GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 98

ANSWERED ON 22.07.2024

GROUNDWATER DEPLETION IN TAMIL NADU

98. SHRI M. MOHAMED ABDULLA

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

(a) the data about groundwater depletion in the State of Tamil Nadu, district-wise;

(b) the data on the number of artificial structures built to recharge groundwater in the State of Tamil Nadu, under the advice of the Central Ground Water Authority (CGWA); and

(c) the details of expenditure incurred thereon?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJBHUSHAN CHOUDHARY**)**

(a) Central Ground Water Board(CGWB) is periodically monitoring the ground water levels throughout the Country on a regional scale, through a network of monitoring wells including in the state of Tamil Nadu. In order to assess the long term fluctuation in ground water level in the State of Tamil Nadu, the water level data collected by CGWB in Tamil Nadu during November 2023 has been compared with the decadal mean of water levels for the month of November from 2013 to 2022. District-wise details of Decadal Water Level Fluctuation in respect of Tamil Nadu is presented in **Annexure-I**. Analysis of water level data indicates that **about 72.6% of the wells** monitored have registered **rise in ground water levels**.

(b) & (c) In Tamil Nadu, ground water regulation is being carried out by the State government itself and not by Central Ground Water Authority (CGWA). However, its the Central Ground Water Board(CGWB) which is engaged in aquifer mapping and preparation of suitable artificial recharge plans for implementation by state governments. Various steps taken by CGWB for artificial recharge to ground water in the State of Tamil Nadu are as follows-

CGWB has prepared the 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 Tamil Nadu. In Tamil Nadu, the Master Plan envisages construction of about 88 thousand Rain water harvesting and artificial recharge structures to harness about 960 Million Cubic Metre (MCM) of monsoon rainfall. The management plan has been shared with the state Government which is devising suitable action plan for its implementation in select priority areas.

Besides, CGWB has completed the Aquifer Mapping and Management Programme under the scheme of Ground Water Management and Regulation. The Aquifer Mapping is aimed to delineate

aquifer disposition and their characterization for preparation of aquifer/ area specific ground water management plans with community participation. In Tamil Nadu, the entire mappable area of 1,05,829 sq. km. has been completed. The management plans are shared with the State Government for further implementation.

Further, the Government is implementing Jal Shakti Abhiyan(JSA) in the country since 2019in which special emphasis is being given for rainwater harvesting / groundwater recharge. Currently, JSA 2024 is being implemented in 10 water stressed districts of Tamil Nadu under which various ground water recharge and conservation related works are being taken up in convergence with various central and state schemes.

In addition to the above, various line departments of Government of Tamil Nadu are actively engaged in constructing artificial structures to recharge groundwater with an aim to improve water availability for various uses. The important steps taken by the Government of Tamil Nadu for ground water recharge in the State of Tamil Nadu is given at **Annexure II.**

ANNEXURE- I

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 98 TO BE ANSWERED IN RAJYA SABHA ON 22.07.2024 REGARDING "GROUNDWATER DEPLETION IN TAMIL NADU".

District-wise Decadal Water Level Fluctuation with Mean [Post-monsoon (2013 to 2022] and Post-monsoon 2023]

