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Karnataka: Illegal dump sites pollute groundwater, says TV Ramachandra

DECCAN CHRONICLE . | AKSHEEV THAKUR (/byline/aksheev-thakur)

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IISc scientist says high levels of arsenic in tested samples. Builders encroaching lakebeds, dumping debris.



The research done by lead scientist T.V. Ramachandra concluded that the nitrate level in the groundwater close to unauthorised garbage dumping sites was very high and it can lead to stomach and intestine cancers. (Representation purpose)

Bengaluru: Recent reports by the Central Ground Water Board and Ground Water Directorate, Karnataka, on the quality of groundwater in the state has revealed that 14 districts, which include Dharwad, Ballari, Belagavi, Raichur, Bengaluru (rural) and Mysuru have a high content of fluoride.

Now, Indian Institute of Science (IISc) research on the groundwater quality alludes that there is also presence of heavy metals, including arsenic. The research done by lead scientist T.V. Ramachandra concluded that the nitrate level in the groundwater close to unauthorised garbage dumping sites was very high and it can lead to stomach and intestine cancers.

The huge environmental concern is leachate which accumulates at the bottom of the garbage dump sites and percolates through soil into the groundwater. "The dump sites near Varthur and Madivala have a presence of high level of nitrate and several doctors have seconded my research," the lead scientist told

Improper management of solid waste is a serious environmental concern as it contaminates groundwater surface water and soil. The continuous accumulation of nitrate in the lakes leads to growth of algae and causes eutrophication, which leads to the depletion of oxygen level in the water bodies. "The discharge of untreated sewage into water bodies have contaminated them and the groundwater quality in the vicinity. Higher nitrate levels in the immediate vicinity of contaminated water bodies and open dumps corroborate the groundwater quality linkage with other natural resources," the study said.

The study began in 2014 and the final report was published in 2016 and Ramachandra said the groundwater condition was worsening by the day. The encroachment of the lake catchment areas by the builders and the water bodies being treated as a dumping ground has not only led to the disappearance of several lakes in the city, but has contaminated the water. Moreover, in order to quench the thirst of the populace the municipal bodies often dig borewells. However it does not resolve the huge environmental concern.

Varthur, Madivala lakes have dumping grounds

According to the Central Ground Water Board and Ground Water Directorate, Karnataka, Dharwad, Gadag, Ballari, Belagavi, Raichur, Vijayapura, Kalaburagi, Chikamagaluru, Mandya, Bengaluru (rural), Mysuru, Mangaluru, Kolar and Shivamogga have been badly affected by the high fluoride content. The IISc study on groundwater covered Gaundakere, Herohalli, Madivala, Varthur, Veerasandra and Yellamallappachetty lakes. These have unauthorised dump sites nearby

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