

GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

LOK SABHA

UNSTARRED QUESTION NO. 499

ANSWERED ON 25.07.2024

POLLUTION IN GROUND WATER

499. SHRI CHARANJIT SINGH CHANNI

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

- (a) whether the Ministry has any data regarding the Anthropogenic pollutants and heavy metals found in ground water in Punjab during the last five years and if so, the details thereof;
- (b) whether the Ministry has any data regarding the deaths of people in Punjab caused by such pollutants in last five years and if so, the details thereof, gender-wise; and
- (c) whether the Ministry has taken any steps to mitigate the pollutants and restore the quality of ground water and if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY)

(a) Central Ground Water Board (CGWB) generates ground water quality data of the country including Punjab on a regional scale as part of its ground water quality monitoring program and various scientific studies. Anthropogenic pollutants and heavy metals like Nitrate, Iron, Arsenic, Selenium, Chromium, Manganese, Nickel, Cadmium, Lead and Uranium beyond permissible limits (as per BIS) for human consumption have been reported in isolated pockets in Punjab. The details are given in **Annexure**. Further, the Central Pollution Control Board(CPCB) monitors water quality through its network of approximately 1200 specific station locations throughout the country (with 46 locations in Punjab) under National Water Quality Monitoring Programme (NWMP) except Andaman & Nicobar Islands, Arunachal Pradesh and Sikkim on a half yearly frequency. Under NWMP, Groundwater quality monitoring stations were selected considering the criteria such as Drinking water sources located in sanitary conditions and prone to sewage contamination; tubewells, hand pumps or dug-wells located in industrial areas prone to contamination; as well as groundwater sources in residential areas. The ground water contamination reported by CPCB are mostly anthropogenic in nature. Year-wise and state-wise water quality data under NWMP can be accessed @ <https://cpcb.nic.in/nwmp-data/>

(b) As per the information received from M/o Health & Family Welfare, no specific data regarding deaths of people in Punjab caused by ground water pollution is available.

(c) Water being a State subject, sustainable development and management of groundwater resources, including the quality aspect is primarily the responsibility of the State Governments. However, the

Central Government facilitates the efforts of the State Governments including Punjab through technical and financial assistance through its various schemes and projects. In this direction, the important steps taken by the Ministry of Jal Shakti and other central ministries are given below:-

- 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.
- CGWB constructs wells for Exploration of Ground Water. Successful contamination- free wells are handed over to the State Governments for gainful utilization.
- Under the National Aquifer Mapping Programme (NAQUIM) of CGWB, special attention is being given to the aspect of ground water quality including contamination by toxic substances such as Arsenic in ground water. 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.
- CPCB has made a comprehensive programme on water pollution for controlling point sources, the main components of which are developing industry specific standards and general standards for discharge of effluents notified under the Environment (Protection) Act, 1986 by Ministry of Environment, Forest and Climate Change, Govt. of India to be enforced by the SPCBs / PCCs through consent mechanism; Establishment of Common Effluent Treatment Plants (CETPs) for cluster of Small Scale Industries; Installation of Online Continuous Effluent Monitoring Systems (OCEMS) by Grossly Polluting Industries for getting real time information on the effluent quality etc.
- Government of India, in partnership with States, is implementing Jal Jeevan Mission (JJM) since August, 2019 to provide potable tap water supply of prescribed quality and on regular & long term basis to every rural household in the country. Under JJM, while planning water supply schemes to provide tap water supply to house-holds, priority is given to quality-affected habitations. 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.
- Awareness generation programs/ workshop on various aspects of ground water including preventing ground water pollution and safe use of contaminated water are being conducted by CGWB periodically.
- Since ground water is the predominant source used for drinking and since its quality is found to deteriorate when drawn from greater depths, Ministry of Jal Shakti and other central ministries are implementing several programmes for recharging ground water and water conservation which are expected to improve the underground water table, thus improving the quality of ground water. Some of such programmes are Jal Shakti Abhiyan, Amrut Sarovar Mission, MNREGS, PMKSY-WDC etc.

