GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

LOK SABHA

UNSTARRED QUESTION NO. 2456

ANSWERED ON 13.03.2025

HAZARDOUS CHEMICAL COMPONENTS IN GROUNDWATER

†2456. SMT. VIJAYLAKSHMI DEVI

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

(a) whether the Government has taken cognizance of the presence of hazardous chemical components in groundwater which despite being unfit for consumption is being used for drinking purposes across the country adversely affecting human health and if so, the details thereof;

(b) whether the Government has conducted any scientific study on this matter, if so, the details thereof;

(c) whether State and district-wise details of such studies are available, if so, the details thereof and if not, the reasons therefor; and

(d) the measures taken/being taken by the Government in coordination with various States in this regard?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) to (c) As per the available information, there is no reporting of contaminated ground water containing hazardous chemicals, being used for drinking in the country on a large scale.

Central Ground Water Board (CGWB) conducts ground water quality monitoring for several parameters on a regular basis throughout the country and also generates ground water quality data on a regional scale during various scientific studies. Based on the monitoring data, the Annual Groundwater Quality Report 2024 has been prepared by the Central Ground Water Board (CGWB), which contains sampling, and analysis data from 15,259 monitoring locations spread across the country. The report along with other studies conducted by CGWB has found that ground water in the country is largely potable. However, the presence of certain contaminants like Nitrate, Fluoride, Arsenic etc. beyond the prescribed limits for human consumption has been reported in isolated pockets of some States/UTs.

CGWB has completed district-wise aquifer mapping studies for the entire country considering both quantity and quality aspects of ground water under the National Aquifer Mapping Programme (NAQUIM). While taking up aquifer studies, special attention has been given to the aspect of ground water quality including contamination by toxic substances such as Arsenic and Fluoride in ground water. Completed studies with suitable ground water management plans have been shared with concerned state/district authorities for taking up suitable interventions.

Based on the ground water quality report, 2024, State-wise details of affected districts and samples found above permissible limits for some of the important parameters is presented in **Annexure.**

(d) Water is a State subject and the responsibility of ground water management, including taking initiatives for improving ground water quality and addressing the contamination issue, lies primarily with the state governments. In addition to this, given the importance of managing the ground water quality in the country and mitigating the risks of contamination, the Central government has already initiated several steps in co-ordination with States, which are continuing. Some of the important measures are mentioned below :

i. 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. The practice of issuing Half-yearly Bulletins and Fortnightly Alerts for quick action by the stakeholders has also been started.

ii. CGWB is successfully constructing Arsenic free wells in arsenic affected areas using the cement sealing technology for tapping contamination free aquifers and also providing technical assistance to state departments in Fluoride mitigation.

iii. Central Ground Water Board (CGWB) has entered into an MoU with Geological Survey of India (GSI) in 2022 for the study of Uranium, Lead, Arsenic, Fluoride and Mercury contamination of groundwater in parts of Punjab, Haryana, Andhra Pradesh, Uttar Pradesh, Bihar, Chhattisgarh, Jharkhand and Assam States.

iv. Government of India in partnership with States, is implementing Jal Jeevan Mission (JJM) – Har Ghar Jal, since August 2019, to make provision of potable tap water supply in adequate quantity, of prescribed quality and on regular & long-term basis to every rural household in the country. Under the JJM, Bureau of Indian Standards' BIS:10500 standards have been adopted as prescribed norms for quality of tap water service delivery. Water safety has been one of the key priorities under the JJM since its inception. Further, under JJM, while allocating the funds to States/ UTs, 10% weightage is given to the population residing in habitations affected by chemical contaminants.

v. States/ UTs have been advised to plan and implement piped water supply schemes of bulk water transfer based on safe water sources such as surface water sources or alternative safe ground water sources for the villages with water quality issues.

vi. Further, the quality of groundwater can be improved to some extent if concerted efforts are made to improve the groundwater resources through appropriate groundwater recharge/rainwater harvesting. Government of India in this regard has taken up a number of initiatives/schemes like Jal Shakti Abhiyan, PMKSY-Watershed development, MGNREGA, Atal Bhujal Yojana etc.

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ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (a) to (c) OF UNSTARRED QUESTION NO. 2456 TO BE ANSWERED IN LOK SABHA ON 13.03.2025 REGARDING "HAZARDOUS CHEMICAL COMPONENTS IN GROUNDWATER".

