GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI
DEPARTMENT OF DRINKING WATER & SANITATION

RAJYA SABHA
UNSTARRED QUESTION NO. 3453
ANSWERED ON 23/03/2026

ESTABLISHMENT OF TESTING LABORATORIES IN THE COUNTRY

3453. SHRI R. GIRIRAJAN:

Will the Minister of **JAL SHAKTI** be pleased to state:

(a) whether Government has established testing laboratories to find the presence of harmful and high levels of contamination of Arsenic, Mercury and Fluoride in groundwater in the country;

(b) if so, the details thereof and if not, the reasons therefor;

(c) whether Government has any new project proposal to control the contamination of Arsenic, Mercury and Fluoride and other harmful substances in groundwater if so, the details thereof and the total amount sanctioned in this regard; and

(d) the funds allocated to establish water contamination testing laboratories in the State of Tamil Nadu?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI
(SHRI V. SOMANNA)

(a) to (d) Jal Jeevan Mission (JJM) is under implementation since August, 2019, in partnership with States/ UTs to make provision of potable tap water supply in adequate quantity, of prescribed quality and on regular & long-term basis to rural households. Drinking Water being a State subject, the responsibility of Planning, Designing, Approval, Implementation, Operation & Maintenance of drinking water supply schemes, including those under the Jal Jeevan Mission (JJM), is vested with State/UT Governments. The Government of India supplements the efforts of the States/ UTs by providing financial, policy guidance and technical assistance.

As per the Operational Guidelines, States/ UTs including Tamil Nadu can utilize up to 2% of their annual allocation of funds under JJM for Water Quality Monitoring & Surveillance (WQM&S) activities, inter-alia, which includes setting up and strengthening of water quality testing laboratories, procurement of equipment, instruments, chemicals, glassware, consumables, hiring of skilled manpower, surveillance by community using field test kits (FTKs), awareness generation, educational programmes on water quality, accreditation/recognition of laboratories, etc.

As reported by States/ UTs on JJM – Water Quality Management Information System (JJM-WQMIS), as on 18.03.2026, the State Public Health Engineering/ Rural Water Supply Departments operate a network of 2,874 (including 113 in Tamil Nadu) water quality testing laboratories at various levels viz. State, regional, district, sub-division, block, mobile and/ or WTP facility laboratories.

Under the Jal Jeevan Mission, as per existing guidelines, Bureau of Indian Standards' BIS:10500 standards are adopted as benchmark for quality of water being supplied through the piped water supply schemes. Under JJM, while planning water supply schemes to provide tap water supply to households, priority is given to habitations affected by chemical contaminants. States/ UTs have been advised to plan and implement piped water supply schemes based on alternative safe water sources for the villages with water quality issues.

Central Ground Water Board has informed that there are 16 Regional Chemical Laboratories located at Jammu, Chandigarh, Jaipur, Ahmedabad, Bhopal, Raipur, Nagpur, Lucknow, Patna, Kolkata, Guwahati, Bhubaneswar, Hyderabad, Bengaluru, Chennai and Thiruvananthapuram. These laboratories have facilities to analyse groundwater samples for basic parameters such as pH, electrical conductivity, nitrate, fluoride, etc., and heavy metals including iron (Fe), mercury (Hg), arsenic (As) and uranium (U) etc.

Central Ground Water Board (CGWB) conducts periodic groundwater quality monitoring to identify both contaminated and non-contaminated areas. To enhance monitoring efficiency, a new Standard Operating Procedure (SoP) for Groundwater Quality Monitoring has been introduced, incorporating more frequent and denser sampling in vulnerable areas. Data on ground water quality available with CGWB are made available in public domain through reports as well as through the web site (http://www.cgwb.gov.in) for use by various stakeholders. The data is also shared with concerned State Governments for taking necessary remedial measures.

For Arsenic contamination, CGWB has developed the innovative cement sealing technique through in-house research for construction of Arsenic-free wells in the Gangetic flood plains. CGWB is providing technical assistance to State agencies by sharing this cement-sealing technology to enable tapping of contamination-free aquifers and facilitating construction of arsenic-safe wells.

To address Fluoride contamination, Central Ground Water Board (CGWB) has provided technical assistance and proposed an eco-friendly, sustainable natural recharge model. This model involves constructing wells that tap into the shallow water table aquifer within colluvium, alluvium, and the weathered sections of granitic/basaltic areas, at depths ranging from 18 to 30 meters. The shallow aquifers are considered free of fluoride but are not sustainable during the summer season. These wells should be located near surface water bodies such as check dams, percolation tanks, canal command areas, river sections, Amrit Sarovar, and Pushkar Talab. This approach will facilitate the natural recharge of the upper layer of the unconfined aquifer.

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