

P63 The WASCAL regional climate simulations for West Africa – how to add value to existing climate projections

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With climate change being one of the most severe challenges to rural Africa in the 21st century, West Africa is facing an urgent need to develop effective adaptation and mitigation measures to protect its constantly growing population. WASCAL (West African Science Service Center on Climate Change and Adapted Land Use) is a large-scale research-focused program designed to enhance the resilience of human and environmental systems to climate change and increased variability. An integral part of its climate services is the provisioning of a new set of high resolution, ensemble-based regional climate change scenarios for the region of West Africa.

In this contribution, we present the overall concept of the WASCAL regional climate projections and provide information on the dissemination of the data. We discuss the model performance over the validation period for two of the three regional climate models employed, the WRF and the COSMO-CLM model, and give details about a novel precipitation database used to verify the models. Particular attention is paid to the representation of the dynamics of the West African Summer Monsoon. We further present results on the climate change signal obtained from the WRF model runs for the periods 2020-2050 and 2070-2100.