Interannual variability of land, agricultural, hydrological and meteorological parameters over Indian Region

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The use of satellite remote sensing data is increasing and now it is possible to monitor land, agricultural, hydrological and meteorological parameters. In the Developing countries, these parameters are very crucial in the forecasts of monsoon on which the agricultural resources is very much dependent. In the present paper, detailed analysis of the Advanced Very High Resolution Radiometer (AVHRR) onboard NOAA series of satellites has been used for regional and global vegetation coverage since 1978 employing the Normalized Difference Vegetation Index (NDVI). Recently, this technique has been improved combining NDVI with one of the thermal channels and converting them into the vegetation condition Index (VCI) and Temperature condition Index (TCI). The soil moisture has been deduced from IRS P4 MSMR data and ERS data which has been correlated with the Vegetation and Temperature Condition Indices for the year 1981-1999. The effect of these parameters has been further seen on the crop yield and crop production for different parts of India. The detailed analysis of land, agricultural, hydrological and meteorological parameters show a close correlation with the seasonal variability. The effect of these parameters will be discussed in the climatic variability especially over the Indo-Gangetic basin.

Agriculture (Poster)