EMS7/ECAM8 Abstracts,
Vol. 4, EMS2007-A-00549, 2007
7th EMS Annual Meeting / 8th ECAM

Dynamical downscaling in the Central Europe - very high resolution experiment with ALADIN model in climate mode

A. Farda (1), P. Skalak (1), P. Stepanek (1)

(1) Czech Hydrometeorological Institute, Czech Republic (Contact e-mail: ales.farda@chmi.cz)

Regional climate models are one of the ultimate tools employed for the assessment of future climate over various areas of Earth. Concurrent generation of RCM's is used in resolutions typically in tens of kilometers. Such resolution albeit significantly higher than that available from GCMs is still too coarse to capture enough details in selected regions. However such information is essential for more accurate estimation of possible climate change impacts and moreover it is necessary for applications in many related scientific disciplines (e.g. hydrology, air pollution, agriculture). EC FP6 project CECILIA addresses the fundamental question of availability and reliability of high-scale information for the Central and Eastern Europe. In frame of this project model ALADIN is employed in resolution ˜10km to conduct climate experiments utilizing ERA40 data and A1B climate scenario information retrieved from GCM ARPEGE-CLIMATE which are supposed to be utilized in air-pollution, hydrology and agriculture models used at CHMI. In our short contribution we offer first glimpse at ALADIN outputs assessing its ability to provide reliable information necessary in aforementioned research felds. Model performance is scrutinized with respect to the forcing data (ERA-40, ARPEGE-CLIMATE) and compared to the station measurements over the Czech Republic.