

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

LOK SABHA

UNSTARRED QUESTION NO. 512

ANSWERED ON 06.02.2025

HARMFUL EFFECTS OF CONTAMINATION IN GROUNDWATER

512. THIRU D M KATHIR ANAND SMT. MANJU SHARMA SHRI KULDEEP INDORA

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

- (a) whether the Government is aware of the harmful effects of high levels of arsenic, mercury and fluoride contamination in groundwater on humans and animals and if so, the details thereof;
- (b) whether the Government has any new proposal or project for controlling the contamination of arsenic, mercury and fluoride along with the total amount sanctioned in this regard and if so, the details thereof;
- (c) the details of the number of people found victims of health hazards caused by drinking water contaminated with high levels of arsenic, fluoride, iron, salinity and nitrate in Rajasthan, district-wise along with the steps taken/likely to be taken by the Government in this regard;
- (d) whether the Government proposes to improve the water harvesting infrastructure to raise the water level in Rajasthan and if so, the details thereof; and
- (e) the measures taken/likely to be taken by the Government to encourage the households to retain rainwater within the ground?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY)

(a) Use of Ground Water for drinking purpose having Arsenic, Fluoride or Mercury above the permissible limits over a prolonged period of time is known to cause several adverse health effects. As per the information available Arsenic exposure can cause skin lesions, cancer, cardiovascular diseases and developmental effects in children. Likewise, excessive fluoride in the ground water can result in dental and skeletal Fluorosis. Further, Mercury contamination of water sources can lead to Minamata disease (numbness, tremors, memory loss and cognitive impairment), renal damage, developmental toxicity in fetus, cardiovascular effects etc.

(b) Water is a state subject and the responsibility of ground water management, including taking initiatives for improving ground water quality and mitigate the contamination issue, lies primarily with the state governments. The Central Government complements the efforts of the States by providing technical support and financial assistance through its various projects and schemes. However, several steps have been taken by the Central Government in this direction like regular quality monitoring and sharing of data by Central Ground Water Board (CGWB) with state governments and other stakeholders, taking up construction of Arsenic and Fluoride safe wells and disseminating the technology, implementation of Water (Prevention & Control) Act,

1974 and the Environment (Protection) Act, 1986 by CPCB/SPCBs to prevent and control pollution in water etc.

Jal Jeevan Mission (JJM) – HarGhar Jal is a noble initiative. which is operational in the country since August 2019, with a view 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 JJM, Bureau of Indian Standards' BIS:10500 standards have been adopted as prescribed norms for quality of tap water service delivery and JJM guidelines also stipulate that while allocating the funds to States/ UTs, 10% weightage is given to the population residing in habitations affected by chemical contaminants. Moreover, a vast network of more than 2000 water quality testing laboratories have been set up in the country. Besides this, five persons, preferably women, are identified and trained from every village for testing the water samples through Field Test Kits (FTKs).

It may be appreciated that under JJM, funds are not released separately for eradication of individual contaminants like Arsenic, Fluoride or heavy metals in ground and drinking water. As per the information available on the JJM dashboard, it is seen that from the beginning of the Scheme in 2019 to 2024-25 (up to the month of January 2025) funds to the tune of Rs. 4.3 lakh cr were allocated by the central government and an amount of Rs. 3.7 lakh cr. has been spent towards providing safe drinking water to more than 12.2 cr rural households in the country.

(c) As per the information received from National Centre for Disease Control (NCDC), M/o Health & Family Welfare, no specific data regarding number of victims of health hazards caused by drinking water contaminated with high levels of arsenic, fluoride, iron, salinity and nitrate in Rajasthan is available.

(d) Despite the fact that creating rainwater harvesting and artificial recharge infrastructure is primarily the mandate of state governments, the Union government has also taken several notable initiatives in this direction and some of the important ones are given below:-

- i. The Government is implementing Jal Shakti Abhiyan (JSA) in the country since 2019 which is a mission mode and time bound programme for harvesting the rainfall and taking up water conservation activities. Currently, JSA 2024 is being implemented in the country with special focus on 151 water stressed districts of the country, including 10 such districts in Rajasthan. JSA is an umbrella campaign under which various ground water recharge and conservation related works are being taken up in convergence with various central and state schemes.
- ii. CGWB has taken up National Aquifer Mapping and Management Programme (NAQUIM) with an aim to delineate aquifer disposition and their characterization. Entire mappable area of the country of around 25 lakh sq. km, including 3.34 lakh sq km of Rajasthan, has been mapped under the scheme and management plans have been shared with the respective State governments for implementation.

- iii. CGWB implements artificial recharge projects for demonstrative purposes and in select priority areas. In the last 3 years, CGWB has taken up the project on ‘Groundwater augmentation through artificial recharge in identified water stressed areas of Rajasthan’ comprising Jodhpur, Jaisalmer & Sikar districts. The structures include earthen/gravity dams, check dams, anicuts and recharge shaft with ponds.
 - iv. Mission AmritSarovar was launched by the Government of India which aimed at developing and rejuvenating at least 75 water bodies in each district of the country, including Rajasthan. As an outcome nearly 69,000 AmritSarovars have been constructed/rejuvenated in the country with around 3,138 in Rajasthan.
- (e) Individual household level rooftop rain water harvesting and ground water recharge, especially in urban areas, is considered to be of immense importance for the success of water conservation efforts of the government as it is reflective of large scale community participation and ground level action by the masses.
- i. Ministry of Jal Shakti has circulated a Model Bill to all the States/UTs to enable them to enact suitable ground water legislation for regulation of its development, which, *inter alia*, has the provisions for encouraging roof top rain water harvesting. So far, 21 States/UTs have adopted and implemented the ground water legislation.
 - ii. Ministry of Housing & Urban Affairs (MoHUA) has formulated Model Building Bye Laws (MBBL), 2016 for the States/UTs, wherein adequate focus has been given on requirement of rainwater harvesting and water conservation measures. As per MBBL, all buildings having a plot size of 100 Sq.m. or more, shall mandatorily include the complete proposal of rainwater harvesting. 35 States/ UTs have adopted the features of the Model Bye Laws.
 - iii. ‘Jal Sanchay Jan Bhagidari’- A Community-Driven Path to Water Sustainability in India has been launched by the Hon’ble Prime Minister on September 6, 2024, in Surat, Gujarat with a vision to make rain water harvesting a mass movement in the country. Under JSJB, community led construction of rain water harvesting & artificial recharge structures across the country has been taken up in mission mode for installing such structures in various public and private buildings in towns and villages, by bringing all stakeholders together.
 - iv. CGWB has prepared “Guide on Artificial Recharge to Groundwater” and “Manual on Artificial Recharge to Groundwater” which contain information on various aspects of construction, operation and maintenance of these structures. Roof top rain water harvesting, suitable especially for urban habitations is also dealt with in detail.
