

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA
REJUVENATION
LOK SABHA
UNSTARRED QUESTION NO. 2000
ANSWERED ON 30.07.2026

GROUNDWATER EXTRACTION IN PUNJAB

2000. Smt. HARSIMRAT KAUR BADAL:

Will the Minister of JAL SHAKTI be pleased to state:

- (a) whether the Government is aware that Punjab has the highest rate of groundwater extraction in the country with over 75 per cent of its blocks classified as overexploited and groundwater extraction reaching 156 per cent and if so, the details thereof;**
- (b) the steps taken by the Government to address the widespread contamination of groundwater in Punjab with toxic substances such as arsenic, fluoride and uranium as reported in several districts;**
- (c) whether the Government has conducted any studies or assessments on the impact of declining groundwater levels and increasing salinity on agricultural productivity and public health in Punjab and if so, the details and the key findings thereof; and**
- (d) the measures being implemented to promote sustainable irrigation practices in Punjab given the heavy reliance on tubewells and reduction in canal irrigated area?**

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI
(SHRI RAJ BHUSHAN CHOUDHARY)

(a) Dynamic Ground Water Resources of the country are assessed annually jointly by Central Ground Water Board (CGWB) and State Governments. As per the 2025 assessment, the total Annual Ground Water Recharge for the state of Punjab is 18.60 Billion Cubic Meter (BCM) and the Annual Extractable Ground Water Resources is estimated as 16.80 BCM. Further, total Annual Ground Water Extraction in Punjab in 2025 has been assessed as 26.27 BCM. Based on this, the Stage of Ground Water Extraction (SoE), which is a measure of Annual Ground Water Extraction for all uses (irrigation, industrial and domestic uses) over Annual Extractable Ground Water Resource is worked out to be 156.36% for the state of Punjab.

Further, 111 (72.55%) blocks out of 153 in Punjab have been categorized as 'Over-exploited' where total annual ground water extraction exceeds the extractable ground water resources. Additionally, 10 Blocks are in critical, 15 in Semi-critical and 17 in Safe category.

However, groundwater is a replenishable resource which gets recharged every year through rainfall and other sources. Further its sustainability can be improved through judicious regulation of extraction, artificial recharge and large-scale conservation measures.

(b) CGWB generates groundwater quality data on a regional scale across the country, including for the state of Punjab, under its groundwater quality monitoring programme and other scientific studies conducted by it as per the approved Standard Operating Procedure (SOP). As per the Annual Ground Water Quality report 2025, localized occurrence of Arsenic, Fluoride and Uranium in ground water in excess of the limits prescribed for drinking water use has been reported in some isolated pockets of Punjab.

Water is a State subject and the responsibility of taking initiatives to mitigate ground water contamination lies primarily with the state

governments. However, to complement the efforts of the state governments, several steps have been taken by the Central Government to address these issues across the country including Punjab. Some of the important ones are mentioned below:-

- i. The ground water quality data generated by CGWB including that for heavy metal contamination, is regularly disseminated through Annual Reports, Half-yearly Bulletins and Fortnightly Alerts for quick action by the stakeholders.**
- ii. In order to enhance monitoring efficiency, a new Standard Operating Procedure (SoP) for Groundwater Quality Monitoring has been adopted by CGWB, which stipulates more frequent and denser sampling, particularly in vulnerable areas, to ensure a more comprehensive assessment of groundwater quality.**
- iii. CGWB has also developed an innovative cement sealing technology for tapping deeper Arsenic free aquifers in the Arsenic affected areas and has so far successfully constructed 525 Arsenic safe exploratory wells and is also providing technical assistance to state departments for taking up similar constructions.**
- iv. Jal Jeevan Mission (JJM) – Har Ghar Jal, being implemented by this Ministry in partnership with states, marks an important milestone for providing contamination free potable tap water to every rural household of the country in adequate quantity, of prescribed quality and on regular & long-term basis. Several water quality safety measures including setting up of an extensive network of testing labs, distribution of Field Testing Kits (FTKs), installation of**

community water purifier plants in affected habitations etc. have been taken up under JJM.

- v. Improvement in ground water quality can also be achieved to some extent by taking up artificial recharge of contaminated aquifers, which dilutes the contaminants to reduce their adverse effects. Accordingly, Ministry of Jal Shakti and other central ministries are implementing several programmes towards this end like the annual Jal Shakti Abhiyan campaign, Jal Sanchay Jan Bhagidari (JSJB) initiative, PMKSY schemes, etc.**

(c) CGWB regularly monitors groundwater levels and groundwater quality throughout the country, including Punjab, as per its mandate. Further, under Phase 1.0 of the National Aquifer Mapping and Management Programme (NAQUIM), the entire identified mappable area of about 25 lakh sq. km of the country, including about 50,368 sq. km in Punjab, has been mapped and district-wise groundwater management plans have been prepared and shared with the concerned State and district authorities for suitable field-level interventions. In the NAQUIM study reports, the problem of ground water depletion and quality issues like salinity in affected pockets has been addressed and suitable supply and demand side measures for remediation like construction of rain water harvesting and artificial recharge structures, increasing the area under micro-irrigation, crop diversification etc. have been recommended. Similarly, several remedial measures for mitigation of ground water contamination issues like identifying and tapping safer aquifers for drinking water use, various techniques for local water purification etc. have also been suggested for preventing adverse impact on public health.

(d) The government has taken up several important measures, as summarized below, for reducing dependence on ground water for irrigation, encouraging conjunctive use with surface water and promoting sustainable irrigation practices in the country, including Punjab.

- i. Under various components of the umbrella Scheme of PMKSY like Repair, Renovation & Restoration (RRR), Surface Minor Irrigation (SMI) etc. the M/o Jal Shakti provides assistance to states, including Punjab for reviving/restoring traditional water bodies and enhancing irrigation through smaller surface water projects like tanks, check dams and lift irrigation, benefiting small & marginal farmers.**
- ii. As intimated by the Government of Punjab, several measures have been undertaken to promote sustainable irrigation practices through expansion and modernization of the canal irrigation system. During the last four financial years (2022–26), irrigation infrastructure development works worth more than Rs. 7,200 crore have been undertaken, including restoration and lining of canals, rehabilitation and construction of watercourses, strengthening of underground pipeline systems in Kandi areas and modernization of major canal systems. These works have restored canal irrigation in about 2.75 lakh acres and enabled canal water to reach several tail-end and previously uncovered areas.**

In addition, the State Government has undertaken measures such as extension of existing canals, restoration of the Kandi Canal System, implementation of lift irrigation schemes, promotion of micro-irrigation and revision of canal water policies to promote greater

utilisation of surface water and efficient irrigation practices. The water allowance in major canal systems has also been enhanced to improve the availability of canal irrigation.

- iii. Based on the advisories of M/o Jal Shakti to States to review their free/subsidized electricity policy to farmers, bring suitable water pricing policy and to work further towards crop rotation/diversification/other initiatives to reduce over-dependence on groundwater, Department of Agriculture, Punjab is pursuing hard to diversify the acreage under paddy to other less water consuming crops by extending incentives to farmers.**
- iv. Department of Agriculture & Farmers' Welfare (DA & FW), GoI, is implementing Per Drop More Crop (PDMC) Scheme in the country including Punjab, since 2015-16, which focuses on enhancing water use efficiency at farm level through Micro Irrigation and better on-farm water management practices to optimize the use of available water resources.**
