

Analysis and Assessment of Groundwater Quality, Beohari block Shahdol District, Madhya Pradesh, India

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Abstract: *The paper deals with groundwater quality assessment of Beohari block, District Shahdol, Madhya Pradesh, India. Geologically, the area is occupied by the Gondwana formation the clay and mudstone facies of Tihiki stage overlying the arenaceous facies of Pali bed have an aquifer system of moderate to high yield potential in Beohari block. The upper barakar sandstone of Gondwana Supergroup has a positive piezometric head and at many places auto-filling condition occurs. Twenty two groundwater samples from the area were collected in pre- monsoon and post-monsoon seasons of 2024 from different locations of study area and analysed for comically analysis for various water quality parameters such as PH, electric conductivity (EC), Total dissolved solids (TDS), Total hardness (TH), Chloride (Cl), Bicarbonate (HCO₃), Sodium (Na), Potassium (K), Calcium(C), Fluoride(F), Magnesium (Mg) and Nitrate (NO₃). The main hydrochemical facies are Ca-Mg-HCO₃ and Ca-Mg-SO₄-Cl type. The groundwater is hard to very hard in nature. The concentrations of various cations and anions suggest that the groundwater of the area is partially suitable for drinking. The analysis of various parameters like electrical conductivity, sodium percentage, integrated sodium adsorption ratio (SAR) and EC, residual sodium carbonate suggest that groundwater of the area is suitable for irrigation.*

Keywords: Groundwater Quality, Beohari block , Shahdol, Madhya Pradesh, India

