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

LOK SABHA
STARRED QUESTION NO. *397
ANSWERED ON 19/03/2026

INTEGRATION OF REAL-TIME IOT-BASED SENSORS WITH NJJM DASHBOARD

†*397. SHRI BIDYUT BARAN MAHATO:
SHRI ALOK SHARMA:

Will the Minister of JAL SHAKTI be pleased to state:

(a) the progress made in integrating real-time IoT-based sensors with the National Jal Jeevan Mission (NJJM) dashboard to monitor the 'quantity, quality and regularity' of water supply at the last mile level, particularly in districts under Bharatpur Lok Sabha Constituency, Jalore and Sirohi districts of Rajasthan and in Nabarangpur Lok Sabha Constituency of Odisha;

(b) whether a uniform national protocol has been established for validation, calibration and maintenance of such sensors to ensure data reliability across the country and if so, the details thereof, State/UT-wise;

(c) whether the Government has developed/proposes to develop any standardized "Water Quality Index" to rank States based on the quality of water provided to settlements/habitations to enable comparative assessment of potable water safety and if so, the details thereof, State-wise, particularly in Bharatpur Lok Sabha Constituency, Jalore and Sirohi districts of Rajasthan and Dumka district of Jharkhand;

(d) whether such data is being publicly disclosed to promote transparency and community participation and if so, the details thereof;

(e) the steps taken by the Government to safeguard this critical digital infrastructure from potential cyber security risks in the country, particularly in Nabarangpur Lok Sabha Constituency in Odisha; and

(f) the measures being taken by the Government to address the issue of groundwater crisis and to ensure supply of drinking water in Darbhanga district in Bihar?

ANSWER

THE 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 of Lok Sabha Starred Question No. *397 answered on 19/03/2026.

(a) and (b) Since August 2019, Government of India, in partnership with States, is implementing Jal Jeevan Mission (JJM) – Har Ghar Jal to make provision of tap water supply to every rural household. Water is a state subject and therefore, the primary responsibility for planning and implementing piped water supply schemes to provide tap water to their households, lies with the respective State/UT. Government of India supplements the efforts of the States by providing technical and financial assistance under JJM.

This Department has developed Integrated Management Information System (IMIS) digital portal and mobile app for Jal Jeevan Mission (JJM) to strengthen transparency, data accuracy, and real-time review. Under JJM, the IMIS and online dashboards are functional at Panchayat, District Water and Sanitation Mission (DWSM), State Water and Sanitation Mission (SWSM) and National levels in all States/UTs including Rajasthan (Jalore and Sirohi District) and Odisha (Nabarangpur Lok Sabha Constituency).

To ensure the authenticity of data on the IMIS portal, the Department has implemented a multi-layered verification mechanism. This includes mandatory Aadhaar seeding of beneficiaries, Geo-tagging of assets through Sujalam Bharat App, Uploading of pipelines on PM-GatiShakti Portal. Furthermore, the Department undertakes rigorous ground truthing exercises which involves:

(i) Functionality Assessment**:** Annual independent sample surveys to verify the quantity, quality, and regularity of water supply.

(ii) National Level Monitors (NLMs): Regular field visits by National Wash Experts, Central Nodal Officers, NJJM and NPMU members. NLMs cross-verify reported progress against ground realities.

(iii) Further, to ensure effective performance of IoT devices installed across villages in the country, the department has prepared the "roadmap for the measurement & monitoring or water service delivery system in rural areas" and shared with all States.

(c) and (d) Under the Jal Jeevan Mission (JJM), to enable States/ UTs to test water samples for water quality, and for sample collection, reporting, monitoring and surveillance of drinking water, an online JJM – Water Quality Management Information System (JJM-WQMIS) portal has been developed. Presently, water quality monitoring under NJJM is carried out based on prescribed BIS:10500 standards are adopted as benchmark for quality of water being supplied through the piped water supply schemes. The State–wise, including Rajasthan and Jharkhand, details of water quality test reported through WQMIS are made available in public domain on JJM Dashboard. Development of Water Quality Index (WQI) based on naturally available water is not presently under consideration by this Department.

(e) The Government has taken several measures to safeguard the digital infrastructure of NJJM, including adherence to national cyber security guidelines issued by MeitY time to time, secure data hosting, regular security audits, role-based access controls and data encryption. States/UTs are also advised to follow standard cyber security protocols to protect IoT devices and associated data systems, including in areas such as Nabarangpur constituency.

(f) The Government has taken a special initiative "Jal Sanchay Jan Bhagidari (JSJB)" under Jal Shakti Abhiyan (JSA): Catch the rain (CTR) campaign 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.

According to the 2025 Annual Ground Water Resource Assessment, the groundwater situation in Bihar's Darbhanga district remains stable. Conducted jointly by the CGWB and the State Government, the report estimates the district's Total Annual Recharge at 78,109.77 HAM and Extractable Resources at 70,422.18 HAM.

With an annual extraction of 41,020.09 HAM, the Stage of Ground Water Extraction stands at 58.25%. Consequently, all 18 blocks in the district are categorized as **'**Safe**'** (SoE $\leq$ 70%). This annual monitoring ensures updated data on availability and trends, supporting sustainable management and long-term water security for the region.

While water management is primarily a State subject, the Government of India provides technical and financial support for groundwater sustainability in Darbhanga through the following measures:

(a) The CGWB conducts annual groundwater resource assessments and regular monitoring of water levels and quality to identify stressed areas.

(b) Detailed maps and management plans covering ~2,504 sq. km of Darbhanga have been shared with the State to guide scientific interventions.

(c) Plans for the district advocate for tapping arsenic-safe deep aquifers, installing Arsenic Removal Plants, and promoting urban rainwater harvesting.

(d) A 2020 plan proposes 1,948 recharge structures in Darbhanga for implementation by State departments.

(e) Mandatory NOCs and rainwater harvesting plans are required for groundwater extraction by industries and infrastructure projects.

(f) Bihar has adopted the Centre's Model Bill for groundwater legislation and updated Building Bye-laws to mandate rainwater harvesting for plots over 100 sq. m.

(g) The National Water Policy (2012) promotes community-led conservation and the restoration of traditional water bodies.

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