



Survey and Characterization of Groundwater Quality for Irrigation in Faridabad District of Haryana, India

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Abstract

A survey was conducted during 2017-18 to evaluate the quality of groundwater of Faridabad, district in, Haryana. Two hundred seventeen water samples were collected and analyzed for various physico-chemical parameters. The pH, EC, SAR and RSC in groundwater ranged from 6.81-9.88, 0.50-9.91(dS m⁻¹), 2.54-20.05 (mmol L⁻¹)^{1/2} and 0.00-5.60 (me l⁻¹), respectively. The cations and anions were in the order of Na⁺ > Mg²⁺ > Ca²⁺ > K⁺ and Cl⁻ > HCO₃⁻ > SO₄²⁻ > CO₃²⁻, respectively. Of the total samples, 30.9, 34.6, 1.4, 12.4, 12.4, 3.7 and 4.6% were of good, marginally saline, saline, high SAR saline, marginally alkali, alkali and highly alkali category, respectively. Spatial variability maps of EC, SAR and RSC of groundwater used for irrigation in the district were also prepared.

Key words: Cations and anions, Electrical conductivity, Groundwater quality, Highly alkali