

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI
DEPARTMENT OF DRINKING WATER AND SANITATION

LOK SABHA
STARRED QUESTION NO.*52
ANSWERED ON – 06/02/2025

**INNOVATIVE STRATEGIES TO ACHIEVE TAP WATER AND SANITATION
TARGETS**

†*52. Shri Vijay Baghel:
Smt. Kriti Devi Debbarman:

Will the Minister of JAL SHAKTI be pleased to state:

- (a) The innovative strategies adopted/being adopted by the Government to ensure tap water and sanitation targets are achieved including addressing acute water scarcity in drought-prone areas through advanced technologies and efficient water management systems in the country, State-wise including Chhattisgarh along with the outcome thereof;
- (b) The manner in which the Government is planning to improve the quality of drinking water provided under the Jal Jeevan Mission (JJM), particularly in rural areas, while ensuring sustainable groundwater recharge and the revival of traditional water bodies in over-exploited regions;
- (c) Whether the Government proposes to involve independent bodies in evaluating water and sanitation projects and if so, the details thereof indicating their roles and contributions in monitoring and assessing progress;
- (d) The manner in which the Government is monitoring the progress and effectiveness of tap water and sanitation projects in the country including Chhattisgarh and Delhi along with the specific steps for compliance of water quality standards in Delhi;
- (e) The steps taken/being taken to involve and educate local communities in water conservation efforts, especially in water-stressed zones, to ensure long-term sustainability and active participation; and
- (f) Whether the Government has any dedicated plan to monitor the impact of industrial waste on water sources, enforce strict pollution control norms and ensure compliance with environmental standards and if so, the details thereof?

ANSWER

MINISTER OF JAL SHAKTI
(SHRI C R PATIL)

(a) to (f): A statement is laid on the table of the House.

Statement referred to in reply to parts (a) to (f) in respect of Lok Sabha Starred Question No. †*52 for reply on 06.02.2025 regarding innovative strategies to achieve tap water and sanitation targets asked by Shri Vijay Baghel & Smt. Kriti Devi Debbarman

- (a) : Government of India is committed to make provision for safe & potable tap water supply in adequate quantity, of prescribed quality and on a regular & long-term basis to all rural households in the country. Towards this end, the Government of India launched the Jal Jeevan Mission (JJM), to be implemented in partnership with States/ UTs, in August 2019. Government of India supplements the efforts of States/ UTs by providing technical and financial assistance under JJM. For urban areas, the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), launched on 25.06.2015, focuses on ensuring universal household access to water and improving sewage treatment infrastructure. The Jal Jeevan Mission (Urban) was later introduced as AMRUT 2.0 on 01.10.2021, for the period 2021-26, aiming to make cities self-reliant and water-secure.

For Sanitation, under Swachh Bharat Mission (Gramin) and Swachh Bharat Mission (Urban) provision has been made to provide essential sanitation facilities such as toilets, solid liquid waste management, septic tank, etc.

Ensuring the success of water supply and sanitation initiatives requires the adoption of innovative strategies and advanced technologies. Several measures have been implemented, including the use of HGM maps for identifying groundwater sources, GIS technology to locate existing water sources, and IoT-based monitoring systems for optimizing water distribution. These technological advancements allow for real-time monitoring, leak detection, and efficient water supply management. In regions experiencing severe water scarcity, including Chhattisgarh, the government has actively promoted rainwater harvesting and artificial groundwater recharge through programs like Jal Shakti Abhiyan: Catch the Rain Campaign and Atal Bhujal Yojana. Additionally, efforts have been made to encourage water-saving technologies in agriculture, such as drip irrigation and sprinkler systems, to ensure sustainable water usage. A key component of AMRUT 2.0 is the Technology Sub-Mission, which encourages start-ups and private entrepreneurs to develop and implement innovative, environmentally friendly solutions for water treatment, distribution, and water body rejuvenation.

- (b) : Under JJM, in allocating the funds to States/ UTs, 10% weightage is given to the population residing in habitations affected by chemical contaminants and while taking up schemes to make provision of potable tap water supply to rural households, priority is given to quality-affected habitations. 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. As reported by States/UTs, as on 04.02.2025, there are 2,165 drinking water quality testing laboratories at different levels viz. State, District, sub-division and/ or block level in the country. To encourage water quality testing to ensure potable drinking water supply, States/ UTs have opened water quality testing laboratories to general public for testing of their water samples at a nominal rate. For the assuring the quality of the water, the States/UTs have been advised to undertake testing of water quality on a periodic basis i.e. once in year for chemical and physical parameters, and twice in a year for bacteriological parameters and take remedial action wherever necessary, to ensure that the water supplied to households is of prescribed quality. The State-wise details of water quality test reported through WQMIS are available in public domain on JJM Dashboard. Further, States/ UTs have

also been advised to identify and train 5 persons preferably women from every village to conduct water quality tests using FTKs/ bacteriological vials at village level and report the same on the WQMIS portal.

