

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION
LOK SABHA

UNSTARRED QUESTION NO.1792

ANSWERED ON 01.08.2024

DEPLETION OF GROUND WATER LEVEL

†1792. SHRI AJAY BHATT

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

- (a) whether the Government is aware that the level of ground water would soon deplete in twenty one big cities of the country and there will be scarcity of water by the year 2029 as a result thereof;
- (b) if so, the name of such cities, State-wise;
- (c) whether the Government proposes to rectify this problem through inter-linking of the rivers or by purifying the sea water for human use; and
- (d) if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY)

(a) & (b) Central Ground Water Board is periodically monitoring the ground water levels across the country, including in 66 urban areas, through a network of monitoring wells. Monitoring data of November 2023, collected from 888 monitoring wells in 66 urban areas, shows that around 78.97% of the wells have recorded depth to water level between 0-10 mbgl (meters below ground level), indicating ease of access to ground water. Further, in order to assess the fluctuation in water level on a long-term basis, the water level data of urban areas during November 2023 has been compared with the decadal average (2013-2022). Such analysis of water level data indicates that about 56.98 % (396) of the wells monitored have registered rise in water levels. The details are provided in the **Annexure**. Though there may be variations between individual cities, the data indicates that the ground water situation is largely stable and gradually improving in the urban areas of the country.

Here, it may also be noted that groundwater is a replenishable resource which gets recharged every year through rainfall and other sources. Therefore, the adverse effects of ground water depletion, if any, can be mitigated by increasing the availability of ground water by artificial recharge and rain water harvesting activities on one hand and by promoting the water use efficiency on the other.

(c) & (d) Ensuring water securities of cities calls for a multi-pronged approach involving multiple scientific disciplines, academic institutions and administrative departments. Large scale projects like inter-linking of rivers or desalination of sea water require proper assessment in terms of cost on the exchequer, socio-economic impact and ecological sustainability before scaling up. The government is actively considering these technologies too, among other viable solutions for ensuring adequate water to cities.

- Government of India has formulated a National Perspective Plan (NPP) of interlinking of rivers for transferring water from surplus basins to deficit basins/areas and National Water Development Agency (NWDA) has been formed for this purpose. NWDA is actively working on the identified priority projects.
- Department of Science & Technology- Water Technology Initiative (DST-WTI) program encourages developing indigenous, affordable, and robust research-based solutions for existing and emerging water challenges facing the country. Desalination technology is also being worked upon under this and currently, the pilot facility of Solar powered Forward Osmosis (FO) plant at Ramanathapuram District, Tamil Nadu has been made operational.

ANNEXURE REFERRED TO IN REPLY TO PART (a) & (b) OF UNSTARRED QUESTION NO. 1792 TO BE ANSWERED IN LOK SABHA ON
01.08.2024 REGARDING “DEPLETION OF GROUND WATER LEVEL”.

