Emissions - Land Use

The FAOSTAT Emissions Land Use database provides country-level estimates of greenhouse gas (GHG) emissions based on FAOSTAT activity data using Tier 1 computations, following 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National GHG Inventories. Technical details of specific activity data used and relevant computational steps employed, including the mapping between IPCC and FAOSTAT land use categories, are given in the *Methodology and Quality Information* section of the metadata for each of the sectors in the domain.

Changes in carbon stocks and ecosystem function linked to anthropogenic activities such as land-use change and land management determine emissions and removals of GHG that are reported by countries for the IPCC Land Use, Land-Use Change and Forestry (LULUCF) categories. In general, activities that increase terrestrial carbon stocks over time lead to removal of carbon dioxide (CO_2) from the atmosphere, while activities that decrease total carbon stocks lead to net CO_2 and non-CO_2 emissions.

The current database is limited to CO_2 emissions by sources and removals by sinks from net forest conversion (in Forest Land) and from cultivated organic soils (in Cropland), representing nonetheless a large component of emissions from LULUCF. Because of limitations in FAOSTAT input data, it does not currently contain the full range of IPCC LULUCF emissions.

Results from the FAOSTAT Emissions Land Use database contribute to IPCC WGIII Fifth Assessment Report, extending trend analysis of activity data and GHG emissions to the present time, as well as ensuring annual automatic updates in following years. In particular, the data indicate that emissions from net forest conversion have decreased in the most recent decade of 2000-2010 compared to earlier decades.

The FAOSTAT Emissions database can provide significant support to FAO member countries, along four key dimensions:

- Providing regular updates of global and regional trends in GHG emissions from agriculture and land use;
- Supporting capacity development of member countries in assessing and reporting GHG emissions, considering new requirements under the Durban accords;
- Establishing a GHG emission benchmark for quality control and quality assurance;
- Providing a coherent framework for national-level analysis and dialogue on GHG assessment and gaps.

DISCLAIMER: The FAOSTAT Emissions data are estimates by FAO and do not coincide with GHG data reported by member countries to UNFCCC. The database is intended primarily as a service to help member countries assess and report their emissions, as well as a useful international benchmark. The FAOSTAT Emissions data are disseminated publicly to facilitate continuous feedback from member countries.