GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

STARRED QUESTION NO. *136

ANSWERED ON 09.12.2024

ARSENIC CONTAMINATION

*136 SHRI S NIRANJAN REDDY

Will the Minister of JAL SHAKTI be pleased to state:

(a) whether it is a fact that there is increase in arsenic contamination in the country particularly in the rural areas;

(b) the extent of arsenic contamination in groundwater across the country, State/UT-wise details thereof and the steps being taken to address it;

(c) the plans of Government and strategies for the prevention, reduction, and treatment of arsenic contamination in drinking water in the States most affected by this issue; and

(d) whether any advanced arsenic removal technologies have been developed or introduced in the country, and if so, the manner in which they are accessible to communities affected by arsenic contamination in groundwater?

ANSWER

THE MINISTER OF JAL SHAKTI

(SHRI C R PAATIL)

(a) to (d) : A statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) OF STARRED QUESTION NO. *136 TO BE ANSWERED ON 09.12.2024 IN RAJYA SABHA REGARDING "ARSENIC CONTAMINATION"

(a) There is no conclusive evidence regarding increase in Arsenic contamination in the country, particularly in rural areas. However, there could be increased cases of reporting of Arsenic contamination due to increased sample testing.

(b) & (c) As per the available information, Arsenic beyond the permissible limit has been reported in isolated pockets of 230 districts of 25 States. The list of partially affected States/UTs is given in **Annexure.**

Water being a state subject, addressing ground water contamination, including that caused by Arsenic, and provision of safe drinking water to the citizens is primarily the responsibility of the state governments. However, the central government has taken several initiatives in this direction, among which some of the important ones are mentioned below:

i. CGWB has taken up National Aquifer Mapping & Management Programme (NAQUIM) under which special attention is being given to the aspect of ground water quality including contamination by toxic substances such as Arsenic in ground water. Further, under NAQUIM, CGWB has successfully constructed Arsenic-free wells in arsenic affected areas using the cement sealing technology for tapping contamination free aquifers. Thus far, 525 exploratory wells tapping arsenic-safe aquifers have been constructed, including 40 wells in Bihar, 191 in West Bengal, and 294 in Uttar Pradesh.

ii. Government of India in partnership with States, is implementing Jal Jeevan Mission (JJM) – Har Ghar Jal, since August 2019, 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 norm for quality of tap water service delivery.
- JJM guidelines stipulate that while allocating the funds to States/ UTs, 10% weightage should be given to the population residing in habitations affected by chemical contaminants.
- States/ UTs have been advised to plan and implement piped water supply schemes of bulk water transfer based, preferably, on surface water sources or alternative safe ground water sources for the villages with water quality issues including Arsenic.
- JJM prescribes that while planning for potable water supply to household through tap water connection, priority should be given to quality-affected habitations. States/ UTs have been advised, as an interim measure, to install community water purification plants (CWPPs) especially in Arsenic and Fluoride affected 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.

- The "Drinking Water Quality Monitoring & Surveillance Framework" has been devised and disseminated to states in October 2021 with an objective to facilitate water quality testing, monitoring and surveillance activities effectively.

iii. Several research studies regarding mitigation of Arsenic and other contaminants, notably the ones being conducted in collaboration with Geological Survey of India (GSI), are funded by this Ministry and their results/reports are disseminated for public awareness and action by implementing agencies.

(d) Several key technology initiatives have been taken by this Ministry for combating ground water contamination in the country, including that caused by Arsenic. Efforts have also been made to make the initiatives more and more community centric so as to enhance their effectiveness. Some of the important steps are mentioned below:

i. Under JJM, 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).

ii. To enable States/ UTs to test water samples for water quality, and for sample collection, reporting, monitoring and surveillance of drinking water sources, an online JJM – Water Quality Management Information System (WQMIS) portal has been developed.

iii. National Centre for Drinking Water, Sanitation and Quality (NCDWSQ) has also been set up at Kolkata, West Bengal with the aim, *inter alia,* to work in the area of identification, mitigation and management of drinking water quality related problems in India, with a focus, among other contaminants, on arsenic and fluoride to cater to both rural and urban water supply.

