Conference on Climate Change and Official Statistics
Oslo, Norway, 14-16 April 2008

Session Two

RJ Andres[1], TA Boden[1], G Marland[1, 2]
[1]Environmental Sciences Division
Oak Ridge National Laboratory
Oak Ridge, TN 37831-6335 USA
[2]International Institute for Applied Systems Analysis
A2361 Laxenburg
Austria
andresrj@ornl.gov, bodenta@ornl.gov, marlandgh@ornl.gov

The Use of UN-Supplied Fuel Production and Trade Statistics for the Estimation of Global and National Fossil-Fuel-Derived Carbon Dioxide Emissions

Statistics on the production, transfers, transformations, and consumption of fuel are collected by various governmental, public and private entities. These statistics are compiled by national statistical offices (NSOs). NSOs forward summaries of these statistics via questionnaires to international organizations such as the United Nations Statistics Division (UNSD) and the International Energy Agency (IEA). These international organizations then make these statistics available to the general public, government entities, private firms, and non-governmental organizations through a variety of means. These individual groups then use these statistics for a multitude of applications.

This talk will focus on one such application: the estimation of global and national carbon dioxide emissions from fossil-fuel consumption. In addition to the fossil fuel statistics, these estimates also rely on a knowledge of fuel chemistry and combustion conditions. Personnel at the Carbon Dioxide Information Analysis Center (CDIAC) at Oak Ridge National Laboratory (ORNL), USA, have for three decades made annual estimates of fossil-fuel-derived carbon dioxide emissions. New releases of the emissions data are made each year when another year of fuel statistics becomes available from the UNSD. This talk will briefly review how the emissions estimates are made on both a global and national basis. These estimates are only made after the completion of a quality assurance/quality control (QA/QC) procedure. The QA/QC procedure is an interactive process with the UNSD that helps ensure the UNSD fuel statistics release is internally consistent. The talk will then close with a brief description of a value-added product produced at CDIAC: the distribution of the national emissions at a one degree latitude by one degree longitude scale.