstract

*Financial and economic instruments for reducing CO2 emissions is the most effective means of prevention and control of pollution is certainly superior command and control measures used in complementary. Environmental policy instruments used in Germany have made improvements locally, regionally and nationally. The problem is that we need to find new ways to apply these tools to ensure a healthy long term. How Germany managed so far to reduce the greenhouse gas emissions by up to 20%, is a good example to follow, so Romania to improve implementation of environmental policy at local, regional and national level.*

**Key words:** *economic instruments, prevention of pollution, CO2 emissions*

**JEL classification:** Q53, Q58

## 1.INTRODUCTION

The main objectives of the Kyoto Protocol until 2020 for Germany are the reduction of the hothouse gasses emissions by up to 40%, in comparison to the year 1990. Germany in the EU -15 distributions in the Kyoto Protocol for hothouse gas reduction of 21% in the period 1990-2008. The following measures can be successful, in order to offer the rest of 19% until 2020.

The energy generation and use are contributing to the climate protection. The Environmental Federal Agency has identified eight measures in the electric power, heat and transport, with the goal of reaching this objective until 2020 (Table 1). The development of the energy renewable sources should base themselves on these pillars, in order to reduce emissions. The share of the technical and systemically measures in the global scenario for the reduction of CO2 emissions is based on economic efficiency criteria (the lowest cost possible to reduce emissions per Co2 ton), the elimination of the juridical and administrative barriers in the way of emissions reduction and the putting into application of the necessary behavior changes.

Activity fields	1990	2005	2020
trade / services	87	53	43
households	129	113	74
transport	162	164	134
industry	154	103	73
energy	415	362	247

**Table 1: Evolution of the CO2 emissions**

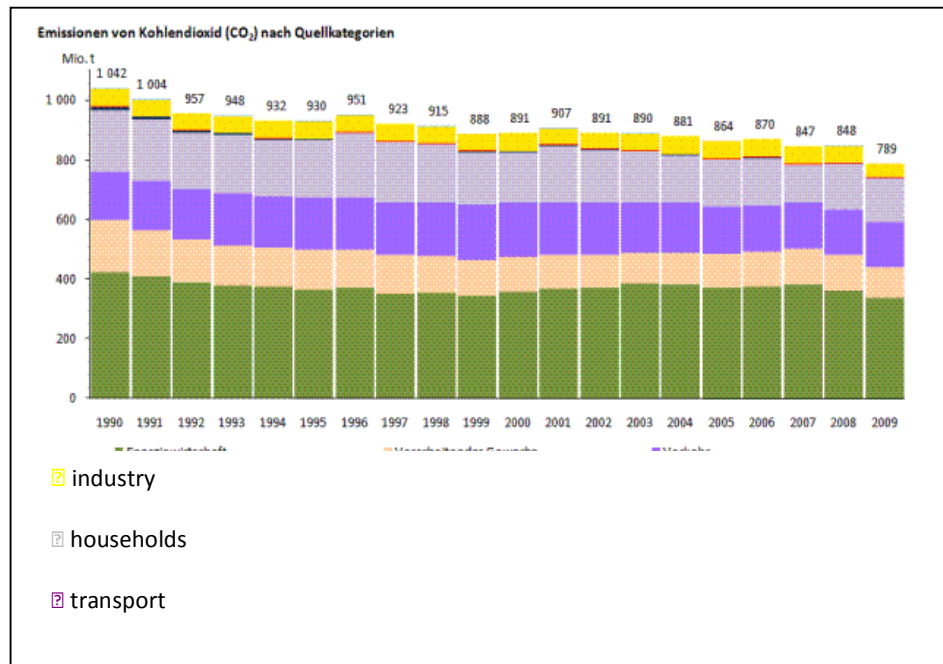
Source: Umweltbundesamt (Ministry of Environment)

<sup>1</sup> Financial and Monetary Research Center „Victor Slăvescu”, Bucharest, Romania, [gabriela\\_piciu@yahoo.com](mailto:gabriela_piciu@yahoo.com)

<sup>2</sup> Academy of Economic Studies Bucharest, Romania, [carmentrica@yahoo.com](mailto:carmentrica@yahoo.com)

The energy savings, the avoiding of the useless traffic and the greater use of the renewable energies can diminish not only the CO<sub>2</sub> emissions, but also the atmosphere pollutants, as the sulphur dioxide, the particles emissions, the nitrogen oxides and the volatile organic components. By the reduction of the atmosphere pollutants, according to a report issued by the UBA (Umweltbundesamt), the health expenses in Europe (EU-27) could have an average of 12 Euro.

In the graph above (Figure1), we can see the evolution of the CO<sub>2</sub> emissions coming from different activity sectors in the period 1992-2011. The greatest share is held by energy sector, around 50% of the emissions.



**Figure 1: CO<sub>2</sub> emissions - Activity fields**  
 Source: Umweltbundesamt (Ministry of Environment)

During the analyzed period, the emissions value decreased by use of some well defined economic instruments, through the efforts made by the Environmental Federal Government. A method for the reduction of these emissions coming from this sector is the use of the renewable energy, which means higher costs, but also could create ecological security on long term.

Another field acknowledged as a source of gas emissions with hothouse effect is the transport sector, which holds a share of 20% of the emissions coming from the fossil fuels consumption. The German Government has established taxes and charges to reduce the emissions, but this will lead to the increase of the diesel oil price.

## 2. THE ECONOMIC INSTRUMENTS APPLIED FOR THE REDUCTION OF THE CO<sub>2</sub> EMISSIONS

The economic instruments represent the most important means through which the Federal Government in collaboration with other levels of the Government, as the European Union can determine the change of the quantity of the hothouse effect gas emissions. The instruments are characterized by a relatively high productivity, in terms of the reduction of realizable





