GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

LOK SABHA

UNSTARRED QUESTION NO. 2463

ANSWERED ON 13.03.2025

RATE OF GROUNDWATER DEPLETION IN DIFFERENT STATES

†2463. SHRI ASHISH DUBEY

SHRI DHARAMBIR SINGH

Will the Minister of JAL SHAKTI be pleased to state:

(a) whether it is true that the volume of groundwater is continuously depleting in most areas of the country;

(b) if so, whether the Government has conducted any survey or assessed the rate of groundwater depletion in different States of the country, especially in States like Punjab, Haryana, Rajasthan and Jabalpur division of Madhya Pradesh during the last five years and if so, the details thereof along with the current status of groundwater level;

(c) the reasons behind the rapid decline of groundwater levels, including over-extraction, deforestation and inefficient irrigation practices;

(d) the measures taken/being taken by the Government to promote rainwater harvesting and groundwater recharge across urban and rural areas;

(e) whether the Government is implementing stricter regulations on industries and businesses that over-extract groundwater and if so, the details thereof; and

(f) the details of any financial schemes or incentives to encourage farmers to adopt water efficient irrigation methods such as drip and sprinkler irrigation?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) Assessment of Dynamic Ground Water Resources of the country is being annually carried out jointly by Central Ground Water Board (CGWB) and the concerned State Nodal/Ground Water Department. On comparison of data from 2017 assessment to that of 2024, it is seen that total annual ground water recharge in the country has increased from 432 Billion Cubic Meters (BCM) to 446.9 BCM and total extractable ground water in the country has increased from 393 Billion Cubic Meters (BCM) to 406 BCM during the period. Further, the Stage of Ground Water Extraction (SoE), which is defined as a ratio of total annual ground water extraction for all purposes to total annual extractable ground water resources, has decreased from 63% to 60.47% during the same period, indicating overall improvement in the ground water situation of the country, albeit with regional variations.

(b) Comparative figures of total extractable ground water for the years 2017 and 2024 available in the states of Punjab, Haryana, Rajasthan and Jabalpur division of Madhya Pradesh are provided in **Annexure –I.** Further, a measure of fluctuation of ground water level in the said states by comparing the post monsoon 2024 water level to mean of previous five years is provided in **Annexure –II.**

(c) Growing need of rapid industrialization, continuous urbanization, population growth, inclination of farmers towards water intensive crops, clubbed with the effect of climate change are known to be the major factors putting stress on ground water resources of the country.

d) Water being a State subject, sustainable development and management of groundwater resources is primarily the responsibility of the 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, the important steps taken by the Ministry of Jal Shakti and other central ministries for improving the ground water levels and sustainable development of ground water resources in the country 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 in the country 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.

ii. Master Plan for Artificial Recharge to Groundwater- 2020 has been prepared by the 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).

iii. CGWB has taken up National Aquifer Mapping and Management Programme (NAQUIM) with an aim to delineate aquifer disposition and their characterization. Entire mappable area of the country of around 25 lakh sq. km has been mapped under the scheme and management plans, including recommendations for artificial recharge have been shared with the respective State governments for implementation.

iv. 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. As an outcome nearly 69,000 Amrit Sarovars have been constructed/rejuvenated in the country.

v. To further strengthen the momentum of Jal Shakti Abhiyan, Jal Sanchay Jan Bhagidari: A Community-Driven Path to Water Sustainability in India has been launched by Prime Minister Narendra Modi on September 6, 2024, in Surat, Gujarat with a vision to make rain water harvesting a mass movement in the country. By promoting community ownership and

responsibility, the initiative seeks to develop cost-effective, local solutions tailored to specific water challenges across different regions.

vi. Ministry of Housing & Urban Affairs (MoHUA) has formulated Model Building Bye Laws (MBBL), 2016 for the States/UTs, wherein adequate focus has been given on requirement of rainwater harvesting and water conservation measures. As per MBBL, all buildings having a plot size of 100 Sq.m. or, more shall mandatorily include the complete proposal of rainwater harvesting. 35 States/ UTs have adopted the features of the Model Bye Laws.

vii. Ministry of Jal Shakti has circulated a Model Bill to all the States/UTs to enable them to enact suitable ground water legislation for regulation of its development, which also includes provisions for rain water harvesting and ground water recharge. So far, 21 States/UTs have adopted and implemented the ground water legislation.