Jal Shakti Abhiyaan – Catch the rain campaign, in its different editions, focused on water conservation and rainwater harvesting structures, renovation of traditional water bodies, reuse and recharge structures, watershed development, etc. Further, a special initiative Jal Sanchay Jan Bhagidari (JSJB) under JSA: CTR has been launched on September 6, 2024, which aims to promote collaborative community-driven water conservation efforts and focuses on enhancing water management through low-cost, scientifically designed artificial recharge structures, ensuring active participation from local communities, industries, and other stakeholders. Additionally, borewell recharge structures are encouraged/ supported under the JJM operational guidelines. Apart from this, Government of India is also implementing Atal Bhujal Yojana in 8,213 water stressed Gram Panchayats (GPs) in 80 districts of 7 States, viz., Haryana, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh to enhance physical access of water on farm and expand cultivable area under assured irrigation, improve on farm water use efficiency, introduce sustainable water conservation practices etc.

- (c) & (d) : The Operational Guidelines of JJM mandates DDWS to carry out regular functionality assessment, evaluation and impact assessment. For the purpose, DDWS shortlists a third party through open tendering process. In such assessment(s), State/ UTs are given a functionality score on the basis of functionality of samples on quantity, quality and regularity of water supply to rural households. The reports are shared with States/ UTs to undertake measures for mid-course corrections to enhance the functionality of tap connections. For assessment and monitoring of work done under AMRUT in the States, there is a provision for setting up Independent Review and Monitoring Agencies (IRMAs) in all the States/UTs. For sanitation, Swachh Survekshan Grameen (SSG), through a third-party survey agency, is carried out to assess household sanitation parameters, including Faecal Sludge Management (FSM), biodegradable and non-biodegradable waste management, and Grey Water Management (GWM).

The mechanism of online monitoring is also in place for these programmes, such as JJM–Integrated Management Information System (IMIS) and JJM–Dashboard for JJM, and separate dashboards for SBM (G) for monitoring of progress under the programme across the country including Chhattisgarh. Similar, dashboards are in place for monitoring of water and sanitation projects in urban areas including Chhattisgarh and Delhi under AMRUT, and SBM (U) respectively. Also, the progress of these schemes is reviewed & monitored through regular meetings, workshops, site-visits etc.

Further, as informed by M/o Housing and Urban Affairs, in Delhi under AMRUT, water supply projects have been taken including creation of water treatment plant. Further, under AMRUT 2.0 water supply projects have been approved by MoHUA.

- (e) : The JJM Operational Guidelines *inter-alia* emphasize the role of the community in planning, operations & maintenance (O&M) and sustainability of in-village water supply infrastructure. The Gram Panchayat or its sub-committee i.e. Village Water and Sanitation Committee (VWSC)/ Pani Samiti/ User Group etc. with at least 50% women members are required to operate and maintain the in-village water supply. The Gram Panchayat and/ or its sub-committee, i.e. VWSC/ Pani Samiti/ User Group, etc. are also empowered to open an account to receive funds for O&M from different sources

including 15th FC tied grants, collection charges, etc. The community level functionaries are also trained under various capacity building programmes.

Further, Ministry of Jal Shakti (MoJS) launched Jal Shakti Abhiyan (JSA), a time-bound, mission mode water conservation campaign for implementation in the July-November 2019 period in 1,592 blocks out of 2,836 blocks of 256 water-stressed districts of the country. Jal Shakti Abhiyan could not be taken up in 2020 due to restrictions imposed by the COVID pandemic. Ministry of Jal Shakti in 2021 took up the “Jal Shakti Abhiyan: Catch the Rain” (JSA: CTR) subsuming Catch the Rain campaign which covered rural and urban areas of all districts (all blocks and municipalities) of the country. JSA: CTR campaign has five focused interventions which inter-alia includes rainwater harvesting & water conservation. JSA: CTR has become an annual feature since 2021 and the 5th edition of JSA: CTR was launched on 09.03.2024 for implementation during the period 09.03.2024 to 30.11.2024 in rural and urban areas of all districts (all blocks and municipalities) of the country.

Involvement of Nehru Yuva Kendra Sangathan (NYKS): After the easing of the lock-down, the “JSA-Catch The Rain” Awareness generation campaign in collaboration with NYKS (Nehru Yuva Kendra Sangathan) was launched on 21 December, 2020 jointly by Minister of Jal Shakti and Minister of Youth Affairs & Sports in New Delhi. NYKS had been implementing the awareness generation campaign 623 districts of the country since then.

Expanding on this vision, the **Jal Sanchay Jan Bhagidari (JSJB)** initiative was launched on September 6, 2024, in Surat, Gujarat, in the virtual presence of the Hon'ble Prime Minister. This special initiative, under JSA: CTR, aims to scale up Gujarat's **Jal Sanchay** program nationwide, promoting collaborative community-driven water conservation efforts. JSJB aims to create **one million low-cost recharge structures** across urban and rural India, using a combination of **scientific technology and traditional methods**. The initiative promotes active participation and sustainable water management by involving local communities, industries, NGOs and government bodies. It's a public-private partnership model which draws funding from not only government schemes like MGNREGS, AMRUT, PMKSY etc but also from mobilization of private finance like Industry - CSR , Philanthropy, individual donors, crowdfunding etc for people's participation, ownership and sustainability.

