

Sabarmati heavy metals may soon hit your plate - Times of India

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Sabarmati heavy metals may soon hit your plate

Paul John | tnn | Dec 5, 2018, 05:53 IST



A study found that copper levels were 7 to 9 times higher in the river water than limits set by the Bureau of ... [Read More](#)

AHMEDABAD: Our Sabarmati waters are laden with neurotoxic metals, even though municipal sewage and industrial effluent treatment plants claim to have treated the sewage. It's a serious threat to hundreds of farmers in 43 villages downstream of the Sabarmati who use waste waters for growing vegetables and crops.

A recent study carried out by the Collaborative Regional Research Programme (CRRP) of the Asia Pacific Network (APN) and the discipline of earth sciences at IIT-Gandhinagar found that copper levels were 7 to 9 times higher than limits set

by the [Bureau of Indian Standards \(BIS\)](#). Nickel was found to be 2 to 5 times higher; iron, 4 to 5 times higher; selenium, 4 to 10 times higher; and [chromium](#), 8 to 9 times higher.

METALLIC TASTE				
Location	Copper	Nickel	Iron	Chromium
Sabarmati at Palaj	360.00	48.68	1,235.80	450
Indira Bridge	360.40	29.24	1,277.40	405
Subhash Bridge	446.00	102.46	1,691.60	435
Nehru Bridge	434.80	51.86	1,233.00	450
Sardar Bridge	146.06	10.90	1,060.60	435
Ambedkar Bridge	146.70	29.02	1,588.20	435
Sabarmati near Gyaspur	310.20	68.98	1,168.60	435
Fatehwadi canal	239.40	91.72	1,106.60	420
BIS Acceptable Limits	50	20	300	50

Figures in Microgram per litre ;Source : IIT-Gandhinagar , Discipline of Earth Sciences



HEALTH EFFECTS OF METAL INTAKE
➤ Problems like retardation in development of the body
➤ Decrease in blood pH, cancers of organs, and sometimes even death
➤ Heavy metals like lead cause convulsions, coma, renal failure and even death when metabolic function of the body is disturbed

After the Gujarat government launched its 'Policy for Reuse of Treated Waste Water' in May this year, many STPs across the state are being installed to provide farmers with treated waste water to grow food to meet water demands in stressed areas. A senior [Gujarat Pollution Control Board \(GPCB\)](#) official admitted that many of the STPs in the state are not capable of filtering out heavy metals. The ecology research laboratory of the department of botany of the Banaras Hindu University (BHU) had found that heavy metals from treated waste water used for agriculture found their way into vegetables — amaranthus, cabbage, spinach, okra, egg-plant and tomato. The research was carried out by R K Sharma and M Agarwal from BHU and F Marshall from SPRU Freeman Center, Sussex University, the UK.

"One of the origins of the heavy metal load in urban environment is waste water effluents," said IIT-Gn Professor Manish Kumar who is the lead principal investigator (PI) of the project along with IIT-Gn Scholars Bhagwana Ram, Subhash K Sharma, and Arbind Patel. Kumar went on to say: "The extent of its accumulation depends usually on industries in the vicinity and the lack of awareness on unscientific dumping of wastes. One also requires a precise understanding of heavy metal absorption in soil, road dust, and sediment."

Kumar said that unlike organic contaminants, heavy metals are non-biodegradable and tend to accumulate in living organisms. "There are heavy metal ions that are known to be toxic or carcinogenic," Kumar said. Industrial effluents from tanneries, [electroplating](#), dyeing, metallurgical and paint businesses, and other metal preparing and refining operations contain significant measures of metal particles.

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