- In addition to these schemes, Master Plan for Artificial Recharge to Groundwater- 2020 has been prepared by CGWB in consultation with States/UTs which is a macro level plan indicating various structures for the different terrain conditions of the country including estimated cost. In Punjab, Master plan envisages about 11 Lakh Rain water harvesting and artificial recharge structures to harness about 1200 Million Cubic Meter (MCM) of rain-water. The plan has been shared with the state Government which is devising suitable action plan for its implementation in select priority areas.

Complementary to the above, the important steps taken by the Government of Punjab for improving quality of ground water in the State of Punjab are-

1. The Punjab Water Resources Regulation and Development Authority (PWRDA) has been established under section 3 of Punjab Water Resources (Management and Regulation) Act, 2020 Act. The Authority will ensure conservation, management and regulation of water in the State in accordance with the Integrated State Water Plan (ISWP). This plan includes measures for improving water quality, ensuring sustainable use, and enhancing overall water resource management in Punjab.
2. In the state of Punjab, 30 canal-based recharge schemes are currently operational, and work for the construction of 189 additional recharge schemes has been approved. These initiatives are designed to enhance groundwater recharge and contribute to the improvement of groundwater quality by promoting the natural filtration of water.

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 499 TO BE ANSWERED IN LOK SABHA ON 25.07.2024 REGARDING “POLLUTION IN GROUND WATER”.

Year wise details of contaminants above BIS permissible limit in ground water of Punjab from 2019 to 2023

Year	Nit rate (>45 mg/L)	Chromium (>0.05 mg/L)	Manganese (>0.3 mg/L)	Iron (>1.00 mg/L)	Nickel (>0.02 mg/L)	Arsenic (>10 µg/L)	Selenium (>10 µg/L)	Cadmium (>3.00 µg/L)	Lead (>10 µg/L)	Uranium (>30 µg/L)
2019	23.18% (70 out of 302 samples)	0.66% (2 out of 302 samples)	5.3% (16 out of 302 samples)	3.97% (12 out of 302 samples)	0% (0 out of 302 samples)	5.96% (18 out of 302 samples)	0.66% (2 out of 302 samples)	0% (0 out of 302 samples)	1.0% (3 out of 302 samples)	24.17% (73 out of 302 samples)
2020	31.0 % (100 out of 323 samples)	0% (0 out of 323 samples)	9.0% (29 out of 323 samples)	4.64 % (15 out of 323 samples)	0% (0 out of 323 samples)	5.57 % (18 out of 323 samples)	0% (0 out of 323 samples)	0% (0 out of 323 samples)	1.5% (5 out of 323 samples)	31.58 % (102 out of 323 samples)
2021	22.4 % (74 out of 330 samples)	0.30% (1 out of 328 samples)	7.0% (23 out of 328 samples)	5.18 % (17 out of 328 samples)	0% (0 out of 328 samples)	5.18 % (17 out of 328 samples)	0% (0 out of 328 samples)	0% (0 out of 328 samples)	1.2% (4 out of 328 samples)	28.96 % (95 out of 328 samples)
2022	19.2 % (65 out of 338 samples)	0.30% (1 out of 338 samples)	15.7% (53 out of 338 samples)	4.73 % (16 out of 338 samples)	1.2% (4 out of 338 samples)	4.44 % (15 out of 338 samples)	0.30% (1 out of 338 samples)	0% (0 out of 338 samples)	6.8% (23 out of 338 samples)	66.86 % (226 out of 338 samples)
2023	12.8 % (118 out of 924 samples)	0% (0 Out of 924 samples)	4.1% (38 out of 924 samples)	5.52 % (51 out of 924 samples)	0.1% (1 out of 924 samples)	4.87 % (45 out of 924 samples)	0.43% (4 out of 924 samples)	0% (0 out of 924 samples)	0.5% (5 out of 924 samples)	32.14 % (297 out of 924 samples)