(e) Extraction cum use of Groundwater in the country is regulated by Central Ground Water Authority (CGWA) in most of the states by way of issuing NOCs as per the provisions of its Guidelines dated 24.09.2020 which have pan India applicability. As per the Guidelines, Environmental Compensation (EC) charges are being levied on the projects extracting ground water without a valid NOC. Further, provisions for strict penalties have also been made for violation of NOC conditions, over-extraction of ground water, non-installation of piezometers/water flow meters meant for measuring the ground water extracted etc.

(f) GoI is continuously encouraging the states to impress upon their farmers to adopt water efficient irrigation techniques for conservation of ground water. In this regard, currently, the following schemes are being implemented for providing impetus to switching over to micro irrigation :

i. The Central Government is implementing Atal Bhujal Yojana in 80 water stressed districts in the states of Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh. The primary aim of the scheme is demand side management through scientific means based on water budgeting of the area involving the local communities at village levels leading to sustainable groundwater management in the targeted areas. Promoting water efficient irrigation practices like use of drips and sprinklers and incentivizing the farmers to switch over to less water intensive crops are major focus areas under Atal Jal Scheme.

ii. 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.

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ANNEXURE-I

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF LOK SABHA STARRED QUESTION NO. *2463 TO BE ANSWERED ON 13.03.2025 REGARDING "RATE OF GROUNDWATER DEPLETION IN DIFFERENT STATES"

Comparative Ground Water Resource Assessment for Punjab State, Haryana State, Rajasthan State and Jabalpur Division of Madhya Pradesh (2017 & 2024)

S. No	State/ Region	Annual GW Recharge (BCM)		Annual Extractable GW Resource (BCM)		Annual GW Extraction for All Uses (BCM)		Stage of Extraction (SOE) (%)	
		2017	2024	2017	2024	2017	2024	2017	2024
1	Punjab	23.93	19.19	21.58	17.63	35.78	27.66	165.77	156.87
2	Haryana	10.15	10.32	9.13	9.36	12.50	12.72	136.91	135.96
3	Rajasthan	13.21	12.58	11.99	11.37	16.77	17.05	139.88	149.86
4	Jabalpur Division	6.19	5.68	5.83	5.38	2.38	2.52	40.82	46.88

Jabalpur Division includes Balaghat, Chhindwara, Dindori, Jabalpur, Katni, Mandla, Narsimhapur&Seoni districts of Madhya Pradesh.

ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF LOK SABHA STARRED QUESTION NO. *2463 TO BE ANSWERED ON 13.03.2025 REGARDING "RATE OF GROUNDWATER DEPLETION IN DIFFERENT STATES"

State-wise Water Level Fluctuation (in meters) with Mean (Post-Monsoon 2019 to 2023) and Post-Monsoon 2024 (Unconfined Aquifer) for Haryana, Punjab and Rajasthan

S.No.	State/ Region	No of wells analysed	No. of wells in different fluctuation ranges in meters												Total No. of wells			
			Rise						Fall									
			0 to 2 (m)	%	2 to 4 (m)	%	> 4 (m)	%	0 to 2 (m)	%	2 to 4 (m)	%	> 4 (m)	%	Rise	%	Fall	%
1	Haryana	163	61	37.4	11	6.7	7	4.3	57	35	19	11.7	8	4.9	79	48.5	84	51.5
2	Punjab	174	43	24.7	9	5.2	4	2.3	74	42.5	30	17.2	13	7.5	56	32.2	117	67.2
3	Rajasthan	824	263	31.9	120	14.6	132	16	163	19.8	61	7.4	85	10.3	515	62.5	309	37.5
4	Jabalpur Division	179	53	29.6	6	3.4	5	2.8	102	57	9	5	3	1.7	64	35.8	114	63.7

Jabalpur Division includes Balaghat, Chhindwara, Dindori, Jabalpur, Katni, Mandla, Narsimhapur&Seoni districts of Madhya Pradesh.

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