

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 1516

ANSWERED ON 05.08.2024

DEPLETION OF GROUNDWATER LEVEL IN NORTH INDIA

1516. SHRI NEERAJ SHEKHAR

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

- (a) whether as per the recent study report of IIT, Gandhinagar, huge depletion in groundwater level have been reported in North India between 2002 to 2021;
- (b) if so, the details thereof; and
- (c) the details of action taken in this regard by Government to arrest the depletion in groundwater in the Northern States?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY)

(a) & (b) Central Ground Water Board is regularly monitoring the ground water levels throughout the Country, including in Northern States, on a regional scale, through its network of monitoring wells. In order to assess the long term fluctuation (twenty years) in ground water level in the Northern States, the water level data collected by CGWB during November 2023 has been compared with the bi-decadal mean of twenty years recorded during November 2003 to 2022. State-wise details of Decadal Water Level Fluctuation in respect of Northern States is presented in **Annexure-I**. Analysis of water level data indicates that about 48% of the wells monitored have registered rise in ground water levels.

(c) Water being a State subject, sustainable development and management of groundwater resources is primarily the responsibility of the State Government. 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 arresting the depletion in ground water and sustainable management of ground water resources in the country, including in the northern states are given below:-

- Central Ground Water Board (CGWB) has completed the National Aquifer Mapping (NAQUIM) Project in the entire mappable area of the country of about 25 Lakh sq. km including in the Northern States. The Aquifer maps and management plans have been prepared and shared with the respective State agencies for implementation. The management plans include various water conservation measures through construction of recharge structures.

- Under Ground Water Management & Regulation scheme, CGWB has implemented several successful artificial recharge projects in the country including Northern States of India for demonstrative purpose which enables the State Governments to replicate the same in suitable hydrogeological conditions. Recently, CGWB has taken up construction of 154 small and 2 major artificial recharge structures in the water deficit areas of Rajasthan.
- CGWB has prepared a Master Plan for Artificial Recharge to Groundwater- 2020 in consultation with States/UTs which is a macro level plan indicating various structures for the different terrain conditions of the country including their estimated cost. The Master Plan envisages construction of about 1.42 crore Rain water harvesting and artificial recharge structures in the country to harness 185 Billion Cubic Metre (BCM) of monsoon rainfall. Several states have taken initiatives towards implementation of Masterplan in priority areas identified by them.
- The Government is implementing Jal Shakti Abhiyan (JSA) in the country since 2019, a time-bound, mission mode water conservation campaign. Fifth edition of JSA with the theme 'Nari Shakti se Jal Shakti' was launched by the Ministry of Jal Shakti during March 2024 which is being implemented across 151 water stressed districts of the country, including 66 districts in northern states, under which various ground water recharge and conservation related works are being taken up in convergence with various central and state schemes.
- Ministry of Jal Shakti (MoJS) has launched Atal Bhujal Yojana, a community led scheme for participatory ground water management focusing on demand side management of ground water. The scheme has been launched with an outlay of Rs.6000 cr in 8213 water stressed Gram Panchayats of 7 states, viz. Haryana, Rajasthan, Gujarat, Maharashtra, Karnataka, Madhya Pradesh and Uttar Pradesh. Under this scheme, inter alia, states are incentivized for adopting water efficient agricultural practices like switching over to drips/sprinklers, crop diversification to less water incentive crops, mulching etc.
- The Central Ground Water Authority (CGWA) has been constituted under MoJS for the purpose of regulation and control of ground water development and management in the country. Extraction cum use of Groundwater in the country is regulated by CGWA by way of issuing NOCs as per the provisions of its Guidelines dated 24.09.2020 which have pan India applicability.
- 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.
- MoJS 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.

- Central Government supports construction of water harvesting and conservation works on a large scale through Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and Pradhan Mantri Krishi Sinchayee Yojana – Watershed Development Component (PMKSY- WDC).
- 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 provision of rain water harvesting. So far, 21 States/UTs have adopted and implemented the ground water legislation, including the northern states of U.P., Haryana, Punjab, Bihar and Himachal Pradesh.
- In addition, a number of States have done notable work in the field of water conservation/harvesting. Some of them can be mentioned as ‘Mukhyamantri Jal Swavlamban Abhiyan’ in Rajasthan, ‘Jalyukt Shibir’ in Maharashtra, ‘Sujalam Sufalam Abhiyan’ in Gujarat, ‘Mission Kakatiya’ in Telangana, Neeru Chettu’ in Andhra Pradesh, Jal Jeevan Hariyali in Bihar, ‘Jal Hi Jeevan’ in Haryana, Kudimaramath scheme in Tamil Nadu etc.
- Details of several other significant initiatives of the Government of India for improvement of groundwater situation in the country can be seen through the link below-

<https://jalshakti-dowr.gov.in/document/steps-taken-by-the-central-government-to-control-water-depletion-and-promote-rain-water-harvesting-conservation/>

ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (a) & (b) OF UNSTARRED QUESTION NO. 1516 TO BE ANSWERED IN RAJYA SABHA ON 05.08.2024 REGARDING “DEPLETION OF GROUNDWATER LEVEL IN NORTH INDIA”.

State-wise 20 Years Water Level Fluctuation with Mean (November 2003 to 2022) and November 2023 (Unconfined Aquifer)

Sr.No.	State/UT Name	No of wells	No. of wells in different depth range												Total No. of wells				Total Number of No Change Wells	
			Rise						Fall						Rise	%	Fall	%	Nos.	%
			0 to 2	%	2 to 4	%	> 4	%	0 to 2	%	2 to 4	%	> 4	%						
1	Bihar	325	125	38.5	12	3.7	0	0.0	153	47.1	26	8.0	9	2.8	137.0	42.2	188.0	57.8	0.0	0.0
2	Haryana	214	63	29.4	25	11.7	13	6.1	51	23.8	29	13.6	32	15.0	101.0	47.2	112.0	52.3	1.0	0.5
3	Himachal Pradesh	70	33	47.1	4	5.7	4	5.7	27	38.6	1	1.4	0	0.0	41.0	58.6	28.0	40.0	1.0	1.4
4	Punjab	186	38	20.4	8	4.3	9	4.8	55	29.6	32	17.2	43	23.1	55.0	29.6	130.0	69.9	1.0	0.5
5	Rajasthan	611	156	25.5	88	14.4	72	11.8	123	20.1	59	9.7	110	18.0	316.0	51.7	292.0	47.8	3.0	0.5
6	Uttar Pradesh	537	215	40.0	24	4.5	10	1.9	216	40.2	47	8.8	23	4.3	249.0	46.4	286.0	53.3	2.0	0.4
7	Uttarakhand	124	51	41.1	11	8.9	8	6.5	39	31.5	8	6.5	5	4.0	70.0	56.5	52.0	41.9	2.0	1.6
8	Chandigarh	8	5	62.5	0	0.0	0	0.0	2	25.0	0	0.0	1	12.5	5.0	62.5	3.0	37.5	0.0	0.0
9	Delhi	74	23	31.1	13	17.6	13	17.6	12	16.2	3	4.1	10	13.5	49.0	66.2	25.0	33.8	0.0	0.0
10	Jammu and Kashmir	180	90	50.0	3	1.7	1	0.6	76	42.2	8	4.4	1	0.6	94.0	52.2	85.0	47.2	1.0	0.6
	Total	2329	799	34.3	188	8.1	130	5.6	754	32.4	213	9.1	234	10.0	1117	48.0	1201	51.5	11	0.5
