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UERRA Regional Reanalysis production data with Data rescue and Quality and Uncertainty evaluation for pre-operational Copernicus climate change services

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The FP7 Project UERRA (Uncertainties in Ensembles of Regional ReAnalyses) is now in its final stage and most of the production, archiving and evaluation has been undertaken. Almost 9M observations from several European countries have been digitised and quality controlled. They are on the sub-daily time scale and most from after 1950 in order to assist with regional (and global) reanalyses. Also much more digitised data have been collected from some countries and the distribution of rescued data will be shown.
The interpolation methods of climate observations and analysis for E-OBS have been revised and improved methods for high resolution and uncertainties have been developed and some of the impact will be demonstrated. Also for E-OBS there have been many more data added including the UERRA rescued data which will first be available from the ECA&D data portal.
The three full upper air Regional European Reanalysis 12 km systems have been run in production from the year 1961 (SMHI) or 1979 (Met Office) and 2006 to 2010 for the University of Bonn and are completed or in their final stage. The 2-dimensional Météo-France temperature and precipitation reanalysis at 5 km resolution is being produced for most of the 55 year period.
The reanalyses reside in a common UERRA MARS archive at ECMWF and all data are openly available from the Data Services and a portal at ECMWF. A common set of variables exists with rather high vertical resolution pressure level data as well as height levels near the ground. There are also model, surface and soil level data. An overview of the data availability will be given.
Evaluation methods have been developed or assembled jointly in the Project and are used to evaluate both the quality of the reanalyses as well as the uncertainties compared with independent observations, high-resolution data sets and the spread in ensembles of reanalyses. Some of the UERRA reanalyses will feed into the Copernicus Regional Reanalyses where the efforts will be continued and extended.