

GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 89

ANSWERED ON 04.12.2023

GROUNDWATER MANAGEMENT

89. SHRI MUZIBULLA KHAN SHRI NIRANJAN BISHI

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

- (a) the recent assessment of groundwater resources, water level, and quality, State-wise;
- (b) the current status of the targets mentioned in the CAG report (Groundwater management and regulation-2021); and
- (c) details of allocation and utilization of funds under the Jal Shakti Abhiyan?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI BISHWESWAR TUDU)

(a) The Dynamic Ground Water Resources of the country are being periodically assessed jointly by Central Ground Water Board and State Nodal/Ground Water Department. As per the Ground Water Resource Assessment-2023 (latest), the total annual extractable ground water resource is 407.21 bcm. The annual groundwater extraction for all uses is 241.34 bcm. The average stage of groundwater extraction for the country is 59.26 %. Out of the total 6553 assessment units in the country, 736 units (11.23%) have been categorized as 'Over-exploited', 199 units (3.04 %) as 'Critical', 698 units (10.65 %) as 'Semi-critical' and 4793 units (73.14 %) as 'Safe' units and 127 units (1.94%) as 'saline'. State wise details in respect of Ground Water Resources is given in **Annexure I**

Central Ground Water Board (CGWB) is periodically monitoring the ground water levels throughout the country. The details of the water level data (As of May 2023) are given in **Annexure II**.

Central Ground Water Board (CGWB) generates ground water quality data annually on regional scale through ground water quality monitoring throughout the country. State-wise quality data of ground water (for the Year 2022) is given at **Annexure III**.

(b) The CAG report no. 9 of 2021 on groundwater management and regulation provides observations and recommendations related to groundwater management and regulation. The report is largely recommendatory in nature and does not impose specific numerical targets. The report, *inter alia*, recommends

- i. the Department of Water Resources (DoWR) to ensure assessment of ground water resources, water level and quality are done at the prescribed intervals
- ii. for taking action to increase the number of observation wells with Digital Water Level Recorders with Telemetry (DWLRs).

- iii. to take steps for improving the manpower situation, iv) to improve the regulatory mechanism for extraction of ground water, v) to expeditiously complete aquifer mapping in the identified area etc.

All the recommendations have been acted upon and suitable action has been taken/initiated. A detailed action taken report in this regard may be found at

URL :- http://cgwb.gov.in/sites/default/files/2023-11/revised_atn-cgwb_0.pdf

(c) Under Jal Shakti Abhiyan: Catch the Rain campaign, funds are utilized through convergence of different Central and State Government schemes. In addition to this the Scheme also provides one time financial assistance of Rs. 2.00 lakh for each GIS mapping of water bodies and preparation of scientific plans under Jal Shakti Abhiyan: Catch the Rain (JSA: CTR). The state-wise details of funds so released under JSA: CTR during the last three years are given in **Annexure- IV**.

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 89 TO BE ANSWERED IN RAJYA SABHA ON 04.12.2023 REGARDING "GROUNDWATER MANAGEMENT".

STATE-WISE GROUND WATER RESOURCES OF INDIA, 2023					
S. No.	States / Union Territories	Total Annual Ground Water Recharge (in bcm)	Annual Extractable Ground Water Resource (in bcm)	Annual Ground Water Extraction (in bcm)	Stage of Ground Water Extraction (%)
1	Andhra Pradesh	27.83	26.45	7.48	28.30
2	Arunachal Pradesh	4.65	4.16	0.02	0.42
3	Assam	27.26	20.93	2.63	12.54
4	Bihar	33.96	30.72	13.75	44.76
5	Chhattisgarh	13.34	12.18	5.75	47.17
6	Delhi	0.38	0.34	0.34	99.13
7	Goa	0.40	0.32	0.07	21.37
8	Gujarat	27.35	25.41	13.13	51.68
9	Haryana	9.55	8.69	11.80	135.74
10	Himachal Pradesh	1.11	1.01	0.35	34.95
11	Jharkhand	6.25	5.73	1.80	31.38
12	Karnataka	18.93	17.08	11.32	66.26
13	Kerala	5.53	5.01	2.73	54.55
14	Madhya Pradesh	35.47	32.85	19.30	58.75
15	Maharashtra	32.76	30.95	16.66	53.83
16	Manipur	0.52	0.47	0.04	7.99
17	Meghalaya	1.83	1.51	0.07	4.58
18	Mizoram	0.22	0.20	0.01	3.70
19	Nagaland	0.60	0.54	0.02	3.76
20	Odisha	17.35	15.94	7.39	46.33
21	Punjab	18.84	16.98	27.80	163.76
22	Rajasthan	12.45	11.25	16.74	148.77
23	Sikkim	0.24	0.22	0.01	5.54
24	Tamil Nadu	21.59	19.51	14.42	73.91
25	Telangana	23.14	20.92	8.09	38.65
26	Tripura	1.36	1.09	0.11	9.92
27	Uttar Pradesh	71.83	65.57	46.40	70.76
28	Uttarakhand	2.02	1.85	0.95	51.69
29	West Bengal	26.29	23.90	10.71	44.81
30	Andaman And Nicobar	0.62	0.56	0.01	1.37
31	Chandigarh	0.05	0.05	0.04	75.41
32	Dadra & Nagar Haveli	0.09	0.08	0.11	131.53
33	Daman & Diu	0.04	0.03	0.06	170.70
34	Jammu And Kashmir	4.94	4.46	1.08	24.20
35	Ladakh	0.09	0.08	0.03	37.05
36	Lakshadweep	0.01	0.01	0.003	61.72
37	Puducherry	0.20	0.18	0.13	70.27
	Grand Total	449.08	407.21	241.34	59.26

