Preparing the Operational Copernicus Climate Change Service

Produce European regional meteorological reanalyses of essential Climate Variables for several decades;
provide observations for reanalyses; provide data services and user information

Builds on the previous EURO4M FP7 project but extends in several directions:

- Estimate uncertainty; produce ensembles of reanalyses including multiple models; increase grid resolution; extend time spans;
- Extend observation record; improve gridded data sets and estimate underlying uncertainty

Regional Reanalyses

+ Emphasis on the user’s perspective
+ Investigate spatio-temporal scales and trends
+ Exploring different methods
+ Use standardized uncertainty measures for all data sets

OBSERVATIONS

- Enhanced gridded observations E-_OBS
  - Estimate uncertainty arising from heterogenous observation coverage and interpolation
- Data rescue of historical observations
  - Already more than 5M data recovered
  - Focus on sub-daily scale → observation stream for reanalyses
  - Comprehensive quality control and data development (correction, homogenisation)

Ensemble of Reanalyses

- Regional reanalyses driven by global forcing and upper-air and surface observations using frozen systems
- Surface and upper-air parameters

ARCHIVING IN MARS

- The common UERRA archive is MARs at ECMWF
- Data services from MARs and ESGF interface
- Web Map Servers
- Visualisation through Metview and WMS

PROJECT PARTNERS

Among 5 pre-operational FP7 projects

- ERA-CLM2: European Reanalysis of the Global Climate System
- UERRA: Uncertainties in Ensembles of Regional ReAnalyses
- QA4ECV: Quality Assurance for Essential Climate Variables
- CLIPC: A Climate Information Portal for Copernicus
- EUCLEIA: European Climate and weather events: interpretation and attribution

UERRA: Grant Agreement 607193 EU FP7 SPACE 2013-1