State-wise details of Nitrate, Fluoride, Arsenic and Uranium Contamination in Ground Water for Year 2023

S.No.	State	Nitrate			Fluoride			Arsenic			Uranium		
		No. of samples analysed	% of samples with NO_3> 45 mg/L	No. of districts having Nitrate > 45 mg/L	No. of samples analysed	% of samples with F >1.5 mg/L	No of districts having F > 1.5 mg/L	No. of samples Asanalysed	% of samples with As> 10 ppb	No of districts having Arsenic > 10 ppb	No. of samples U analysed	% of samples U> 30 ppb	No of districts having U > 30 ppb
1	Andaman & Nicobar Islands	113	0	0	113	0	0	0	0	0			
2	Andhra Pradesh	1149	23.5	26	1149	11.31	17	0	0	0			
3	Arunachal Pradesh	12	0	0	12	0	0	12	0.0	0	12	0	0
4	Assam	155	0	0	155	0	0	155	0.65	1	155	0	0
5	Bihar	808	2.35	15	808	4.58	6	0	0.0	0	752	0.1	1
6	Chandigarh UT	8	0	0	8	0	0	8	0.0	0	8	0	0
7	Chhattisgarh	783	11.49	20	783	1.79	8	0	0	0	783	0.6	3
8	Dadra & Nagar Haveli and Daman & Diu	17	0	0	10	0	0	0	0	0			
9	Delhi	103	20.39	7	103	16.5	6	103	2.91	2	103	10.7	6
10	Goa	10	0	0	10	0	0	6	0.0	0	6	0	0
11	Gujarat	632	18.04	23	632	13.92	25	0	0.0	0			
12	Haryana	879	14.56	21	879	23.66	17	857	0.70	5	857	18.7	16
13	Himachal Pradesh	171	9.36	6	171	1.17	2	0	0.0	0			
14	Jammu & Kashmir	250	9.2	6	250	0	0	250	0.8	2	250	0	0
15	Jharkhand	397	5.79	9	397	2.77	8	0	0.0	0	342	0	0

16	Karnataka	345	48.99	27	345	17.68	19	125	3.20	2	125	4.8	3
17	Kerala	342	6.73	10	342	0.29	1	0	0.00	0	342	0	0
18	Madhya Pradesh	589	22.58	39	589	1.02	6	1064	0.0	0	1064	0.5	3
19	Maharashtra	1567	35.74	32	1567	1.91	10	0	0.00	0	1567	0.2	3
20	Meghalaya	39	0	0	39	0	0	39	0.0	0	39	0	0
21	Mizoram	3	0	0	3	0	0	3	0.0	0	3	0	0
22	Nagaland	6	0	0	6	0	0	6	0.0	0	6	0	0
23	Odisha	625	14.4	15	625	4.48	10	904	0.66	3	904	0.3	3
24	Pondicherry	4	25	1	4	0	0	0	0	0	4	0	0
25	Punjab	922	12.58	20	922	13.77	17	908	4.85	12	908	32.6	20
26	Rajasthan	630	49.52	30	630	43.17	31	0	0.0	0	627	21.2	21
27	Tamil Nadu	916	37.77	31	916	9.72	21	0	0.0	0	915	2.3	9
28	Telangana	1150	27.48	32	1150	14.87	28	0	0.0	0			
29	Tripura	81	2.47	2	81	0	0	81	0.0	0	81	0	0
30	Uttar Pradesh	1387	9.37	48	1387	5.7	27	1386	6.70	29	1386	8.3	43
31	Uttarakhand	207	17.39	5	207	0.48	1	207	3.86	3	206	0.5	1
32	West Bengal	959	8.65	18	959	0.73	3	959	8.76	6			
	Grand Total	**15259**	**19.8**	**443**	**15259**	**9.04**	**263**	**7074**	**3.55**	**65**	**11445**	**6.6**	**132**
		Parts of 443 districts in 23 States/UTs			**Parts of 263 districts in 20 States/UTs**			**Parts of 65 districts in 10 States/UTs**			**Parts of 132 districts in 13 States/UTs**		

***Data from the States/UTs of Manipur, Lakshadweep, Ladakh and Sikkim is not available.**

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