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Depth to Water Level Distribution of Percentage of Observation Wells as of May 2023															
Sr. No.	State/UT Name	No of well analysed	No./Percentage of Wells Showing Depth to Water Level (mbgl) in the Range of												
			0 to 2		2 to 5		5 to 10		10 to 20		20 to 40		> 40		
			No	%	No	%	No	%	No	%	No	%	No	%	
1	Andhra Pradesh	796	149	18.72	382	47.99	197	24.75	52	6.53	10	1.26	6	0.75	
2	Arunachal Pradesh	25	6	24.00	9	36.00	8	32.00	2	8.00	0	0.00	0	0.00	
3	Assam	292	50	17.12	192	65.75	39	13.36	10	3.42	1	0.34	0	0.00	
4	Bihar	654	20	3.06	276	42.20	349	53.36	9	1.38	0	0.00	0	0.00	
5	Chhattisgarh	1133	29	2.56	357	31.51	594	52.43	144	12.71	9	0.79	0	0.00	
6	Goa	84	1	1.19	32	38.10	39	46.43	12	14.29	0	0.00	0	0.00	
7	Gujarat	741	24	3.24	169	22.81	256	34.55	239	32.25	52	7.02	1	0.13	
8	Haryana	656	45	6.86	107	16.31	109	16.62	142	21.65	173	26.37	80	12.20	
9	Himachal Pradesh	65	9	13.85	22	33.85	13	20.00	14	21.54	4	6.15	3	4.62	
10	Jharkhand	415	12	2.89	71	17.11	259	62.41	73	17.59	0	0.00	0	0.00	
11	Karnataka	1366	73	5.34	431	31.55	537	39.31	306	22.40	19	1.39	0	0.00	
12	Kerala	1261	112	8.88	390	30.93	534	42.35	214	16.97	9	0.71	2	0.16	
13	Madhya Pradesh	1205	24	1.99	252	20.91	580	48.13	309	25.64	34	2.82	6	0.50	
14	Maharashtra	1646	71	4.31	413	25.09	829	50.36	311	18.89	20	1.22	2	0.12	
15	Manipur	2	0	0.00	2	100.00	0	0.00	0	0.00	0	0.00	0	0.00	
16	Meghalaya	63	11	17.46	36	57.14	13	20.63	3	4.76	0	0.00	0	0.00	
17	Mizoram	3	2	66.67	1	33.33	0	0.00	0	0.00	0	0.00	0	0.00	
18	Nagaland	23	0	0.00	3	13.04	5	21.74	14	60.87	0	0.00	1	4.35	
19	Orissa	1279	105	8.21	564	44.10	568	44.41	42	3.28	0	0.00	0	0.00	
20	Punjab	512	18	3.52	67	13.09	87	16.99	151	29.49	172	33.59	17	3.32	
21	Rajasthan	897	22	2.45	106	11.82	222	24.75	227	25.31	161	17.95	159	17.73	
22	Tamil Nadu	1007	32	3.18	396	39.32	384	38.13	140	13.90	31	3.08	24	2.38	
23	Telangana	642	44	6.85	208	32.40	259	40.34	112	17.45	17	2.65	2	0.31	
24	Tripura	135	12	8.89	45	33.33	69	51.11	8	5.93	1	0.74	0	0.00	
25	Uttar Pradesh	1185	17	1.43	257	21.69	408	34.43	235	19.83	51	4.30	217	18.31	
26	Uttarakhand	196	12	6.12	30	15.31	57	29.08	49	25.00	31	15.82	17	8.67	
27	West Bengal	1022	76	7.44	313	30.63	343	33.56	247	24.17	40	3.91	3	0.29	
28	Andaman and Nicobar	111	49	44.14	54	48.65	8	7.21	0	0.00	0	0.00	0	0.00	
29	Chandigarh	11	0	0.00	4	36.36	2	18.18	1	9.09	4	36.36	0	0.00	
30	Daman & Diu and Dadra & Nagar Haveli	28	0	0.00	8	28.57	15	53.57	5	17.86	0	0.00	0	0.00	
31	Delhi	123	5	4.07	30	24.39	46	37.40	26	21.14	14	11.38	2	1.63	
32	Jammu and Kashmir	364	58	15.93	148	40.66	81	22.25	36	9.89	27	7.42	14	3.85	
33	Puducherry	10	1	10.00	5	50.00	4	40.00	0	0.00	0	0.00	0	0.00	
	Total *	17952	1089	6.07	5380	29.97	6914	38.51	3133	17.45	880	4.90	556	3.10	

