

## HYDROGEOCHEMICAL PARAMETERS FOR ASSESSMENT OF GROUNDWATER QUALITY IN A PART OF GANGAPUR, DISTRICT AURANGABAD, CENTRAL INDIA

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### Abstract

Groundwater samples from thirty-five locations have been collected from part of Gangapur, district Aurangabad. The extensive agricultural industrial activities and urbanization resulted in the contamination of the aquifer where major part of the study area constitutes a sequence of basaltic lava flows. To study the contamination of groundwater, water samples were collected in an area of 1308.6 km<sup>2</sup> and analyzed for major cations and anions. Some of the locations are contaminated by higher concentration of Total hardness and NO<sub>3</sub><sup>-</sup>. Major hydro chemical facies were identified using Piper trilinear diagram. Based on US salinity diagram, most of the water samples fall in the field of C<sub>3</sub>-S<sub>1</sub>, indicating high salinity and low sodium water, which can be used for almost all types of soil. Majority of the samples are suitable for domestic as well as irrigation purposes.

*Keywords:* Groundwater quality, Gangapur, Irrigation purpose, U.S. Salinity diagram, India.