S. No.	State/UT	Decadal Water Level Fluctuation With Mean [Nov (2013 to 2022)] and Nov 2023 in Urban Cities of the Country	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	%	No	%		
1	Andhra Pradesh	Vijayawada	5	0	0.00%	0	0.00%	0	0.00%	4	80.00%	1	20.00%	0	0.00%	0	0.00%	5	100.00%
		Vishakapatnam	18	1	5.56%	4	22.22%	0	0.00%	5	27.78%	5	27.78%	3	16.67%	5	27.78%	13	72.22%
3	Assam	Guwahati	33	19	57.58%	1	3.03%	1	3.03%	9	27.27%	3	9.09%	0	0.00%	21	63.64%	12	36.36%
4	Bihar	Patna (phreatic)	5	3	60.00%	0	0.00%	0	0.00%	1	20.00%	1	20.00%	0	0.00%	3	60.00%	2	40.00%
		Patna (Deeper)	5	0	0.00%	0	0.00%	0	0.00%	3	60.00%	2	40.00%	0	0.00%	0	0.00%	5	100.00%
5	Chhatisgarh	Bhilai	6	2	33.33%	1	16.67%	0	0.00%	2	33.33%	1	16.67%	0	0.00%	3	50.00%	3	50.00%
6		Raipur	13	6	46.15%	4	30.77%	0	0.00%	3	23.08%	0	0.00%	0	0.00%	10	76.92%	3	23.08%
7	Delhi	Delhi	79	28	35.44%	18	22.78%	15	18.99%	7	8.86%	4	5.06%	7	8.86%	61	77.22%	18	22.78%
8	Gujarat	Ahmedabad (phreatic)	2	0	0.00%	0	0.00%	0	0.00%	1	50.00%	1	50.00%	0	0.00%	0	0.00%	2	100.00%
		Ahmedabad (Confined)	3	0	0.00%	0	0.00%	0	0.00%	1	33.33%	2	66.67%	0	0.00%	0	0.00%	3	100.00%
9		Rajkot	3 wells established in N																
10		Surat	1	0	0.00%	0	0.00%	0	0.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	1	100.00%
11		Vadodara (phreatic)	2	0	0.00%	1	50.00%	0	0.00%	0	0.00%	1	50.00%	0	0.00%	1	50.00%	1	50.00%
		Vadodara (Confined)	2	0	0.00%	0	0.00%	0	0.00%	1	50.00%	0	0.00%	1	50.00%	0	0.00%	2	100.00%
12		Gandhinagar	1	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	100.00%	0	0.00%
13	Haryana	Ambala	2	0	0.00%	1	50.00%	0	0.00%	0	0.00%	1	50.00%	0	0.00%	1	50.00%	1	50.00%
14		Faridabad	3	1	33.33%	1	33.33%	0	0.00%	1	33.33%	0	0.00%	0	0.00%	2	66.67%	1	33.33%
15		Gurugram	4	0	0.00%	1	25.00%	1	25.00%	1	25.00%	1	25.00%	0	0.00%	2	50.00%	2	50.00%
16		Yamunanagar	3	1	33.33%	1	33.33%	0	0.00%	1	33.33%	0	0.00%	0	0.00%	2	66.67%	1	33.33%
17	Chandigarh	Chandigarh	20	8	40.00%	3	15.00%	1	5.00%	2	10.00%	1	5.00%	5	25.00%	12	60.00%	8	40.00%
18	Jharkhand	Ranchi	13	6	46.15%	1	7.69%	0	0.00%	6	46.15%	0	0.00%	0	0.00%	7	53.85%	6	46.15%
19		Dhanbad	8	2	25.00%	0	0.00%	1	12.50%	5	62.50%	0	0.00%	0	0.00%	3	37.50%	5	62.50%
20		Jamshedpur	10	6	60.00%	0	0.00%	1	10.00%	2	20.00%	0	0.00%	1	10.00%	7	70.00%	3	30.00%
21	Karnataka	Bangalore	24	2	8.33%	0	0.00%	0	0.00%	11	45.83%	6	25.00%	5	20.83%	2	8.33%	22	91.67%
22	Kerala	Kannur	13	12	92.31%	0	0.00%	0	0.00%	1	7.69%	0	0.00%	0	0.00%	12	92.31%	1	7.69%
23		Kochi	18	17	94.44%	0	0.00%	0	0.00%	1	5.56%	0	0.00%	0	0.00%	17	94.44%	1	5.56%
24		Kollam	8	7	87.50%	0	0.00%	0	0.00%	1	12.50%	0	0.00%	0	0.00%	7	87.50%	1	12.50%
25		Kozhikode	14	10	71.43%	0	0.00%	0	0.00%	4	28.57%	0	0.00%	0	0.00%	10	71.43%	4	28.57%
26		Malappuram	10	10	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	10	100.00%	0	0.00%
27		Thiruvananthapuram	9	4	44.44%	1	11.11%	0	0.00%	4	44.44%	0	0.00%	0	0.00%	5	55.56%	4	44.44%
28		Thrissur	15	15	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	15	100.00%	0	0.00%

