PROVIDING DATA FOR REPORTING ON GREENHOUSE GASSES IN GERMANY

A digital landscape model (DLM) produced by surveying authorities is playing a pivotal role in reporting on greenhouse gasses in Germany. The ATKIS Basis-DLM is used as the base dataset for the National Inventory Report (NIR) of greenhouse gases from CRF-Sector 5 – Land Use and Land Use Change.

It is provided by AdV, the Working Committee of the Surveying Authorities of the Laender of the Federal Republic of Germany and underpins the land use matrix created for the NIR. The inventory is required under international treaties against climate change, such as the United Nations Framework Convention on Climate Change (UNFCCC 1992) and the Kyoto Protocol (1997), as well as respective EU legislation.

The Thünen Institute of Climate-Smart Agriculture reports greenhouse gases from CRF-Sector 5 (Common Reporting Format of the United Nations Framework Convention on Climate Change – UNFCCC). CRF-Sector 5 reports Land Use and Land Use Change from the German soils and biomass from cropland. The results are published annually in the NIR.

The basis for calculating greenhouse gases from soil is a consistent time series of land use and land use change from 1990 to today. Since 2000, the ATKIS Basis-DLM has been the most important dataset to create this land use matrix.

The illustration here shows CO2 emissions from land use in 2007 and the land use change from 2006 to 2007. Small sinks (that allow reductions of CO2 in the atmosphere) are mostly related to an increase in biomass or a land use change from crops to grass. The largest source of CO2 is from organic soils because most German organic soils are drained for agricultural use.