

GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1530

ANSWERED ON 09.12.2024

RESEARCH AND DEVELOPMENT FOR ERADICATION OF ARSENIC

1530. SHRI NEERAJ SHEKHAR

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

(a) the details of fund allocated, released and utilized by Government for Research and Development for eradication/permanent solution of contamination of arsenic in groundwater during 2023-24 and 2024-25 till date, year-wise; and

(b) the details of activities/research undertaken so far for eradication , and outcome thereof?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY)

(a) The details of funds allocated, released and utilized by the Department of Science and Technology (DST) under Ministry of Science and Technology for research activities for remediation/mitigation of arsenic from water during 2023-24 and 2024-25 till date, year-wise; is given at **Annexure**.

(b) Details of activities/research undertaken for mitigation/removal of arsenic from water are given below:

- i. Department of Drinking Water & Sanitation under Ministry of Jal Shakti is implementing Jal Jeevan Mission (JJM) since August, 2019 to provide 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, while planning water supply schemes, priority is given to habitations affected by chemical contaminants including Arsenic. Under JJM, while allocating the funds to States/ UTs, 10% weightage is given to the population residing in habitations affected by chemical contaminants. States/ UTs have been advised to plan and implement piped water supply schemes based on alternative safe water sources for the villages with water quality issues. Under JJM, as an interim measure, States/ UTs have been advised to install Community Water Purification Plants (CWPPs) especially in Arsenic and Fluoride affected habitations to provide potable water to every household to meet their drinking and cooking requirements. Since launch of JJM, as reported by States/UTs, the number of reported arsenic affected habitations have reduced over the years from 14,020 in August, 2019 to 314 as on

04/12/2024. Further, provision of safe drinking water for cooking and drinking requirements has been made available in all the remaining 314 arsenic affected habitations.

- ii. Central Ground Water Board (CGWB) is implementing Ground Water Management and Regulation (GWMR) Scheme. Under this scheme, CGWB constructs arsenic free wells in arsenic affected areas using the cement sealing technology. CGWB has constructed arsenic safe exploratory wells in arsenic affected parts of the States of West Bengal, Bihar and Uttar Pradesh. So far, 525 exploratory wells tapping arsenic safe aquifers have been constructed under National Aquifer Mapping and Management (NAQUIM) programme including 40 in Bihar, 191 in West Bengal and 294 in Uttar Pradesh. The innovative cement sealing technique of CGWB has been shared with the state agencies to utilize to construct arsenic free wells.
- iii. The research study titled “Ascertaining Arsenic Mobilization in Soil-Water-Plant System and Exploring Possible Remedial Measures in West Bengal” has been carried out under the Research and Development scheme of the Ministry of Jal Shakti. The arsenic accumulation in the crops irrigated with contaminated groundwater was observed in the study area. It was found that storing the extracted (arsenic affected) groundwater in ponds reduced arsenic levels through sedimentation and rainwater dilution, offering a potential remedial option for conjunctive use of surface and groundwater in irrigation, thereby bringing lesser toxin to the soil-crop system.

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 1530 TO BE ANSWERED IN RAJYA SABHA ON 09.12.2024 REGARDING “RESEARCH AND DEVELOPMENT FOR ERADICATION OF ARSENIC”.

Details of funds allocated, released and utilized by the Department of Science and Technology (DST) under Ministry of Science and Technology for research activities for remediation/mitigation/removal of arsenic from water				
Financial Year 2023-24				
S.No.	Details of the Activity / Research Undertaken	Fund Allocated (Rs.)	Fund Released (Rs.)	Fund Utilized (Rs.)
1	In situ remediation of arsenic by ferrous sulfide under heterogeneous porous media Up-Scaling effect and evaluation of long term fate.	₹47,62,800	₹43,62,800	₹38,21,879
Financial Year 2024-25				
1	Demonstration of sustainable mitigation of groundwater arsenic in arsenic-polluted Gangetic River aquifers of Bihar, Uttar Pradesh and West Bengal	₹2,48,47,822	₹1,75,95,942	₹1,72,21,609
2	Development of a low cost technology based on biochar supported green zerovalent iron for arsenic and fluoride removal from water	₹32,49,980	₹22,08,282	₹14,13,202