29	Madhya Pradesh	Bhopal	10	6	60.00%	0	0.00%	0	0.00%	4	40.00%	0	0.00%	0	0.00%	6	60.00%	4	40.00%
30		Gwalior	1	0	0.00%	0	0.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	1	100.00%	0	0.00%
31		Indore	14	3	21.43%	4	28.57%	0	0.00%	7	50.00%	0	0.00%	0	0.00%	7	50.00%	7	50.00%
32		Jabalpur	13	10	76.92%	0	0.00%	0	0.00%	2	15.38%	1	7.69%	0	0.00%	10	76.92%	3	23.08%
33	Maharashtra	Aurangabad	6	3	50.00%	1	16.67%	0	0.00%	2	33.33%	0	0.00%	0	0.00%	4	66.67%	2	33.33%
34		Mumbai City	6	2	33.33%	0	0.00%	0	0.00%	3	50.00%	0	0.00%	1	16.67%	2	33.33%	4	66.67%
35		Mumbai Suburban	17	10	58.82%	1	5.88%	0	0.00%	6	35.29%	0	0.00%	0	0.00%	11	64.71%	6	35.29%
36		Nagpur	78	30	38.46%	4	5.13%	1	1.28%	37	47.44%	6	7.69%	0	0.00%	35	44.87%	43	55.13%
37		Nashik	3	1	33.33%	0	0.00%	0	0.00%	1	33.33%	0	0.00%	1	33.33%	1	33.33%	2	66.67%
38		Pune	15	4	26.67%	1	6.67%	0	0.00%	7	46.67%	2	13.33%	1	6.67%	5	33.33%	10	66.67%
39		Vasai Virar	2	1	50.00%	0	0.00%	0	0.00%	1	50.00%	0	0.00%	0	0.00%	1	50.00%	1	50.00%
40	Odisha	Bhubaneshwar	38	21	55.26%	1	2.63%	0	0.00%	13	34.21%	3	7.89%	0	0.00%	22	57.89%	16	42.11%
41	Punjab	Amritsar	4	0	0.00%	0	0.00%	0	0.00%	4	100.00%	0	0.00%	0	0.00%	0	0.00%	4	100.00%
42		Jalandhar	2	0	0.00%	0	0.00%	1	50.00%	0	0.00%	0	0.00%	1	50.00%	1	50.00%	1	50.00%
43		Ludhiana	2	1	50.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	50.00%	1	50.00%	1	50.00%
44		SAS nagar	2	0	0.00%	1	50.00%	0	0.00%	1	50.00%	0	0.00%	0	0.00%	1	50.00%	1	50.00%
45		Patiala	1	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	100.00%	0	0.00%	0	0.00%	1	100.00%
46	Rajasthan	Ajmer	3	1	33.33%	0	0.00%	1	33.33%	1	33.33%	0	0.00%	0	0.00%	2	66.67%	1	33.33%
47		Bikaner	1	0	0.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	100.00%	0	0.00%
48		Jaipur	11	1	9.09%	0	0.00%	1	9.09%	1	9.09%	3	27.27%	5	45.45%	2	18.18%	9	81.82%
49		Jaisalmer	1	0	0.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	100.00%	0	0.00%
50		Jodhpur	5	3	60.00%	1	20.00%	0	0.00%	1	20.00%	0	0.00%	0	0.00%	4	80.00%	1	20.00%
51		Kota	2	0	0.00%	0	0.00%	0	0.00%	2	100.00%	0	0.00%	0	0.00%	0	0.00%	2	100.00%
52	Tamil Nadu	Chennai	9	6	66.67%	2	22.22%	0	0.00%	1	11.11%	0	0.00%	0	0.00%	8	88.89%	1	11.11%
53		Coimbatore	6	1	16.67%	0	0.00%	2	33.33%	2	33.33%	0	0.00%	1	16.67%	3	50.00%	3	50.00%
54		Madurai	11	3	27.27%	4	36.36%	3	27.27%	0	0.00%	0	0.00%	1	9.09%	10	90.91%	1	9.09%
55		Trichy	6	2	33.33%	1	16.67%	1	16.67%	2	33.33%	0	0.00%	0	0.00%	4	66.67%	2	33.33%
56		vellore	2	2	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	100.00%	0	0.00%
57	Telangana	Hyderabad	37	6	16.22%	7	18.92%	3	8.11%	13	35.14%	3	8.11%	5	13.51%	16	43.24%	21	56.76%
58	Uttar Pradesh	Agra	1	1	100.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	100.00%	0	0.00%
59		Allahabad	4	0	0.00%	0	0.00%	0	0.00%	3	75.00%	0	0.00%	1	25.00%	0	0.00%	4	100.00%
60		Ghaziabad	1	0	0.00%	0	0.00%	0	0.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	1	100.00%
61		Kanpur	6	5	83.33%	0	0.00%	0	0.00%	1	16.67%	0	0.00%	0	0.00%	5	83.33%	1	16.67%
62		Lucknow	3	0	0.00%	0	0.00%	0	0.00%	0	0.00%	2	66.67%	1	33.33%	0	0.00%	3	100.00%
63		Meerut	1	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	100.00%	0	0.00%	0	0.00%	1	100.00%
64		Varanasi	1	0	0.00%	0	0.00%	0	0.00%	1	100.00%	0	0.00%	0	0.00%	0	0.00%	1	100.00%
65	Uttaranchal	Dehradun	9	3	33.33%	4	44.44%	1	11.11%	1	11.11%	0	0.00%	0	0.00%	8	88.89%	1	11.11%
66	West Bengal	Kolkata(Confined)	12	2	16.67%	0	0.00%	0	0.00%	7	58.33%	2	16.67%	1	8.33%	2	16.67%	10	83.33%
TOTAL			695	289	41.58%	72	10.36%	35	5.04%	203	29.21%	54	7.77%	42	6.04%	396	56.98%	299	43.02%
