



EuMetChem: Review of current status and European framework of online integrated meteorology-chemistry modelling

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Although atmospheric chemical transport (ACT) models can be coupled to numerical weather prediction (NWP) models either off-line or on-line at present, a scientific perspective of chemical weather forecasting (CWF) would argue for an eventual migration from off-line modelling (where the ACT model is run after the NWP model is completed) to on-line modelling, allowing coupling and integration of the physical and the chemical components of CWF systems.

The COST Action ES1004 EuMetChem: 'European framework for on-line integrated air quality and meteorology modelling' (2011-2015) (web-site: <http://eumetchem.info>) is focusing on a new generation of on-line integrated ACT and Meteorology (NWP-CLIM) modelling with two-way interactions between different atmospheric processes including chemistry (both gases and aerosols), clouds, radiation, boundary layer, emissions, meteorology and climate. The overall objective of the Action is to set up a multi-disciplinary forum for on-line integrated air quality/meteorology modelling and elaboration of the European strategy for a new-generation integrated ACT/NWP-CLIM modelling capability/ framework.

The first task of EuMetChem was a review of the current status of on-line integrated meteorology-chemistry modelling in Europe. This presentation is giving an overview of existing 17 online coupled regional models and building a framework of online integrated meteorology-chemistry modelling in Europe.