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Is Space R&D Truly Fostering A Better World For Our Future? (2)

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SPACE DATA FOR PREDICTING CLIMATE CHANGE AND DESERTIFICATION IN AFRICA: CASE STUDY OF THE SAHEL REGION.

Abstract

Desertification and climate change are two primary issues affecting the fertile lands of the Sahel and its people .This Sahel region stretches all the way from Senegal to Somalia or the Horn of Africa while cutting across over ten different African countries within the Sub-Saharan Africa. It borders the "Sahara desert" in the North and the "Sudan Savannah" in the South. This region has an annual rainfall of an average of 50-55 cm in the late 1960's and has drastically dropped to an annual average of 35-40 cm per annum since the late 1990's.While the Sahara desert of the region keeps expanding from an average 0.5 kilometers per annum in the late 1980's to 0.8 kilometers per annum since the last decade.

In view of the above mentioned desertification and climate change situations the agricultural out puts and pastoral activities as well as the sizes of lakes, rivers and ponds upon which the inhabitants of this region depends has drastically reduced significantly over the last two decades and further keeps increasing the rate of rural-urban migrations, job losses, poverty and land disputes.

Considering the above dynamic changes going-on in the Sahel region a faster, precise and reliable data are required by researchers conducting research in this field and such data can only come through space application such as applying the GNSS Technologies to water resource management as well as thematic mapping and forest management in the region.