

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI,
DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION
LOK SABHA

UNSTARRED QUESTION NO. 3188

ANSWERED ON 04.08.2022

WATER SHORTAGE IN CITIES

3188 SHRI THOMAS CHAZHIKADAN

Will the Minister of JAL SHAKTI be pleased to state:

- (a) the details of the cities in the country that are facing problems of water shortage;
- (b) the details of the cities facing the water shortage problem due to irregular rain;
- (c) whether the Government has taken any steps to solve the problem; and
- (d) if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI BISHWESWAR TUDU)

(a) Central Ground Water Board (CGWB) periodically monitors the ground water levels throughout the country including urban areas through monitoring wells. Comparison of water level data during November, 2021 with the decadal mean water level of November (2011-2020) in urban areas indicates that about 34.6% of the wells monitored have registered decline in ground water mostly in the range of 0-2 meter. Decline of more than 4.0 metre has also been observed in some of the cities. Rise in groundwater level has also been observed in 65.4% analysed wells. The details in this regard are given in **Annexure-I**. CGWB has also prepared a report titled "Groundwater Situations in Select Cities in India." The report provides the demand and water supply information collected from respective water supply departments in the cities and also analyses the groundwater situation in these cities.

(b) Problem of water shortage in cities does not depend directly on the rainfall pattern in particular city/areas. The factors which also contribute to shortage of water in a city include extent of urbanization, amount of extraction of ground water, availability of measures of rain water harvesting, existence of water management plans, ground water flows within the aquifers and other anthropogenic activities.

(c) & (d) Water is a state subject and the Central Government supplements the efforts of the states on water conservation and recharge through technical and financial support. The details of major steps taken by the Government to solve the problem of water shortage, particularly in cities, are at **Annexure-II**.

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 3188 TO BE ANSWERED IN LOK SABHA ON 04.08.2022 REGARDING “WATER SHORTAGE IN CITIES”

Decadal Water Level Fluctuation with Mean [NOVEMBER (2011 to 2020) and NOVEMBER 2021 in Urban Areas of the Country

