

Satellites reveal that green means rain in Africa

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Scientists from the NERC – funded Climate and Land Surface Interactions Centre (CLASSIC) have found that the presence of green vegetation has a major influence on the amount of rain that falls in the Sahel region of Africa, south of the Sahara desert. Rains at the start of the growing season cause vegetation growth. This encourages a feedback loop as the greener the vegetation becomes, the greater the amount of rain that falls.

This Important new research could help us to predict future droughts in Africa. The research can be used to aid regional and international forecasts for rain-starved regions.

Using satellite technology, Dr Sietse Los and colleagues at CLASSIC worked with NASA to develop a dataset covering 18 years of vegetation greenness records. They combined these records with rainfall data in the region over the same period – from 1982 to 1999. The resulting analyses show, for the first time, that rainfall amounts vary between 10% and 30% more when the land is green, and decreases by a similar amount when conditions are dry and there is little green vegetation growing.

Dr Los said, “ The role of vegetation in enhancing both wet and dry conditions in sub-Saharan Africa is important for understanding the causes of droughts, which often have dire consequences for the local population. Our research will help to improve current climate models and give better rainfall and vegetation growth predictions. And in turn this will help both climate scientists and local agricultural managers.”

Source: Natural Environment Research Council (NERC)

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