iv. The in-house technique developed by CGWB for constructing Arsenic free wells in the affected areas by tapping deeper aquifers is shared with state agencies to aid them in the construction of such arsenic-free wells on their own, enhancing arsenic mitigation efforts in vulnerable areas.

v. Awareness generation on various aspects of ground water including preventing ground water pollution and safe use of contaminated water are being conducted by CGWB periodically by way of holding Public Interaction Programmes (PIPs) at grassroots level.

vi. CGWB conducts ground water quality monitoring for several contaminants including Arsenic on a regular basis throughout the country and also generates ground water quality data on a regional scale during various scientific studies. Data on ground water quality so generated is 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.

***

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (b) & (c) OF RAJYA SABHA STARRED QUESTION NO. *136 TO BE ANSWERED ON 09.12.2024 REGARDING "ARSENIC CONTAMINATION"

States Wise Number of Partly Affected Districts (cumulative) with Arsenic in Ground Water of India as of 2023

S.No.	State/ UT	No. of partly affected Districts where Arsenic above 0.01 mg/l detected
1	Andhra Pradesh	7
2	Telangana	1
3	Assam	21
4	Bihar	27
5	Chhattisgarh	4
6	Delhi	5
7	Gujarat	12
8	Haryana	18
9	Himachal Pradesh	1
10	Jammu & Kashmir	3
11	Jharkhand	4
12	Karnataka	3
13	Kerala	1
14	Madhya Pradesh	9
15	Manipur	2
16	Odisha	5
17	Punjab	17
18	Rajasthan	10
19	Tamil Nadu	14
20	Tripura	3
21	Uttar Pradesh	45
22	Uttarakhand	5
23	West Bengal	11
24	Daman & Diu	1
25	Puducherry	1
	Total	**Isolated pockets of 230 districts in 25 states & UTs**

*****

GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

STARRED QUESTION NO. *144

ANSWERED ON 09.12.2024

PROPOSAL FOR CONSTRUCTION OF MULTIPURPOSE DAM ON THE BARAK RIVER

*144 SHRI MISSION RANJAN DAS

Will the Minister of JAL SHAKTI be pleased to state:

(a) whether there was a proposal for constructing one multipurpose dam on upper stream of Barak river in Assam; and

(b) whether Government is considering the proposal and if so, the steps being taken by Government in this regards, the details thereof?

ANSWER

THE MINISTER OF JAL SHAKTI

(SHRI C R PAATIL)

(a) to (b) : A statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (b) OF STARRED QUESTION NO. *144 TO BE ANSWERED ON 09.12.2024 IN RAJYA SABHA REGARDING "PROPOSAL FOR CONSTRUCTION OF MULTIPURPOSE DAM ON THE BARAK RIVER"

(a) & (b) Presently, there is no such proposal for construction of a multipurpose dam in upper stream of Barak River in Assam, under consideration at the level of Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti.

However, in 1995 the detailed project report for Tipaimukh Dam Multipurpose Project located in upper reaches of Barak River and situated at 500 meter downstream of the confluence of river Tuivai with Barak in Manipur-Mizoram border was accorded techno-economic clearance in the 62nd meeting of '**Advisory committee of DoWR, RD & GR on Irrigation, Flood control and Multipurpose projects**' on 25.8.1995 at an estimated cost of Rs. 2899 crore. The responsibility for execution of this project is with the Government of Manipur and as per the present information received from NHPC Ltd., the execution work of this project has not commenced.

*****

GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

STARRED QUESTION NO. *146

ANSWERED ON 09.12.2024

PROBLEM OF SILT IN THE RIVERS OF RAIGAD DISTRICT

*146.# SHRI DHAIRYASHIL MOHAN PATIL

Will the Minister of JAL SHAKTI be pleased to state:

(a) the steps taken by Government to check the problem of increasing silt in rivers like Savitri, Kundalika, Patalganga and Amba of Raigad district;

(b) whether any special plan has been formulated for desilting of these rivers and if so, by when its implementation would be completed; and

(c) the long-term solution to reduce the increased risk of floods due to siltation?

