



## **Evaluation of ALARO-Climate present climate simulation in 6.25 km resolution**

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ALARO-Climate is a new regional climate model (RCM) derived from the ALADIN local area model family. It is based on the numerical weather prediction model ALADIN with so-called ALARO physics and it is being developed at the Czech Hydrometeorological Institute. The model is expected to be able to work in the so called "grey zone" physics (horizontal resolution of 4 - 7 km) and at the same time retain its ability to be operated in resolutions in between 20 and 50 km. The aim of the model development is to provide new and even more detailed insight into the future climate evolution at the regional level than it is expected to come from the Euro-Cordex initiative.

Here we present results of the first model simulation in 6.25 km horizontal resolution on the longer time-scale (1961-1990). The model was driven by the ERA-40 re-analyses and run medium-size integration domain (~ 2500 x 2500 km) covering the major parts of Europe. The simulated model climate is compared with the gridded observation of air temperature (mean, maximum, minimum) and precipitation from the E-OBS version 7 dataset. Furthermore we compare this 6.25 km resolution run with the simulation of ALARO-Climate in 25 km horizontal resolution. Finally the results are also compared with those from the previous version of a RCM originating in the ALADIN family NWP models. For this we took ALADIN-Climate/CZ simulations of 25 km resolution from the EC FP6 project ENSEMBLES that was carried out over the large pan-European integration domain (so called "ENSEMBLES / Euro-Cordex domain") and driven by the ERA-40 re-analyses.

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