



## **Assessment of the performance of CORDEX Regional Climate Models in Africa**

Laura Mariotti, Erika Coppola, and Filippo Giorgi

The Abdus Salam International Centre for Theoretical Physics, Earth System Physics, Trieste, Italy (mariotti@ictp.it)

Following the CORDEX experimental protocol, climate simulations and climate-change projections, we analyse the results of regional climate projections over the CORDEX Africa domain carried out with the different regional climate models (RCMs): CLM4 (Cosmo Model in Climate Mode, Germany), CanRCM4 (Canadian Regional Model, Canada), KNMI-RACMO (KNMI regional atmospheric climate model, Netherlands), RegCM4 (ICTP Regional Climate Model, Italy), SMHI-RCA4 (Rossby Centre regional atmospheric model, Sweden). The models were driven by different Global Climate Models (GCMs) of CMIP5 and for two Representative Concentration Pathways RCP8.5 and RCP4.5.

We focalized the analysis on seasonal and intraseasonal monsoon characteristics, to confirm the two prominent change signals found in Mariotti et al. 2014: over West Africa and the Sahel a forward shift in the monsoon season; over the South of the equator an extension of the dry season with delayed onset and anticipated recession of the monsoon and a narrowing and strengthening of the ITCZ precipitation band.