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Validation of the regional climate model REMO over several CORDEX regions throughout the globe

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In order to investigate impacts of future climate change on a regional scale there is a rising need for high-resolution climate information in all parts of the globe. However, so far for many regions in the world, only coarse resolution global general circulation model output is available that often does not capture specific regional climate characteristics. As remedial action in the COordinated Regional climate Downscaling EXperiment (CORDEX), it is planned to enhance the number of regional climate projections by running different regional climate models (RCMs) on several domains throughout the globe.

In the framework of CORDEX, the Max Planck Institute for Meteorology (MPI-M) will apply its regional climate model REMO over several regions in the world. At the current state the model has been integrated for a validation simulations using ERA-Interim as boundary forcing for the 1989 to 2008 period. We will discuss the ability of REMO to represent the climate characteristics of selected regions such as Africa, Mediterranean, North America, South Asia, etc. The focus of the presentation will be on the evaluation of the spatial and temporal characteristics of simulated precipitation and temperature in comparison to observational datasets. Common model behavior in the different regions will be highlighted.