

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1827

ANSWERED ON 17.03.2025

GROUNDWATER MANAGEMENT AND IMPACTS OF CLIMATE CHANGE

1827 #. SHRI SANJAY SINGH

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

- (a) the manner in which the Central Ground Water Board (CGWB) is incorporating the impact of climate change in water level monitoring and its assessment;
- (b) whether the CGWB has implemented special measures or action plans in areas where the water level is low, if so, the manner in which the effectiveness of these plans are being monitored; and
- (c) the details of major achievements of National Aquifer Mapping and Management Programme (NAQUIM) during the last five years?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY)

(a) The Government of India is committed to combating climate change through various initiatives. To address erratic rainfall and dry spells and their impact on groundwater levels, the Central Ground Water Board (CGWB) is enhancing monitoring efforts. This includes increasing manual monitoring stations and automating the process by constructing piezometers with Digital Water Level Recorders (DWLRs). A PIB-approved project is underway to install 7,000 such piezometers nationwide, transmitting real-time groundwater data to a central server, helping in better understanding the co-relation between ground water levels and rainfall patterns. State governments are also funded under schemes like the National Hydrology Project (NHP) and Atal Bhujal Yojana, resulting in 24,000 DWLR-equipped piezometers being commissioned so far.

Further, in the wake of climate change, to study its effect on the quantum of ground water resources in the country, CGWB has started conducting the Dynamic Ground Water Resource Assessment on annual basis from 2022. A highly customized software called 'IN-GRES' has been developed for the purpose which will help estimation of resources quickly and efficiently.

(b) Water being a State subject, the responsibility of addressing the ground water related issues lies primarily with the concerned State Governments. However, the Central Government facilitates the efforts of the State Governments by way of technical and financial assistance through its various schemes and projects. In this direction, several important steps have been taken by the Ministry of Jal Shakti and other central ministries for improvement of ground water resources of the country, with special focus on water stressed regions. These schemes/projects are being effectively monitored at the top level of respective ministries by constantly engaging with concerned state governments. Several common platforms like steering committees, project monitoring units at national and state levels, dashboards for real time updation and monitoring of data have been put in

place to ensure better co-ordination and speedy implementation. Gist of various such schemes/projects along with outcomes which are a measure of their effectiveness 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 with special focus on 151 water stressed districts of the country. 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. As per JSA dashboard, in the past 4 years construction of more than 1.07 Cr water conservation structures have been completed in the country.
- ii. M/o Jal Shakti is implementing Atal Bhujal Yojana, which is a community led scheme for participatory ground water management focusing on demand side management of ground water. The Scheme is currently in operation in 80 districts in 7 States, which have been identified, among other factors, based on the degree of water stress being faced by them. Thus far, a total area of 6.7 lakh Ha has been brought under efficient irrigation practices in Atal Jal areas through convergence.
- iii. Master Plan for Artificial Recharge to Groundwater- 2020 has been prepared by the Central Ground Water Board (CGWB) for the entire country and shared with States/UTs providing a broad outline for construction of around 1.42 crore rain water harvesting and artificial recharge structures in the country to harness 185 BCM (Billion cubic meter).
- iv. Department of Agriculture & Farmers' Welfare (DA & FW), GoI, is implementing Per Drop More Crop Scheme in the country, since 2015-16, which focuses on enhancing water use efficiency at farm level through Micro Irrigation and better on-farm water management practices to optimize the use of available water resources. The scheme is of immense benefit to water stressed regions of the country with limited water available for irrigation purposes. From 2015-16 till December 2024, an area of 94.36 lakh ha has been covered under micro irrigation in the country through PDMC scheme.
- v. Mission Amrit Sarovar was launched by the Government of India, which aimed at developing and rejuvenating at least 75 water bodies in each district of the country, for the purpose of increasing water storage and boosting ground water recharge. As an outcome nearly 69,000 Amrit Sarovars have been constructed/rejuvenated in the country.
- vi. M/o Jal Shakti is promoting conjunctive use of surface water and groundwater and to reduce over-dependence on groundwater, surface water based Major and Medium irrigation projects have been taken up in the country under PMKSY-AIBP scheme in collaboration with States/UTs.

(c) National Aquifer Mapping and Management Programme (NAQUIM) studies have been taken up for delineation and characterisation of aquifers of the entire country and development of plans for ground water management. NAQUIM was initiated in 2012 as a part of the 'Ground Water Management and Regulation' scheme. Out of ~33 lakh sq. km of the entire geographical area of the country, the mappable area of ~25 lakh sq. km was covered by 31st March 2023. Ground water management plans have been prepared for the entire targeted area across the country covering all the 14 Principal aquifers and 42 major aquifers. These management plans have been shared with the respective State Governments including District Authorities for taking up further field interventions. During 2023-24 to 2024-25, CGWB has initiated detailed aquifer mapping studies in identified priority areas and so far 67 such studies have been completed.
