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Impact of mining activities on Ground Water Resources of Jharia, Dhanbad, India

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The ground water resource may act as potential water resource in the water scare mining areas. Over burden of the population pressure, unplanned urbanization, unrestricted exploration and dumping of the polluted water at inappropriate place enhance the infiltration of harmful compounds to the ground water. Groundwater quality, i.e., of dissolved ion content, is mostly affected either by natural geochemical characteristics, including climate, lithology, mineral weathering, nature of geochemical reactions, solubility of salts, dissolution/precipitation reactions, ion exchange, wet and dry deposition of atmospheric salt, and evapotranspiration, or by various anthropogenic activities, such as agriculture, sewage disposal, mining and industrial wastes. The Groundwater samples Twenty Nine (29 Nos.) were collected from various locations of the study area. The water quality parameters considered in the present study were pH, Temperature, Electrical Conductivity, Total Dissolved Solids, Alkalinity, Chloride, Nitrate, Sulphate, Bicarbonate, Total Hardness, Calcium, Magnesium, Sodium and Potassium. The study were carried out to assess the impacts of industrial and mining activities on the groundwater quality in Jharia coal mining region of Jharkhand State. The quality assessment shows that in general, the groundwater is suitable for drinking with some exceptions.

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