

Environmental isotopic proxies for evaluating Geo-Hydrologic and pollution aspects of groundwater

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Water quality data from 81 samples (groundwater, surface water and sewage) before and after the monsoonal cycles, aquifer characteristics of Bangalore city were compared to assess the risk of urban development in hydrological environment. Isotopic and physicochemical investigation studied to characterize isotopic nature of Sewerage water and their influence on groundwater in the crystalline aquifer. The aquifer parameters were re-evaluated qualitatively; the similarity of water quality data applies PCA analysis and samples were differentiated as the strong to moderate sewerage or geogenic influences. This were compared with the isotopic signature and discriminated as control of different sources in groundwater. Also found, the presences of tritium inferred as groundwater recharged within 50 years and among the lower tritium values, ¹⁴C where found 56 pmC (~4407 years) indicate a complex aquifer system existed in this urban area. Study evaluating the possibilities of isotopic studies for the use of Geo-hydrologic and pollution aspects of groundwater in the urban hydrologic studies.

Biography

R.K. Somashekar completed his Ph.D at the age of 24 years from University of Mysore. Presently he is working as Chairman, Department of Environmental Science, Bangalore University, Bangalore. So far he has completed more than 32 funded research projects funded by various International, National and State agencies. Presently Principal Investigator of five ongoing projects funded by MoEF, BARC, DST, UGC etc. He has published more than 254+ papers in reputed National and International Journals. He is a recipient of various National and State Awards and is serving on the editorial board of many reputed journals.

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