Geophysical Research Abstracts
Vol. 13, EGU2011-9309-4, 2011
EGU General Assembly 2011

EUMETGRID - harmonized gridded climate data for Europe.

Ole Einar Tveito (1), Christoph Frei (2), and the EUMETGRID Team

(1) Norwegian Meteorological Institute, Climatology Division, Oslo, Norway (ole.einar.tveito@met.no), (2) MeteoSwiss, Zurich, Switzerland (christoph.frei@meteoswiss.ch)

High resolution gridded climate and weather data are considered as important in order to improve monitoring of European weather and climate and to understand and predict climate variability, extremes and weather related hazards. The information is urgent for society to be able to adapt to and cope with the challenges associated with a changing climate. EUMETGRID, a programme within the framework of EUMETNET, aims to provide high resolution gridded climate data for Europe meeting the increasing demand for access to such data at a pan-European scale. Presently, 24 EUMETNET members (national meteorological and hydrological services (NMHSs)) participate in EUMETGRID.

The EUMETGRID programme will establish access to high quality gridded data sets of several essential climate variables and related products and services covering all of Europe, including time series of about the recent 50 years. The programme will concentrate on developing and evaluating of methodologies to establish high resolution grids based on observations from synoptic and climatological stations, build a common European data infrastructure to distribute and exchange gridded data and to develop derived products and services associated with these data. After a development phase, EUMETGRID is intended to emerge as an operational activity.

EUMETGRID aims to establish access to very high spatial (preferably 1x1km2) and temporal (at least daily) resolution gridded datasets using in-situ observations as input. The dataset should take advantage of all information available at NMHSs. In order to achieve this, EUMETGRID will take a distributed data base approach, building a system based on nationally tiled gridded datasets provided and hosted by the individual NMHSs. This decentralized approach will ensure access to the current best available datasets, based on full coverage of nationally available observations, the most up to date data quality, the best knowledge about local and regional climate conditions, and taking account of national ownerships that are crucial for the national commitments to the programme.

EUMETGRID services will provide access to weather and climate data for for spatio-temporal modeling of e.g. hydrological and agricultural processes. They will also encompass near real-time monitoring, placing actual extreme events in a historical perspective.

In addition to nationally contributed datasets, EUMETGRID will establish a data infrastructure that will offer a platform for dissemination of other gridded climate datasets such as E-OBS and be used to access and distribute data from regional re-analyses such as results from the EURO4M FP7 project.

The EUMETGRID concept can develop into a central access point to both observation-based gridded climate data and data from weather prediction and climate models and thereby evolve into a future GMES service for weather and climate.