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Cheap filter to solve arsenic crisis

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KOLKATA: The solution to Jadavpur's arsenic problem may lie in the constituency itself, but the civic bosses are unaware of it.

Drinking water has been a long-standing problem in the constituency. In last year's assembly polls, the high-decibel contest between then chief minister Buddhadeb Bhattacharjee and former chief secretary Manish Gupta centred around it, or rather, the lack of it. Gupta had promised to address the issue that had left the former CM's constituency parched.

A year and a half later, Gupta, who is now power minister, hasn't been able to fulfil the promise. Not that anyone can accuse him of lacking in effort. He did try to get the Kolkata Municipal Corporation (KMC) to sink tube wells in the area to meet the acute shortage during summer. But then the civic body ran into trouble as water from hand-pumps in the locality tested positive for arsenic. Though KMC contested the results cited by arsenic expert Dipankar Chakraborty, it later conceded that traces of arsenic were indeed present in drinking water drawn from tube wells in the region.

"It is dangerous to consume drinking water unless it is made arsenic-free," said Chakraborty, director (research) at school of environment studies, Jadavpur University, cautioning against sinking of more tube wells in the arsenic-affected belt.

Even as the civic body ponders over what to do till it is in a position to supply adequate water to densely populated localities along the belt, KMC remained ignorant of a solution that is within hand, but has remained untapped due to its disconnect with scientific and academic institutions.

The Central Glass and Ceramic Research Institute (CGCRI), next to Jadavpur University, has for years been providing filtration plants to Bengal's districts and northeastern states. The institute that is under the wing of the Council for Scientific and Industrial Research is the only facility in the country that manufactures the porous ceramic membranes used to filter out impurities like arsenic, iron and insoluble inorganic compounds and substances.

"We can definitely provide a solution to the arsenic problem in the neighbourhood. We have supplied 35 community filtration units till date and all are in operation. If KMC is keen on shaking hands with CGCRI, we will be delighted to help supply safe drinking water to residents in the locality," said CGCRI director Indranil Manna.

A couple of weeks ago, finance minister Amit Mitra had, during an interaction with Manna, urged him to get in touch with public health engineering minister Subrata Mukherjee and mayor Sovan Chatterjee to help the state benefit from cutting-edge research at CGCRI. While Mukherjee is aware of the filtration plants that are operating in the districts, the mayor is unaware that a solution to the crisis lies at hand.

Swachchha Majumdar, the project scientist of ceramic membrane division, said the institute had developed a superior membrane that would be more efficient. "We have improved the membrane from 19 channels to 21, increasing the efficiency by 20-30% and lowering cost by 20%. Now, a module can filter in excess of 5,000 litre a day," said Majumdar. CGCRI has installed a plant in Taki that purifies 80,000 litre a day.

If a household's drinking water requirement is 10 litre per day, a 15,000 litre capacity plant will serve 1,500 households. All that the institute wants KMC to help with is a small plot with a shed and electricity connection to run the plant. "If these are provided, the project can be implemented in Rs 5.6 lakh," said Majumdar.

Gupta, whose constituency has had a major problem this summer, was delighted to learn that the problem could be solved before next summer. "This is definitely good news for the people of Jadavpur. I will definitely try to get KMC and CGCRI together so that one or more filtration plants can be installed in Jadavpur to meet drinking water needs," he said.