



Role of external drivers in historical Atlantic Temperature changes

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Historical changes in Atlantic Temperatures are strongly linked with rainfall and other climate impacts (not least with changes in North Atlantic Hurricanes; Sahel Rainfall drought; Amazon and Indian Monsoon rainfall). There has been extensive discussion in the literature about whether the observed changes are driven by natural variability or represent forced temperature changes, with the current consensus from CMIP3 generation of models pointing towards natural origins. Here we present the results from two generations of Hadley Centre models with increasing earth system complexity, which suggest that a larger fraction of the observed changes may be consistent with forced changes to the climate system linked to both major volcanic events and historical aerosol emissions.