

September 30th, 2011

Economic-environmental Indicators – NAMEA
1995 - 2009

Air Emissions Accounts

Significative reduction of the greenhouse gases emissions

In 2009, it is estimated a reduction of the greenhouse gases emissions by 4.6%. This evolution confirms the trend, registered since 2006, of dissociation between the evolution of the economic activity and of the greenhouse gases emissions. In relation to the 1995-2009 period, the increase of CO₂ emissions by industries was 6.6%, while the economy's Gross Value Added rose 29.8% in volume. In the 2006-2009 period, a significant reduction was observed in these emissions (-11.6%), mostly influenced by the energy intensity factor, reflecting the use of cleaner energy sources, namely the hydroelectric and wind energies and the natural gas.

Methodological notes:

Being an integrated and relevant part of Environmental Accounts, **NAMEA (National Accounting Matrix including Environmental Accounts)** is a conceptual instrument (framework) that relates National Accounts with Environmental Accounts. In particular, in this press release, is analysed one of its extensions – the air emissions accounts. National Accounts provide macroeconomic data regarding economic activities that combined with air emissions data allow the linkage between environment and economy. More specifically it measures in what way economic agents contribute to the degradation of environment while producing or consuming.

During NAMEA's compilation process, National Accounts principles and rules are used, like the classification of activities, the residence principle and other accounting rules. Also in this framework, only emissions that can be traced to economic activities are considered. Emissions from non-economic agents, for instance nature (e.g. geothermal energy), are excluded. Furthermore, transboundary emissions and nature's absorption of substances are also excluded.

Economic data is provided by National Accounts, and it's classified by NACE, Rev. 2. Emissions data is provided by the Portuguese inventory of emissions (SNIERPA - Sistema Nacional de Inventário de Emissões Antropogénicas por Fontes e Remoção por Sumidouros de Poluentes Atmosféricos), which is compiled by the Portuguese Environmental Agency. This data is classified by SNAP97 (Selected Nomenclature for Air Pollution), which is divided by eleven sources of emissions. Since SNAP97 and NACE Rev.2 aren't compatible, it was necessary to identify which branches of activity were responsible for the emissions. Emissions derived from road transport were allocated to all industries and households that use this kind of transport. In addition, emissions were allocated to industries according to the primary energy consumed, even if that energy is transformed on a later stage. For instance, emissions derived from the production of electricity were allocated to the electricity industry and not to the industries that consumed that electricity. Moreover any secondary production of electricity was allocated to the electricity industry and not to the industry that produced that energy.

Finally, NAMEA takes into account the nationality of economic agents and not the territory. Thus, emissions from non-national entities occurred in the national boundary are excluded and emissions from national economic units abroad are included.

This way, NAMEA figures are different from those used by National authorities for purpose of the European Emissions Trading Scheme or the National Plan for Allocation of Emissions. Any kind of comparison between these sets of data should be avoided.

Factors to calculate Global Warming Potential (GWP) – equivalents defined by IPCC 1995 (Intergovernmental Panel on Climate Change) which express the effect, in the atmosphere's irradiative properties, of one ton of the respective gas to one ton of CO₂.

CO₂ equivalent = 1 ton CO₂

N₂O equivalent = 310 ton CO₂

CH₄ equivalent = 21 ton CO₂