

PLENARY SESSION 1: CORDEX IN ACTION: ACHIEVEMENTS & LESSONS LEARNED

**Production and use of CORDEX projections –
a Swedish perspective on building climate services in practice**

Erik KJELLSTRÖM

SMHI - Sweden

The Rossby Centre regional climate model RCA4 has been used to dynamically downscale ten different coupled atmosphere ocean general circulation models (AOGCMs) from the CMIP5 project with horizontal resolution varying from about 1° to 3°. For Europe downscaling has been done at 0.44° (c. 50 km) and at 0.11°, (c. 12.5 km). In addition, RCA4 has also been used to dynamically downscale ERA-Interim reanalysis data as part of the model evaluation process. Results from the RCA4 EURO-CORDEX simulations has been analysed for model performance, added value of high resolution and various features of climate change. Particularly, a dialogue with Swedish end users has resulted in analysis of a number of climate variables and indices that are reported upon in this study. Examples are given of how information from the climate change experiments is used in a national climate service perspective which includes dissemination through the SMHI web page.

Erik Kjellström¹, Lars Bärring¹, Grigory Nikulin¹, Carin Nilsson², Gustav Strandberg¹

¹SMHI, ²University of Lund