S.No	District	No. Wells	No./Percentage of wells showing depth to water level (mbgl) in the range of												Total No./Percentage of well			
			Rise						Fall						Total Rise		Total Fall	
			0 to 2		2 to 4		> 4		0 to 2		2 to 4		> 4					
			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	Ariyalur	9	4	44.4	0	0	0	0	4	44.4	1	11.1	0	0	4	44.44	5	55.56
2	Chengalpattu	11	6	54.5	3	27.3	1	9.1	1	9.1	0	0	0	0	10	90.91	1	9.09
3	Chennai	14	9	64.3	3	21.4	0	0	2	14.3	0	0	0	0	12	85.71	2	14.29
4	Coimbatore	30	4	13.3	2	6.7	4	13.3	10	33.3	6	20	4	13.3	10	33.33	20	66.67
5	Cuddalore	28	8	28.6	1	3.6	0	0	16	57.1	2	7.1	1	3.6	9	32.14	19	67.86
6	Dharmapuri	21	9	42.9	5	23.8	5	23.8	2	9.5	0	0	0	0	19	90.48	2	9.52
7	Dindigul	28	14	50	5	17.9	4	14.3	4	14.3	0	0	1	3.6	23	82.14	5	17.86
8	Erode	54	15	27.8	11	20.4	8	14.8	13	24.1	7	13	0	0	34	62.96	20	37.04
9	Kallakurichchi	20	10	50	3	15	1	5	3	15	2	10	1	5	14	70.00	6	30.00
10	Kancheepuram	8	6	75	0	0	1	12.5	1	12.5	0	0	0	0	7	87.50	1	12.50
11	Kanniyakumari	16	6	37.5	9	56.3	1	6.3	0	0	0	0	0	0	16	100.00	0	0.00
12	Karur	13	4	30.8	5	38.5	2	15.4	2	15.4	0	0	0	0	11	84.62	2	15.38
13	Krishnagiri	16	9	56.3	3	18.8	1	6.3	3	18.8	0	0	0	0	13	81.25	3	18.75
14	Madurai	21	6	28.6	7	33.3	7	33.3	0	0	1	4.8	0	0	20	95.24	1	4.76
15	Nagapattinam	11	4	36.4	0	0	0	0	7	63.6	0	0	0	0	4	36.36	7	63.64
16	Namakkal	47	9	19.1	17	36.2	14	29.8	5	10.6	1	2.1	1	2.1	40	85.11	7	14.89
17	Perambalur	17	7	41.2	5	29.4	4	23.5	1	5.9	0	0	0	0	16	94.12	1	5.88
18	Pudukkottai	22	10	45.5	3	13.6	1	4.5	8	36.4	0	0	0	0	14	63.64	8	36.36
19	Ramanathapuram	23	5	21.7	2	8.7	1	4.3	12	52.2	3	13	0	0	8	34.78	15	65.22
20	Ranipet	8	3	37.5	2	25	1	12.5	2	25	0	0	0	0	6	75.00	2	25.00
21	Salem	45	20	44.4	8	17.8	13	28.9	2	4.4	1	2.2	1	2.2	41	91.11	4	8.89
22	Sivagangai	11	4	36.4	3	27.3	2	18.2	2	18.2	0	0	0	0	9	81.82	2	18.18
23	Tenkasi	12	3	25	0	0	4	33.3	4	33.3	0	0	1	8.3	7	58.33	5	41.67
24	Thanjavur	16	7	43.8	2	12.5	0	0	6	37.5	1	6.3	0	0	9	56.25	7	43.75
25	The Nilgiris	9	5	55.6	1	11.1	0	0	3	33.3	0	0	0	0	6	66.67	3	33.33
26	Theni	13	3	23.1	6	46.2	3	23.1	1	7.7	0	0	0	0	12	92.31	1	7.69
27	Thiruvarur	6	4	66.7	0	0	0	0	2	33.3	0	0	0	0	4	66.67	2	33.33
28	Thoothukudi	27	5	18.5	6	22.2	1	3.7	10	37	3	11.1	2	7.4	12	44.44	15	55.56
29	Tiruchirappalli	43	17	39.5	6	14	9	20.9	11	25.6	0	0	0	0	32	74.42	11	25.58
30	Tirunelveli	18	8	44.4	2	11.1	1	5.6	2	11.1	3	16.7	2	11.1	11	61.11	7	38.89
31	Tirupathur	17	7	41.2	6	35.3	3	17.6	1	5.9	0	0	0	0	16	94.12	1	5.88
32	Tiruppur	45	17	37.8	4	8.9	9	20	13	28.9	2	4.4	0	0	30	66.67	15	33.33
33	Tiruvallur	26	14	53.8	6	23.1	3	11.5	3	11.5	0	0	0	0	23	88.46	3	11.54
34	Tiruvannamalai	19	7	36.8	6	31.6	3	15.8	3	15.8	0	0	0	0	16	84.21	3	15.79
35	Vellore	9	2	22.2	1	11.1	4	44.4	2	22.2	0	0	0	0	7	77.78	2	22.22
36	Villupuram	19	9	47.4	4	21.1	3	15.8	2	10.5	1	5.3	0	0	16	84.21	3	15.79
37	Virudhunagar	19	5	26.3	7	36.8	7	36.8	0	0	0	0	0	0	19	100.00	0	0.00
	Total	**771**	**285**	**37**	**154**	**20**	**121**	**15.7**	**163**	**21.1**	**34**	**4.4**	**14**	**1.8**	**560**	**72.63**	**211**	**27.37**

ANNEXURE- II

ANNEXURE REFERRED TO IN REPLY TO PART (b) & (c) OF UNSTARRED QUESTION NO. 98 TO BE ANSWERED IN RAJYA SABHA ON 22.07.2024 REGARDING "GROUNDWATER DEPLETION IN TAMIL NADU".

Initiatives taken by Government of Tamil Nadu for Artificial Recharge of Groundwater

Water Resources Department (WRD)

While issuing Ground Water Clearance for extraction of groundwater to industries, a condition is imposed to construct Rainwater Harvesting Structures within their premises for the recharge of groundwater.

Directorate of Town Panchayats

There are 490 Town Panchayats in the state. The total number of buildings in Town Panchayats is 24,26,127, out of which 19,29,328 buildings are provided with Rainwater Harvesting as follows:

Sl.No	Type of Buildings	No. of Buildings	No. of Buildings providing RWH Structures So far
1.	Government Buildings	12826	11986
2.	Residential Buildings	2137642	1710900
3.	Commercial Buildings	259170	193379
4.	Industrial Buildings	16489	13063
	Total	**2426127**	**1929328**

Agricultural Engineering Department

Farm ponds, check dams, and desilting of water bodies have been undertaken for harvesting rainwater and recharging groundwater under various schemes like the Tamil Nadu Irrigated Agriculture Modernization Project (TNIAMP), Kalaignar All Village Integrated Agriculture Development Programme (Kalaignar Scheme), River Valley Project, and Special Area Development Programme, etc.

Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB)

The Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB) is creating awareness in Chennai city every year about the installation and maintenance of Rainwater Harvesting structures before the onset of the monsoon period.

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