

GOVERNMENT OF INDIA  
MINISTRY OF JAL SHAKTI,  
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION  
**LOK SABHA**  
**STARRED QUESTION NO. \*407**  
ANSWERED ON 31.03.2022

**TOXIC SUBSTANCES IN GROUND WATER**

\*407. SHRI GIRISH CHANDRA

Will the Minister of JAL SHAKTI be pleased to state:

- (a) whether the Government has conducted any study particularly in Uttar Pradesh regarding presence of toxic substances like arsenic and fluoride in ground water and their adverse effects on human health;
- (b) if so, the details thereof along with the steps taken by the Government for maintaining clean ground water, State-wise; and
- (c) the steps taken by the Central Ground Water Board (CGWB) for exploration of clean and safe ground water resources thereby tackling problems of prolonged use of arsenic contaminated water which leads to diseases like dermatosis, keratosis, conjunctivitis, bronchitis, gastro-enteritis in initial stage and then peripheral neuropathies, hepatopathy, melanosis, depigmentation etc.?

**ANSWER**

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI BISHWESWAR TUDU)

**(a) to (c)** A statement is laid on the Table of the House.

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**STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (c) OF LOK SABHA STARRED QUESTION NO. \*407 TO BE ANSWERED ON THURSDAY, 31.03.2022 ON “TOXIC SUBSTANCES IN GROUND WATER”.**

**(a) & (b)** Central Ground Water Board (CGWB) generates ground water quality data annually on a regional scale through ground water quality monitoring throughout the country. This monitoring indicates the occurrence of fluoride, arsenic, nitrate, iron and heavy metals beyond the BIS (Bureau of Indian Standards) permissible limits for human consumption in isolated pockets in certain parts of the country including Uttar Pradesh. Details in this regard are given at **Annexure I**.

Consumption of arsenic beyond permissible limits may lead to arsenicosis, development of black-brown skin pigmentation (melanosis), hardening of palm and soles (keratosis), skin cancer etc. In addition, consumption of fluoride beyond permissible limits may lead to dental fluorosis, skeletal fluorosis and non-skeletal fluorosis including anemia etc.

Water being State subject, initiatives on water management including taking corrective action related to ground water quality in the country is primarily States' responsibility. However, Central Pollution Control Board (CPCB) in association with State Pollution Control Boards/Pollution Control Committees (SPCBs/PCCs) is implementing provisions of the Water (Prevention & Control) Act, 1974 & the Environment (Protection) Act, 1986 to prevent and control pollution.

Adverse effects of the groundwater contamination can be addressed to a large extent if safe water is made available to public. The Department of Drinking Water and Sanitation (DoDW&S) had launched a National Water Quality Sub-Mission (NWQSM) on 22<sup>nd</sup> March, 2017 as a part of National Rural Drinking Water Programme (NRDWP), which has now been subsumed under Jal Jeevan Mission (JJM), to provide safe drinking water to 27,544 arsenic/fluoride affected rural habitations in the country. JJM, being implemented in partnership with States since August, 2019, aims to provide potable tap water supply of prescribed quality to every rural household in the country by 2024. Under JJM, while allocating the funds to States/ UTs in a particular financial year, 10% weightage is given to the population residing in habitations affected by chemical contaminants including arsenic and fluoride, as on 31st March of the preceding financial year. Since, planning, implementation and commissioning of piped water supply schemes based on a safe water source likely to take time, purely as an interim measure, States/ UTs have been advised to install community water purification plants (CWPPs) in such habitations, to provide potable water to every household at the rate of 8–10 litre per capita per day (lpcd) to meet their drinking and cooking requirements.

**(c)** CGWB has constructed several exploratory and observation wells in the country tapping the arsenic safe deeper aquifer zones delineated through exploration aided detailed aquifer mapping under National Aquifer Mapping programme. Successful wells have been handed over to the State Governments for utilization. Further, the groundwater quality information generated by the CGWB on yearly basis is also shared with States/UTs for their corrective action while making available drinking water to the public.

In addition, CGWB is providing technical assistance to the States by sharing the cement sealing technology for tapping contamination free aquifers in Gangetic flood plains including West Bengal, Bihar, Jharkhand and Uttar Pradesh.

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**ANNEXURE REFERRED TO IN REPLY TO PARTS (A)& (B) OF STARRED QUESTION NO.\*407 TO BE ANSWERED IN LOK SABHA ON 31.03.2022 REGARDING “TOXIC SUBSTANCES IN GROUND WATER”.**

**States Wise Number of Partly Affected Districts with different Contaminants in Ground Water of India**

S. No.	State/ UT	Salinity (EC above 3000 micro mhos/cm) (EC : Electrical Conductivity)	Fluoride (above 1.5 mg)	Nitrate (above 4 mg/l)	Arsenic (above 0.01 mg/l)	Iron (above 1mg)	Lead (above 0.01 mg/l)	Cadmium (above 0.003 mg/l)	Chromium (above 0.05 mg/l)
1	Andhra Pradesh	12	12	13	3	7			
2	Telangana	8	10	10	1	8	2	1	1
3	Assam		9		19	18			
4	Arunachal Pradesh					4			
5	Bihar		13	10	22	19			
6	Chhattisgarh	1	19	12	1	17	1	1	1
7	Delhi	7	7	8	2		3	1	4
8	Goa					2			
9	Gujarat	21	22	24	12	10			
10	Haryana	18	21	21	15	17	17	7	1
11	Himachal Pradesh			6	1				
12	Jammu & Kashmir		2	6	3	9	3	1	
13	Jharkhand		12	11	2	6	1		
14	Karnataka	29	30	29	2	22			
15	Kerala	4	5	11		14	2		1
16	Madhya Pradesh	18	43	51	8	41	16		
17	Maharashtra	25	17	30		20	19		
18	Manipur		1		2	4			
19	Meghalaya		1			6			
20	Nagaland		1			1			
21	Odisha	17	26	28	1	30			1
22	Punjab	10	19	21	10	9	6	8	10
23	Rajasthan	30	33	33	1	33	3		
24	Tamil Nadu	27	25	29	9	2	3	1	5
25	Tripura					4			
26	Uttar Pradesh	13	34	59	28	15	10	2	3
27	Uttarakhand			4		5			
28	West Bengal	6	8	5	9	16	6	2	2
29	Andaman & Nicobar	1				2			
30	Daman & Diu	1		1	1				
31	Puducherry			1					
	<b>Total</b>	<b>Parts of 248 districts in 18 states &amp; UTs</b>	<b>Parts of 370 districts in 23 states &amp; UTs</b>	<b>Parts of 423 districts in 23 states &amp; UTs</b>	<b>Parts of 152 districts in 21 states &amp; UTs</b>	<b>Parts of 341 districts in 27 states &amp; UTs</b>	<b>Pb in parts of 92 districts in 14 states</b>	<b>Cd in parts of 24 districts in 9 states</b>	<b>Cr in parts of 29 districts in 10 states</b>

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