

Regional climate projections for the MENA-CORDEX domain: analysis of projected temperature and precipitation changes

Andreas Hänsler, Torsten Weber, Bastian Eggert, Fahad Saeed, and Daniela Jacob Climate Service Center, Climate System Department, Hamburg, Germany (andreas.haensler@hzg.de)

Within the CORDEX initiative a multi-model suite of regionalized climate change information will be made available for several regions of the world. The German Climate Service Center (CSC) is taking part in this initiative by applying the regional climate model REMO to downscale global climate projections of different coupled general circulation models (GCMs) for several CORDEX domains. Also for the MENA-CORDEX domain, a set of regional climate change projections has been established at the CSC by downscaling CMIP5 projections of the Max-Planck-Institute Earth System Model (MPI-ESM) for the scenarios RCP4.5 and RCP8.5 with the regional model REMO for the time period from 1950 to 2100 to a horizontal resolution of 0.44 degree. In this study we investigate projected changes in future climate conditions over the domain towards the end of the 21st century. Focus in the analysis is given to projected changes in the temperature and rainfall characteristics and their differences for the two scenarios will be highlighted.