ANSWER

THE MINISTER OF JAL SHAKTI

(SHRI C R PAATIL)

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

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (c) OF STARRED QUESTION NO. *146 TO BE ANSWERED ON 09.12.2024 IN RAJYA SABHA REGARDING "PROBLEM OF SILT IN THE RIVERS OF RAIGAD DISTRICT"

(a) & (b) Erosion, movement and deposition of sediment in a river are natural regulating functions of a river. Rivers tend to maintain a balance between the silt load carried and silt load deposited, maintaining a river regime. Dredging/desilting of rivers is not considered techno-economic as it can provide marginally benefits and is effective only for a short period. Selective dredging in specific reaches such as tidal rivers, confluence points with narrow constrictions, etc., sometimes may have to be undertaken based upon local site conditions. However, the same should be backed by proper scientific model study. The desilting measures including dredging in specific reaches of rivers for removal of drainage congestion, channel capacity improvement and navigation purpose are formulated and implemented by concerned States/ agencies as per requirement.

Water Resources Department, Government of Maharashtra has informed that removal of silt from Savitri river and its tributaries were undertaken through District Disaster Management Authority in the year 2022 and 2023 and approximately 30.25 lakh cubic meter of silt was removed. Further, the proposals for silt removal from rivers Savitri, Kundalika, Patalganga and Amba rivers of Raigad District have also been taken up.

For the comprehensive and holistic management of sediments in a holistic manner, the Department of Water Resources, River Development & Ganga Rejuvenation, Ministry of Jal Shakti, in extensive consultations with Central Government Ministries/ Departments/ State Governments/ UTs have prepared the "National Framework for Sediment Management (NFSM)". Its emphasis is on reducing silt generation rather than silt removal and promote technological innovations & best practices. The framework lays emphasis on sediment management through integrated river basin management plan giving due consideration to environment and ecology.

(c) Floods are primarily a natural calamity that the country faces almost every year, in varying degrees of magnitude due to various factors including silting of river beds.

Integrated flood approach aims at adopting judicious mix of structural and non-structural measures to provide a reasonable degree of protection against flood damages at economic cost. Structural Measures bring relief to the flood prone areas by reducing flood flows and thereby reducing the flood levels. Creation of reservoirs with adequate flood cushion is one of the structural measures for long term solution in flood management. Non-structural measures facilitate timely evacuation of the people and shifting of their movable property to safer grounds by having advance warning of incoming flood through setting up a flood forecasting system. Discouraging creation of valuable assets/settlement of the people in the areas

subject to frequent flooding i.e. enforcing flood plain zoning regulation. Catchment area treatment is crucial for managing water resources, mitigating flood risks and preserving bio-diversity within a watershed.

Flood management and anti-erosion schemes are formulated and implemented by concerned State Governments as per their priority. The Union Government supplements the efforts of the States by providing technical guidance and also promotional financial assistance for management of floods in critical areas. To strengthen the structural measures of flood management, Ministry had implemented during XI & XII Plan Flood Management Programme (FMP) for providing Central Assistance to States for works related to river management, flood control, anti-erosion, drainage development, anti-sea erosion, etc. which subsequently continued as a component of "Flood Management and Border Areas Programme" (FMBAP) for the period from 2017-18 to 2020-21 and further continued for a period of 5 years from 2021-22 to 2025-26 with total outlay of Rs. 4,100 crore. Total Central assistance amounting to Rs 7136.00 Cr. has been released under FMP component to various states since the inception of the programme.

Central Water Commission (CWC) is the nodal Organisation entrusted with the task of flood forecasting & early flood warnings in the country. The network has been established in consultation with the State Governments and UTs. In order to provide more lead time to the local authorities to plan evacuation of people & take other remedial measures, CWC has developed basin wise flood forecasting model based on rainfall-runoff mathematical modelling for 7 days' advance advisory at its forecasting stations in addition to short range forecast with response time upto 24 hours. Presently, CWC issues flood forecasts for 340 forecasting stations (200 river level forecast stations & 140 dam/ barrage inflow forecast stations) in India. Out of this, Maharashtra have 22 flood forecast stations (8 level forecast & 14 inflow forecast).

*****