National Water Mission (NWM) have developed a guidance document titled "Simple and Practical Methods of Artificial Recharge of Groundwater Augmentation" in the form of FAQs to provide technical support. Information, Education, and Communication (IEC) activities have also been undertaken to spread awareness about the initiative.

A monitoring and evaluation framework has also been established through the Jal Sanchay Dashboard, which tracks progress with geo-tagged locations of recharge structures. CWC and CGWB also provide technical assistance for the creation and renovation of recharge structures to improve groundwater augmentation efforts.

Apart from above, Government of India is implementing Atal Bhujal Yojana, in 8,213 water stressed Gram Panchayats (GPs) in 80 districts of 7 States, viz., Haryana, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh for a period of 5 years from 01.04.2020. The scheme marks a paradigm shift from groundwater development to groundwater management. “Pradhan Mantri Krishi Sinchai Yojana (PMKSY)” has been implementing with an aim to enhance physical access of water on farm and expand cultivable area under assured irrigation, improve on farm water use efficiency, introduce sustainable water conservation practices etc. PMKSY has three components/ schemes namely Har Khet Ko Pani (HKKP), Repair, Renovation & Restoration (RRR) Scheme of Water Bodies and Surface Minor irrigation (SMI) Scheme.

The Ministry of Jal Shakti has set up the Bureau of Water Use Efficiency (BWUE) under the National Water Mission on 20.10.2022, to act as a facilitator for promotion of improving water use efficiency across various sectors namely irrigation, drinking water supply, power generation, industries, etc. in the country. To enhance water use efficiency in some of the water intensive industries viz. Thermal Power plants, Textile, Pulp & Paper and Steel Industry, NWM has awarded in June, 2016 a **benchmarking study to TERI regarding “Benchmarking Industrial Water Use to Assist Policy for Enhancing Industrial Water Use Efficiency in India”**. This study looks into the water use practices in selective water intensive industries (viz. Thermal Power Plants, Textile Industries, Steel Industries and Pulp & Paper) to identify the opportunities for reducing water consumption and associated benchmarks. The TERI have completed the studies and submitted the report to the department.

Central Ground Water Board (CGWB) in association with World Bank has launched the Support for Irrigation Modernization Program (SIMP) for modernizing Major/ Medium Irrigation Projects in the country with the objective of increasing irrigation efficiency and crop water productivity. The Central Ground Water Board (CGWB) has reported that it conducts various awareness and training programs to promote rainwater harvesting (RWH) and water conservation.

- (f) : As reported by the Ministry of Environment, Forest & Climate Change, the steps taken by the Government to check the pollution of water bodies, *inter alia*, include formulation and notification of standards for effluents from industries into land masses / water bodies, operations or processes; enforcing of these standards by Central Pollution Control Board (CPCB)/State Pollution Control Boards (SPCBs) / Pollution Control Committee (PCCs) through a consent mechanism to establish / operate and regular monitoring; setting up of monitoring network for assessment of water quality/National Water Quality Monitoring Programme (NWMP); installation of Online Continuous Effluent Monitoring Systems (OCEMS) to check the discharge of effluent directly into water bodies; promotion of cleaner production processes; installation of Sewage Treatment Plants (STPs) in cities; installation of Common Effluent Treatment Plants for cluster of Small Scale Industrial units etc. Moreover, as per Solid Waste Management Rules, 2016, waste generators are mandated to segregate and store the waste generated by them in three separate streams namely bio-degradable, non bio-degradable and domestic hazardous wastes in suitable bins and handover segregated wastes to authorized waste pickers or waste collectors as per the direction

or notification by the local authorities from time to time. Further, waste generators are prohibited from throwing, burning or burying solid waste by them on streets, open public spaces outside his premises or in the drain or water bodies.

CPCB is also periodically issuing directions to all the concerned departments in the States for management of sewage and waste water in accordance with the provisions notified under the Environment (Protection) Rules, 1986 and for ensuring proper operation of existing STPs, Common Effluent Treatment Plants (CETPs) and industrial pollution control, under Section 18 (1)(b) of the Water (Prevention and Control of Pollution) Act, 1974 as well as under Section 5 of the Environment (Protection) Act, 1986. CPCB has prepared guidelines for conservation and Zero Liquid Discharge (ZLD) in feasible industrial sectors, along with guidelines for the utilization of treated effluent in irrigation. Treated wastewater can be reused in various industrial sectors to reduce dependency on freshwater, enhance sustainability, and promote effective water resource management. “Indicative Guidelines for Restoration of Water Bodies” have been issued by CPCB in June, 2019 as a guidance to the Stakeholders for ensuring restoration/rejuvenation of water bodies & circulated it to all the SPCBs/PCCs vide letters dated 18.06.2019 & 26.07.2019 and also uploaded in CPCB Website at <https://cpcb.nic.in/NGTMC/Ind-Guidelines-RestWaterBodies-10062019.pdf>
