



Seasonal forecast of the West African summer monsoon using a dynamical-statistical approach

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For people in Western Africa the occurrence of the African summer monsoon is of crucial interest. The availability of freshwater is highly important not only for agricultural needs. However, methods of predicting the rainfall in the tropics at seasonal time scales are sparse, including high bias. Daily predictions are nearly impossible. Usually, seasonal prediction of monsoon rainfall is based on the statistical relationship between sea-surface temperature (SST) anomalies in the tropical Atlantic and the amount of precipitation over Sub-Saharan West Africa during the summer monsoon season. In contrast to previous attempts which are only based on statistical methods, we present a dynamical-statistical approach with an ensemble of global climate models driven by predicted SSTs, a high-resolution regional climate model nested over Africa, and a statistical postprocessing in the form of model output statistics (MOS) in order to adjust systematic model errors. This combined approach is very promising when being applied to a hindcast period. It is planned to implement the prediction system operationally at the Benin weather service during this year.