



## Groundwater Suitability for Irrigation in Chickmagaluru District, Southern Karnataka, India using WATCHIT

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### Abstract

The groundwater is the major source of irrigation in the Chickmagaluru district of Southern Karnataka. A multitude of factors, including soil composition, soil texture, the geology of the area and agricultural activity, impacts the water's suitability. The Permeability Index, Salinity and Sodium hazard classification, Sodium Adsorption Ratio, Residual Sodium Carbonate, Sodium Ratio, Adjusted Sodium Adsorption Ratio, United States Salinity Laboratory (salinity USSL), Salinity Hazard, Na- Hazard USSL, Na- Hazard, Kelly's Ratio and Corrosivity Ratio are some of the characteristics that determine the quality groundwater used for the irrigation. The present study focuses on to gain the better understanding of the groundwater quality and its suitability for agriculture in the Chickmagaluru district of the Karnataka state, India. The present work revealed that more than half of the collected samples are confirmed to be appropriate for irrigation purpose.

**Keywords:** Water Quality, Irrigation Suitability, Pollution, Groundwater, wells, Chickamanaluru District, Karnataka