

SEASONAL COVERAGE ANALYSIS OF SPATIO-TEMPORAL SATELLITE DATA OF INDIA

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Abstract: The decadal analysis of total cereal crops area and production with climatic factors viz. temperature and rainfall of India observed status of rabi and kharif season. India lies to the north of the equator between 6° 44'N and 35° 30'N latitude and 68° 7'E and 97° 25'E longitude. The analysis of time series (2000-01 to 2009-10) data of maximum and minimum temperatures of India R² values observed 0.003 and 0.013. The actual rainfall data analysis of 10 years R² value 0.002 and average rainfall observed 1120mm. The actual rainfall showed decreasing trend 972.8 mm in year 2009-10 and 981.4 mm in year 2002-03. The rainfall data variability observed due to changing of rainfall trend in India. The satellite imageries of SPOT VGT are used for crop coverage study of India. The overall analyses of decadal data are observed 58.1% for agricultural coverage and 41.9% for non-agricultural coverage uses. The Kharif (August) and Rabi (March) season agricultural coverage and Non-agricultural coverage observed 57.6% and 57.9% and 42.2% and 42.1% respectively. The brightness values based breakpoints were divided into two lands cover categories: Non-agricultural coverage and agricultural coverage. The distribution of tonal value (red to radish and yellow to greenish) visually observed on time series images, which are assigned a DN range from 0 to 255 for Non-agricultural and agricultural coverage. The decadal analysis of total cereal crops area and production with climatic factors viz. temperature and rainfall of India observed status of rabi and kharif season. The seasonal time series remote sensing SPOT VGT data is useful for understand changing of land use coverage in India

Keywords: DN Value, Rainfall, SPOT, VGT, Temperature

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