

# HYDROGEOCHEMICAL STUDIES OF GROUNDWATER IN THE CATCHMENT AREA OF RAJGHAT DAM PROJECT, INDIA

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The samples of ground water from the catchment area of Rajghat Dam have been collected from 44 large diameter open wells. Out of 44 locations, 32 belongs to crystalline rocks and 12 belongs to sandstone of Vindhyan Super group of rocks. The parameter like electrical conductivity, total dissolved solids, PH, and major ionic concentrations have been determined. The spatial valiation maps showing the quality parameters total dissolved solids, total hardness, chloride, salinity and sodium hazards and hydrochemical facies of groundwater have been prepared to bringout the regional chemical quality behaviour of the area.

The results of the study snows that there is no much variation in the concentration of major cations and anions in the groundwater of Vindhyan and Crystalline rocks. This may be due to the intermixing of groundwater of both the formations. The most dominant hydrochemical facies is Ca-Na, Cl-SO<sub>4</sub>-HCO<sub>3</sub> of groundwater of both the rock types. The groundwater is suitable for domestic as well as irrigation purpose and there is no significant effect of degradation on the chemical quality of groundwater.