*Additional data in addition to the GEMS
database analysed for post-monsoon 2022

ANNEXURE-III

**ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 89
TO BE ANSWERED IN RAJYA SABHA ON 04.12.2023 REGARDING
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S.No.	State/ UT	Summary of Contamination of Ground Water in parts of India Salinity (EC above 3000 micro mhos/ cm) (EC : Electrical Conductivity)	Fluoride (above 1.5 mg/l)	Nitrate (above 45 mg/l)	Arsenic (above 0.01 mg/l)	Iron (above 1mg/l)	Lead (above 0.01 mg/l)	Cadmium (above 0.003 mg/l)	Chromium (above 0.05 mg/l)	Uranium (above 30 ppb)
1	Andhra Pradesh	23	19	26	7	12	2	0	1	8
2	Telangana	16	29	32	1	9	4	1	1	6
3	Assam	1	17	0	21	28	9	0	2	0
4	Arunachal Pradesh	0	0	0	0	7	0	0	0	0
5	Bihar	7	17	32	27	35	9	0	3	10
6	Chhattisgarh	1	22	23	4	23	5	1	1	4
7	Delhi	8	8	11	5	5	3	1	5	4
8	Goa	0	0	0	0	2	0	0	1	0
9	Gujarat	28	30	32	12	14	1	0	0	5
10	Haryana	18	21	21	18	20	17	8	5	19
11	Himachal Pradesh	0	2	7	1	5	0	0	0	1
12	Jammu & Kashmir	0	4	10	3	10	3	1	1	0
13	Jharkhand	0	17	23	4	23	24	0	0	4
14	Karnataka	30	31	30	3	22	1	0	7	8
15	Kerala	4	6	14	1	14	6	7	1	0
16	Madhya Pradesh	21	44	51	9	47	16	0	2	12
17	Maharashtra	29	22	31	0	24	20	1	0	3
18	Manipur	0	1	0	2	4	0	0	0	0
19	Meghalaya	0	5	0	0	8	0	0	0	0
20	Nagaland	0	3	0	0	5	0	0	0	0
21	Odisha	18	26	30	5	30	4	0	2	5
22	Punjab	12	19	22	17	18	15	8	11	20
23	Rajasthan	32	33	33	10	33	13	0	0	28
24	Tamil Nadu	29	29	33	14	16	6	1	7	14
25	Tripura	0	3	0	3	8	0	0	0	0
26	Uttar Pradesh	21	42	67	45	75	25	2	18	35
27	Uttarakhand	1	1	5	5	8	8	0	2	0
28	West Bengal	9	12	18	11	22	7	2	3	1
29	Andaman & Nicobar	1	0	0	0	2	0	0	0	0
30	Daman & Diu	1	1	2	1	0	0	0	0	0
31	Puducherry	0	0	2	1	0	0	0	0	0
	Total	Parts of 310 districts in 21 states & UTs	Parts of 464 districts in 27 states & UTs	Parts of 555 districts in 23 states & UTs	Parts of 230 districts in 25 states & UTs	Parts of 529 districts in 29 states & UTs	Pb in parts of 198 districts in 21 states	Cd in parts of 33 districts in 11 states	Cr in parts of 71 districts in 18 states	U in parts of 187 districts in 18 states

ANNEXURE REFERRED TO IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 89 TO BE ANSWERED IN RAJYA SABHA ON 04.12.2023 REGARDING “GROUNDWATER MANAGEMENT”.

(Amount in Rs Lakhs)

Sr.No.	STATE/ UT	2021-22	2022-23	2023-24
1	ANDAMAN AND NICOBAR ISLAND (UT)	2	0	0
2	ANDHRA PADESH	13	13	0
3	ARUNACHAL PRADESH	11	1	1
4	ASSAM	19	0	1
5	BIHAR	28	3	39
6	CHANDIGARH	1	0	0
7	CHATTISGARH	13	4	10
8	DADRA & NAGAR HAVELI	2	0	0
9	DELHI	8	1	4
10	GOA	1	1	2
11	GUJARAT	15	37	0
12	HARYANA	22	22	0
13	HIMACHAL PRADESH	7	4	1
14	JAMMU AND KASHMIR	18	1	19
15	JHARKHAND	13	1	2
16	KARNATAKA	2	26	3
17	KERALA	11	2	0
18	LEH AND LADAKH	2	0	0
19	LAKSHADWEEP	0	1	0
20	MADHYA PRADESH	44	1	1
21	MAHARASHTRA	3	20	0
22	MANIPUR	12	6	0
23	MEGHALAYA	8	1	1
24	MIZORAM	7	1	0
25	NAGALAND	5	5	11
26	ORISHA	11	10	8
27	PUDUCHERRY (UT)	0	2	2
28	PUNJAB	7	8	8
29	RAJASTHAN	24	37	1
30	SIKKIM	4	0	0
31	TAMILNADU	34	31	1
32	TELANGANA	32	4	0
33	TRIPURA	8	0	8
34	UTTAR PRADESH	46	19	5
35	UTTRAKHAND	13	0	13
36	WEST BENGAL	2	0	0
Total		448	262	141