Recent Vegetation Dynamics in the African Sahel and their Relationship to Climate

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Abstract

Contrary to assertions of wide-spread irreversible desertification in the African Sahel, a recent increase in seasonal greenness over large areas of the Sahel has been observed, which has been interpreted as a recovery from the great Sahelian droughts. This research investigates temporal and spatial patterns of vegetation greenness and rainfall variability in the African Sahel and their interrelationships, based on analyses of NDVI time series for the period 1982 to 2003 and gridded satellite rainfall estimates. While rainfall emerges as the dominant causative factor of vegetation greenness, there is evidence of another causative factor, hypothetically a human signal.

*The remaining paper is currently being reviewed for publication. The author expressed wishes for it not to be published on our website until approved for publication. If you wish to learn more about this research, please contact marci.delaney@gsfc.nasa.gov.