



## **Modeling the West African climate system: systematic errors and future steps.**

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We review the AMMA-EU model inter-comparison activities for West Africa. One of these is the AMMA-MIP, a Model Intercomparison Project developed in the frame of the African Monsoon Multi disciplinary Analysis project (AMMA). It is an exercise of inter-comparison and evaluation of how both global and regional atmospheric models represent seasonal and intra-seasonal variations of the climate and rainfall over Sahel. The ALMIP (AMMA Land surface Model Intercomparison Project) in turn focused on modelling critical land surface processes over west Africa and on their link with the atmosphere. The CHEMIP (CHEmistry Model Intercomparison Project) is a comparison of the tropospheric composition as simulated by a number of Chemical Transport Models (CTM) and Chemistry-Climate Models (CCM) for Equatorial Africa. These inter-comparison activities provide a unique opportunity to compare different model components and to highlight their weaknesses as well as ways to improve them.