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WATER QUALITY INDEX MAPPING OF KENGERI INDUSTRIAL AREA OF BANGALORE CITY USING GEOSPATIAL ANALYSIS

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Abstract

Assessment of groundwater quality is essential in the field of environmental quality management. The present study aims at the assessment of groundwater quality of Kengeri industrial area, comprises of 133.95 Sq Km, in Bangalore city with the help of water quality index (WQI).The groundwater samples collected from thirty locations were analyzed as per the standard methods. pH , total hardness, iron, chloride, fluoride, total dissolved solids, calcium, magnesium, sulphate and nitrate were considered for the study. The WQI of thirty samples were ranged between 0.92 and 361.41. Nearly 24 % of the samples exceeded the value of WQI 100. The high value of WQI may be attributed due to higher concentrations of iron, nitrate, total dissolved solids, total hardness and fluorides beyond desirable limits in the groundwater samples. During post monsoon season, groundwater of about 42.78 Sq Km area was unfit for drinking. The analysis reveals that the groundwater of south-west Kengeri industrial area needs some treatment before using it for domestic applications and it also necessitates for protection from the risk of further contamination.

Author Keywords

Geographical Information System, Groundwater Quality, Spatial distribution, Water Quality Index, Water Quality Parameters.

Index Keywords

WQI, higher concentrations iron, Dissolved solids.

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