



Simulated precipitation within the CORDEX-Africa framework: evaluation phase.

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An ensemble of regional climate simulations is utilized to evaluate performance of 11 RCMs and their ensemble mean in simulation of different aspects of precipitation statistics over Africa. All regional simulations are driven by the ERA-Interim reanalysis and cover the 1989-2008 period. Precipitation statistics is analysed on several time-scales, namely: diurnal cycle (based on 3-hourly data), annual cycle (on daily means) and seasonal means.

It is shown that the RCMs are able to simulate the main feature of precipitation over the African continent. However (and as expected), individual RCMs can show large biases that depend on season and region. The ensemble average outperforms the individual simulations, especially in reproducing annual cycle and seasonal means but not diurnal cycle. A common problem is that precipitation in most of RCMs is triggered too early during a day compared to the TRMM observation and the ensemble mean does not improve the daily phase of the simulated precipitation in this case.