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## ***Assessment of ground water quality in pimpri chinchwad area***

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## **Abstract:**

Intensive agricultural practices using agrochemicals and the use of sewage and polluted drain water have significantly impacted groundwater quality in peri-urban areas of Pune, such as the Pimpri Chinchwad area. This study aimed to assess groundwater quality and map its spatial variation to evaluate its suitability for irrigation and drinking. The study used ordinary methods to create thematic maps showing groundwater quality parameters like electrical conductivity, sodium adsorption ratio, bicarbonate levels, magnesium/calcium ratio, total dissolved solids (TDS), chloride, nitrate, and hardness. Post-monsoon physicochemical data from bore well samples across the region were analyzed. Results indicate that the groundwater is generally of good quality, ranging from fresh to slightly brackish, with low salinity and alkalinity, making it suitable for drinking. The acceptable levels of total hardness and TDS confirm its suitability for consumption. Based on TDS values, the groundwater is classified as bicarbonate/calcium chloride/sodium chloride type.

## **Keywords:**

Groundwater pollution, drinking water, physicochemical parameters, spatial interpolation.