S. No.	Name of the City	No. of wells Analysed	Rise						Fall						Rise		Fall	
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		No	%	No	%
			No	%	No	%	No	%	No	%	No	%	No	%				
1	Mumbai City	6	4	66.7	0	0.0	0	0.0	1	16.7	1	16.7	0	0.0	4	66.7	2	33.3
2	Mumbai Suburban	17	9	52.9	1	5.9	0	0.0	5	29.4	2	11.8	0	0.0	10	58.8	7	41.2
3	Delhi	86	29	33.7	21	24.4	15	17.4	12	14.0	3	3.5	6	7.0	65	75.6	21	24.4
4	Kolkata(Confined)	25	16	64.0	0	0.0	1	4.0	7	28.0	1	4.0	0	0.0	17	68.0	8	32.0
5	Chennai	21	12	57.1	7	33.3	2	9.5	0	0.0	0	0.0	0	0.0	21	100.0	0	0.0
6	Bangalore	18	12	66.7	2	11.1	1	5.6	3	16.7	0	0.0	0	0.0	15	83.3	3	16.7
7	Hyderabad	36	18	50.0	6	16.7	9	25.0	3	8.3	0	0.0	0	0.0	33	91.7	3	8.3
8	Ahmedabad (phreatic)	3	0	0.0	0	0.0	0	0.0	3	100.0	0	0.0	0	0.0	0	0.0	3	100.0
	Ahmedabad (Confined)	1	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0
9	Nagpur	67	37	55.2	3	4.5	0	0.0	26	38.8	1	1.5	0	0.0	40	59.7	27	40.3
10	Nashik	4	1	25.0	0	0.0	0	0.0	3	75.0	0	0.0	0	0.0	1	25.0	3	75.0
11	Pune	3	1	33.3	0	0.0	0	0.0	2	66.7	0	0.0	0	0.0	1	33.3	2	66.7
12	Vasai Virar	2	1	50.0	0	0.0	0	0.0	1	50.0	0	0.0	0	0.0	1	50.0	1	50.0
13	Aurangabad	6	3	50.0	3	50.0	0	0.0	0	0.0	0	0.0	0	0.0	6	100.0	0	0.0
14	Kannur	3	1	33.3	2	66.7	0	0.0	0	0.0	0	0.0	0	0.0	3	100.0	0	0.0
15	Kochi	1	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0
16	Kollam	4	3	75.0	0	0.0	0	0.0	1	25.0	0	0.0	0	0.0	3	75.0	1	25.0
17	Kozhikode	12	11	91.7	0	0.0	0	0.0	1	8.3	0	0.0	0	0.0	11	91.7	1	8.3
18	Malappuram	5	4	80.0	0	0.0	0	0.0	1	20.0	0	0.0	0	0.0	4	80.0	1	20.0
19	Thiruvananthapuram	6	3	50.0	3	50.0	0	0.0	0	0.0	0	0.0	0	0.0	6	100.0	0	0.0
20	Thrissur	11	5	45.5	0	0.0	0	0.0	6	54.5	0	0.0	0	0.0	5	45.5	6	54.5
21	Patna	6	4	66.7	1	16.7	0	0.0	1	16.7	0	0.0	0	0.0	5	83.3	1	16.7
22	Ranchi	11	10	90.9	1	9.1	0	0.0	0	0.0	0	0.0	0	0.0	11	100.0	0	0.0
23	Dhanbad	4	1	25.0	0	0.0	0	0.0	1	25.0	2	50.0	0	0.0	1	25.0	3	75.0
24	Jamshedpur	1	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0
25	Bhopal	14	9	64.3	2	14.3	0	0.0	2	14.3	1	7.1	0	0.0	11	78.6	3	21.4
26	Indore	14	9	64.3	2	14.3	0	0.0	3	21.4	0	0.0	0	0.0	11	78.6	3	21.4
27	Jabalpur	16	6	37.5	0	0.0	0	0.0	8	50.0	2	12.5	0	0.0	6	37.5	10	62.5
28	Gwalior	1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0
29	Guwahati	31	13	41.9	2	6.5	0	0.0	11	35.5	5	16.1	0	0.0	15	48.4	16	51.6
30	Ludhiana	2	0	0.0	0	0.0	0	0.0	1	50.0	0	0.0	1	50.0	0	0.0	2	100.0
31	Amritsar	4	2	50.0	1	25.0	0	0.0	1	25.0	0	0.0	0	0.0	3	75.0	1	25.0
32	Faridabad	2	0	0.0	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0
33	Chandigarh-UT	13	4	30.8	1	7.7	1	7.7	5	38.5	1	7.7	1	7.7	6	46.2	7	53.8
34	Coimbatore	6	0	0.0	2	33.3	2	33.3	0	0.0	0	0.0	2	33.3	4	66.7	2	33.3
35	Thiruchirapalli	6	1	16.7	4	66.7	1	16.7	0	0.0	0	0.0	0	0.0	6	100.0	0	0.0
36	Madurai	12	5	41.7	3	25.0	3	25.0	1	8.3	0	0.0	0	0.0	11	91.7	1	8.3
37	Vijayawada	8	2	25.0	0	0.0	0	0.0	2	25.0	2	25.0	2	25.0	2	25.0	6	75.0
38	Vishakapatnam	27	13	48.1	2	7.4	0	0.0	8	29.6	1	3.7	3	11.1	15	55.6	12	44.4
39	Rajkot	1	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1	100.0
40	Surat	1	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0
41	Vadodara	4	0	0.0	1	25.0	3	75.0	0	0.0	0	0.0	0	0.0	4	100.0	0	0.0
42	Jaipur	28	2	7.1	2	7.1	7	25.0	2	7.1	6	21.4	9	32.1	11	39.3	17	60.7
43	Jodhpur	5	3	60.0	0	0.0	1	20.0	1	20.0	0	0.0	0	0.0	4	80.0	1	20.0
44	Kota	2	0	0.0	0	0.0	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	2	100.0
45	Bhubaneswar	39	18	46.2	4	10.3	0	0.0	16	41.0	1	2.6	0	0.0	22	56.4	17	43.6
46	Agra	1	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1	100.0
47	Allahabad	4	1	25.0	2	50.0	0	0.0	0	0.0	1	25.0	0	0.0	3	75.0	1	25.0
48	Ghaziabad	1	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1	100.0
49	Kanpur	7	6	85.7	0	0.0	0	0.0	1	14.3	0	0.0	0	0.0	6	85.7	1	14.3
50	Lucknow	3	0	0.0	0	0.0	0	0.0	1	33.3	0	0.0	2	66.7	0	0.0	3	100.0
51	Meerut	1	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1	100.0
52	Varanasi	1	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0
53	Raipur	6	1	16.7	0	0.0	0	0.0	4	66.7	1	16.7	0	0.0	1	16.7	5	83.3

