AMMA's contribution to the evolution of prediction and decision-making systems for West Africa

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The AMMA project (African Monsoon Multidisciplinary Analysis) has now been running for 5 years. The project set out to better understand the geophysical processes in the atmosphere, in the oceans and on land surfaces which govern the evolution of the monsoon. At the same time we studied the control exerted by weather and climate on agronomic production, water resources and public health and the potential for populations to adapt. The objective is to provide the underpinning science needed to improve prediction and decision-support systems in West Africa. AMMA has been a joint effort of the West African and international research communities.

This presentation will provide an overview of the achievements of the project over the last 5 years. The observation strategy will be presented and in particular the effort undertaken by AMMA to demonstrate the value of improved observing networks. The new and unique data sets collected have allowed us to gain new knowledge in areas as diverse as the atmospheric processes governing the evolution of the monsoon, the contrasting behaviors of catchments in the Guinean and Sahelian zones and the perception farmers have of the constraint climate imposes on their livelihood. The talk will show how this new knowledge has allowed the project to demonstrate the progress which can be made in prediction and decision-making system. The presentation will conclude with an analysis of the difficulties which need to be overcome in order to implement operationally enhanced observing networks and forecasting systems for the benefit of West African societies.