

Assessment of Ground water Quality in Guntur District, Andhra Pradesh by Remote Sensing

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ABSTRACT

By filtering through various soil layers groundwater is clean and free from bacteria, Due to rapid changes like urbanization, industrialization and improper disposal of waste that polluting the groundwater. Objective of this study is to assess and map the spatial distribution of groundwater quality in Guntur District Andhra Pradesh, using Remote Sensing and Geographical Information System. As the capital region is laid in Guntur district, Groundwater is the main source for industrialization and urbanization. Here the physical and chemical properties analytical data of groundwater sample data of well points from various regions in Guntur district are being collected from the ground water department of Andhra Pradesh. These data is predefined into attribute database and prepared the thematic map. The Inverse Distance Weighted (IDW) spatial interpolation technique was used to estimate the spatial distribution of groundwater parameters like pH, hardness, chlorides, sulphates, sodium, magnesium, potassium, carbonates, bicarbonates and specific conductivity. However, this analysis helps us to compare between different parameters and with different years. The present work is available for future planning and management of groundwater resources in the Guntur district. Suitable remedial measures are also suggested for the improvement of the quality of groundwater uniformly throughout the district.

Keywords: *Remote sensing, GIS, ground water, spatial distribution, thematic maps, quality*