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Urbanization persuaded geochemical impact assessment of groundwater quality for Kattankulathur block, Tamil Nadu, Southern India

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Abstract : Quality of groundwater assures the wellbeing, success, and improvement of the society. The existing humanoid demands clean water for daily consumption as drinking, different domestic usages and agricultural activities. It is a known fact that groundwater is the only source of freshwater in the highly urbanized regime. The over inhabitants and non-judicial development of groundwater along with the dumping of untreated urban solid waste is a potential source of threat for groundwater contamination. For the current study, the Kattankulathur Block of Kanchipuram district of Tamil Nadu has been undertaken to understand the urbanization trend and its impact on groundwater. The block is having a geographical area of 378.536 sq. km with variant educational and industrial sectors and besides with Thirurpour blocks, which is having more than 60% of textile industries. The present urbanized area is of an extent of 55.44sq.km.(2014), which is more than two-fold compared to the year 1995 which was 22.509.km for this block. Present study targets at examining various factors of water quality around different parts of the Kattankulathur Block. The spatial distribution of water quality contours has been plotted using ArcView. The study shows though the groundwater potential is decreasing in alarming rate, the potentiality of groundwater concerning drinking water quality.

Key Words : Groundwater, Water Quality Parameters, Spatial Distribution, Urbanization.

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