

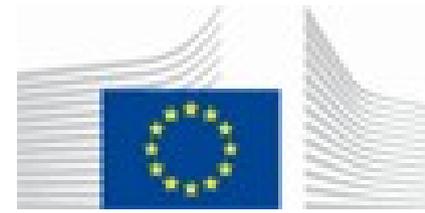
Risks and contingencies

General (from DoW, more in Lessons..)



- Large-scale computing demanding
- Data services extensive
- EURO4M dependencies or delays
 - > Only some delay and SMHI ran 20, then 30 + years anyway in parallel to UERRA
- Global lateral boundary forcing
 - ECMWF ERA-5 (SAT) somewhat late, needed for ensembles
 - > MO in development phase 2014-2015, test ERA-5 now possible
 - > ERA-Interim (ERA-40) can be used for deterministic
 - > Possible ERA-CLIM ERA-20C as backup?

Risks and contingencies General



- Staffing
 - Risks of losing competent staff when leaving or short term contracts
 - New recruitments needed for the Project
 - > Monitored and communicated with Coordinator
 - > Staff have been replaced/found but some delays incurred
- Coordinator and coordinator's office
 - Long experience of earlier projects and of other ones
 - Good WP leaders that support

Risks and contingencies Observations



- Observation coverage low or missing for some periods / regions
 - Data policies sometimes/often prohibitive for DARE
 - **Still problem but some (France, Nordic) open data**
 - Transfer to MARS@ECMWF
 - International data centres and transfer/ encoding for MARS
 - The transfer of national data to international data centres and to MARS VERY time consuming and/or complex
 - => **MARS data used and supplemented with ASCII files**
- Crucial for 2m T/RH and precipitation reanalysis!
- Satellite data from also other sources and processing needd

Risks and contingencies for the Reanalyses



- Scientific developments
- Regional Ensemble DA systems not identical to the resp. Global or Meso-scale Forecasting systems
 - MO developed ENS-4DVAR for this purpose
 - UB / DWD developed L-ETKF for the purpose and not guaranteed to work within time frame
 - > MO has a large group and DA and ENS expertise
 - > UB has a working Nudging ENS system as fallback

Risks and contingencies for computing and data



- Large-scale computer resources
 - Demanding and may exceed allocation
 - ECMWF upgrade necessary and counted on
 - > **Being monitored and seem to be under control but will be tight**
- Data services and dissemination
 - **Builds on established services and a lot of experience available**

Risk for Evaluation



- UERRA reanalyses not available yet
 - > **Use preliminary archives**
- Scientific challenges
 - Yet to come!