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Theme 1: Regional climate research data and information, and gaps

The EURO-CORDEX initiative: A new generation of regional climate scenarios for Europe

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The WCRP Coordinated Regional Downscaling Experiment, CORDEX, provides an internationally coordinated framework to improve regional climate scenarios. This includes harmonization of model evaluation activities and the generation of multi-model ensembles of regional climate projections for the land-regions worldwide.

As part of the global CORDEX framework the EURO-CORDEX initiative (www.euro-cordex.net) provides regional climate projections for Europe. The EURO-CORDEX regional simulations are based on CMIP5 global climate projections and representative concentration pathways (RCPs). At 50 km resolution (EUR-44), 37 simulations are available for users, and furthermore 31 simulations at 12.5 km resolution (EUR-11). EURO-CORDEX data is available via the Earth System Grid Federation (ESGF).

Since the first EURO-CORDEX meeting in 2011, the initiative's efforts have included hindcast simulations for evaluation as well as climate projections and their analyses. Recent activities concerned high-resolution simulations and studies as well as contributions to the CORDEX Flagship Pilot Studies (FPS) – in particular the FPS on “Convective phenomena at high resolution over Europe and the Mediterranean” and “LUCAS – Land Use & Climate Across Scales”. Through the FPS on Convective Phenomena, EURO-CORDEX members contribute to the next generation of convection-resolving climate models. The EURO-CORDEX initiative will utilize the upcoming CMIP6 GCM data as forcings for subsequent simulations.