S. No.	Name of the City	No. of wells Analysed	Rise						Fall						Rise		Fall	
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m					
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
54	Bhilai	6	2	33.3	1	16.7	0	0.0	2	33.3	1	16.7	0	0.0	3	50.0	3	50.0
55	Dehradun	45	18	40.0	5	11.1	3	6.7	15	33.3	4	8.9	0	0.0	26	57.8	19	42.2
TOTAL		670	304	45.4	85	12.7	49	7.3	168	25.1	37	5.5	27	4.0	438	65.4	232	34.6
Rajkot : WL data of Nov 2020 used in respect of Rajkot, Gujarat. Monitoring couldnot be carried out during NOV 2021																		

Source: Central Groud Water Board

ANNEXURE REFERRED TO IN REPLY TO PART (c) & (d) OF UNSTARRED QUESTION NO. 3188 TO BE ANSWERED IN LOK SABHA ON 04.08.2022 REGARDING “WATER SHORTAGE IN CITIES”**Details of steps taken by the Government to address the problem water shortage in the country particularly in cities/ urban areas**

I. The Government initiated ‘Jal Shakti Abhiyan’ (JSA) in 1592 blocks of 256 water-stressed districts of the country during July to November 2019 to address the problem of water scarcity/shortage. The second in the series was ‘Jal Shakti Abhiyan: Catch The Rain’ (JSA:CTR) from 22nd March, 2021 to 30 November, 2021 in all districts of the country and third in the series of JSA, ‘Jal Shakti Abhiyan: Catch The Rain’ has been taken up in the current year from 29 March, 2022 to 30 November, 2022, the pre-monsoon and monsoon period in the country, in all districts (rural as well as urban areas) of the country with the main theme “Catch the Rain, where it falls, when it falls”.

II. Marking 75 years of Independence this year. It has been decided that, 75 water bodies are created or rejuvenated in every district. These are called Amrit Sarovars. The creation/rejuvenation of the Amrit Sarovars are a special effort under JSA-CTR 2022. Efforts in this direction have been already initiated and concerned stakeholders-State Governments, NGOs etc. are mobilised to take up this activity under the campaign.

III. Ministry of Housing and Urban Affairs (MoHUA) has formulated guidelines for the States to adopt measures suitable to local conditions, such as Unified Building Bye Laws (UBBL) of Delhi, 2016, Model Building Bye Laws (MBBL), 2016 and Urban and Regional Development Plan Formulation and Implementation (URDPFI) Guidelines, 2014 with adequate focus on requirement of rainwater harvesting and water conservation measures. 500 cities and towns have been identified across India under Atal Mission for Rejuvenation and Urban Transformation (AMRUT). AMRUT 2.0 focuses on making these cities ‘self-reliant and water secure’ by promoting circular economy of water. Under the Smart Cities Mission, 48 cities have reported water management projects under convergence with AMRUT.

IV. Central Ground Water Authority (CGWA) grants No Objection Certificates (NOCs) for ground water abstraction to Industries, Infrastructure units and Mining projects in feasible areas in certain States/UTs where regulation is not being done by the respective State/UTs. The latest guidelines for control and regulation of groundwater extraction with pan-India applicability was notified by the Ministry on 24 September 2020 which envisages that the proponents shall install roof top rain water harvesting & recharge systems in the project area in order to obtain NOC.

V. Master Plan for Artificial Recharge to Groundwater- 2020 has been prepared by CGWB in consultation with States/UTs which is a macro level plan indicating various structures for the different terrain conditions of the country including 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.

VI. A Model Bill has been circulated to all the States/UTs to enable them to enact suitable ground water legislation for regulation of its development, which includes provision of rainwater harvesting structures feasible in urban areas. So far, 19 States/UTs have adopted and implemented the ground water legislation.

VII. A nationwide programme of “National Aquifer Mapping and Management (NAQUIM)” for mapping of aquifers, their characterization and development of aquifer management facilitate sustainable development of ground water resources.

VIII. National Water Policy (2012) has been formulated by the Department of Water Resources, River Development and Ganga Rejuvenation which inter-alia advocates rain water harvesting and conservation of water and highlights the need for augmenting the availability of water.

IX. Besides the above, mass awareness programmes like trainings, seminars, workshops, exhibitions, etc. are conducted from time to time each year under the Information, Education & Communication (IEC) Scheme in various parts of the country to promote rainwater harvesting, reuse and recycle of water and artificial recharge of groundwater.