

# **Climatic Variability Vs Water Resources Status of Peddavagu Sub –Basin in Warangal & Karimnagar Districts, Telangana State -A Spatio Temporal Analysis using GIS. . . . .**

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## **ABSTRACT**

The knowledge and the awareness of climate variability is an important factor to understand the nature of different climatic and their impact on the environment and the human development in vogue. In particular to that the rainfall variability is an important feature of semi-arid climates and climatic change is on the rise such variability is many of these regions. In order to above an attempt is made examine this climatic and water resources phenomenon in semi-arid region of peddavagu sub-basin in Warangal & karimnagar districts in Telangana state, which includes the spatial distribution, variability through different season's precipitation ratio and water levels. The rainfall and water level data were collected from Indian Meteorological Department (IMD), State Groundwater Department for a period of 15 (2002-2017) years. The study area comes under semi-arid zone with moderate drought to moderate excess conditions. The data were statistically interpreted the variation of subsurface water level .The daily data were re analyzed to bring to monthly variation and the monthly data into seasonal variation. The summer, winter, Southwest and northeast rainfall and water level patterns were studied. These seasonal variation data sets were taken to GIS platform for spatial mapping. Spatial mapping were done using GIS to show the classes of rainfall and water level. The results prove that the changes in terms of quantity of rainfall variation and the depth to water level variation also. It shows that, the climatic variability influenced the rainfall pattern and in turn in to the water level also.

**Kew words:** Climate variability, Rainfall, Ground water levels, GIS