CO2 emissions from fuel combustion: Part III: Total Greenhouse Gas Emissions

Abstract:
CO2 emissions from fuel combustion represent the majority of anthropogenic GHG emissions. However, comprehensive analysis of emission trends considers other sources of CO2 as well as other gases, knowing that data on gases and sources other than CO2 from fuel combustion are much more uncertain. Country-specific estimates of CO2 from biomass burning and F-gas emissions are particularly difficult to ascertain. To complement work regarding the emissions of CO2 from fuel combustion, the IEA also included EDGAR data on other CO2 sources and on five other greenhouse gases; methane (CH4), nitrous oxide (N2O) and the fluorinated gases (or “F-gases”) HFCs, PFCs and SF6, all gases addressed by the Kyoto Protocol. The Main changes in this edition are that CO2 emissions from carbon released in fossil fuel use, labelled in the sectoral energy balance as ‘non-energy use’ or ‘chemical feedstock’, in addition to CO2 emissions of fugitive nature are now taken from the EDGAR4.3.2 dataset. The information in Part III (with the exception of CO2 emissions from fuel combustion) has been provided by Jos G.J. Olivier from the PBL Netherlands Environmental Assessment Agency and Greet Janssens-Maenhout from the Joint Research Centre (JRC) of the European Commission, using the EDGAR database (version 4.3.2 for CO2 emissions and 4.2FT2010 for other gases) developed jointly by JRC and PBL. Please note that the GHG emissions totals presented here will differ from those shown in countries’ official national inventory submissions to the UNFCCC. This is primarily due to differences in coverage for the category Other. However, this may also occur due to differences in allocation, methodologies, and underlying data sources for activities and emission factors, as specified in Part III, chapter Sources and Methods. Details on possible differences between IEA and UNFCCC CO2 emissions from fuel combustion estimates can be found in Part I. Details on causes of differences in other GHG emissions can also be found in Part III.

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