



On the relationship between the secular rainfall variability over West Africa north and south of the Sahara desert.

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The rainfall in both Morocco and the sub-Saharan West Sahel region is characterized by a decline since about the 1970s, with the sub-Saharan reduction being a continuation of a trend that started in the 1950s. The source of the pronounced decadal variability in these regions is one of the most pressing questions in climate dynamics today. The Moroccan rainfall is significantly anti-correlated to the state of the North Atlantic Oscillation (NAO). Recent studies have linked the trend of the NAO and the rainfall trend over the West Sahel to a progressive warming of the Indian Ocean. By conducting experiments with a coupled ocean-atmosphere general circulation model (OAGCM) we analyze whether the observed secular rainfall variability over West Africa north and south of the Sahara desert is linked to the Indian Ocean warming.