

GOVERNMENT OF INDIA
MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

RAJYA SABHA

UNSTARRED QUESTION NO. 2306

ANSWERED ON 16.12.2024

WATER CONSERVATION IN CITIES OF THE COUNTRY

2306. MS. DOLA SEN

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

- (a) whether Government plans to launch any initiatives to utilize atomic energy for efficient water management in the country's cities, particularly for desalination of groundwater recharge, if so, the details thereof, if not, the reasons therefor;
- (b) whether Government has conducted studies on the status of groundwater resources in metros like Mumbai, Delhi, and Bengaluru; and
- (c) if so, the details thereof, if not, the reasons therefor?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY)

(a) Desalination using multi effect distillation technology using a small fraction of heat / electrical energy generated from nuclear reactor is used to produce potable as well as demineralized water from sea-water which has high salinity. Presently, one such plant coupled with Madras Atomic Power Station (MAPS), Kalpakkam, is operational. However, the technology is suitable at the locations where reject heat is available from sources such as Nuclear Power Plants. It has been established that Reverse Osmosis Membrane technology would be suitable for treatment of groundwater.

(b) to (c) The Dynamic Ground Water Resources of the country is assessed jointly by Central Ground Water Board (CGWB) and State Governments including urban area like Delhi and Bengaluru. For the assessment Year 2023, the dynamic ground water resources of the urban areas of Delhi and Bengaluru is presented in **Annexure-I & Annexure-II** respectively. However, the dynamic ground water resources for the Mumbai Metropolitan area could not be assessed in 2023 due to insufficient data. Also, the investigation on groundwater recharge mechanism in National Capital Region (NCR) has been done by the Department of Atomic Energy with the aim to evaluate sustainability of groundwater resources in highly urbanized National Capital Region.

ANNEXURE REFERRED TO IN REPLY TO PART (b) to (c) OF UNSTARRED QUESTION NO. 2306 TO BE ANSWERED IN RAJYA SABHA ON 16.12.2024 REGARDING “WATER CONSERVATION IN CITIES OF THE COUNTRY”.

Dynamic Ground Water Resources of Delhi Urban Area (as per assessment Year 2023)

Sl. No	State	District	Assessment Unit Name	Annual Extractable Ground Water Resource (Ham)	Total Extraction (Ham)	Stage Of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
1	DELHI	CENTRAL	CIVIL LINES	1420.91	970.53	68.3	Safe
2	DELHI	CENTRAL	KAROL BAGH	150.11	171.83	114.47	Over-Exploited
3	DELHI	CENTRAL	KOTWALI	635.33	598.6	94.22	Critical
4	DELHI	EAST	GANDHI NAGAR	79.5	72.7	91.45	Critical
5	DELHI	EAST	MAYUR VIHAR	719.03	711.15	98.9	Critical
6	DELHI	EAST	PREET VIHAR	673.88	609.06	90.38	Critical
7	DELHI	NAZUL LAND	NAZUL LAND	458.9	314.04	68.43	Safe
8	DELHI	NEW DELHI	CHANAKYAPURI	535.32	703.67	131.45	Over-Exploited
9	DELHI	NEW DELHI	DELHI CANTONMENT	1023.75	1281.58	125.18	Over-Exploited
10	DELHI	NEW DELHI	VASANT VIHAR	1062.67	1627.27	153.13	Over-Exploited
11	DELHI	NORTH	ALIPUR	1806.39	1615.52	89.43	Semi-Critical
12	DELHI	NORTH	MODEL TOWN	535.83	518.62	96.79	Critical
13	DELHI	NORTH	NARELA	1865.92	2458.85	131.78	Over-Exploited
14	DELHI	NORTH EAST	KARAWAL NAGAR	610.64	694.88	113.8	Over-Exploited
15	DELHI	NORTH EAST	SEELAMPUR	724.34	616.84	85.16	Semi-Critical
16	DELHI	NORTH EAST	YAMUNA VIHAR	262.73	378.66	144.13	Over-Exploited
17	DELHI	NORTH WEST	KANJHAWALA	843.29	574.14	68.08	Safe
18	DELHI	NORTH WEST	ROHINI	2126.74	1299.64	61.11	Safe
19	DELHI	NORTH WEST	SARASWATI VIHAR	484.13	404.52	83.56	Semi-Critical
20	DELHI	SHAHDARA	SEEMAPURI	494.85	490.58	99.14	Critical
21	DELHI	SHAHDARA	SHAHDARA	375	448.78	119.67	Over-Exploited
22	DELHI	SHAHDARA	VIVEK VIHAR	577.45	729.74	126.37	Over-Exploited
23	DELHI	SOUTH	HAUZ KHAS	972.53	970.78	99.82	Critical
24	DELHI	SOUTH	MEHRAULI	1103.45	1300.99	117.9	Over-Exploited
25	DELHI	SOUTH	SAKET	1951.04	2269.33	116.31	Over-Exploited
26	DELHI	SOUTH EAST	DEFENCE COLONY	879.03	864.77	98.38	Critical
27	DELHI	SOUTH EAST	KALKAJI	915.8	875.52	95.6	Critical
28	DELHI	SOUTH EAST	SARITA VIHAR	568.55	567.97	99.9	Critical
29	DELHI	SOUTH WEST	DWARKA	2279.6	2275.66	99.83	Critical
30	DELHI	SOUTH WEST	KAPASHERA	2170.39	2488.16	114.64	Over-Exploited
31	DELHI	SOUTH WEST	NAJAFGARH	2494.49	1735.59	69.58	Safe
32	DELHI	WEST	PATEL NAGAR	1445.87	1395.77	96.53	Critical
33	DELHI	WEST	PUNJABI BAGH	1679.31	1484.3	88.39	Semi-Critical
34	DELHI	WEST	RAJOURI GARDEN	522.46	630.51	120.68	Over-Exploited
GRAND TOTAL				34449.23	34150.55	99.13	Critical

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Dynamic Ground Water Resources of Bengaluru Urban Area (as per assessment Year 2023)

Sl. No	State	District	Assessment Unit Name	Annual Extractable Ground Water Resource (Ham)	Total Extraction (Ham)	Stage Of Ground Water Extraction (%)	Categorization (Over-Exploited/Critical/Semi-Critical/Safe/Saline)
1	KARNATAKA	BENGALURU (URBAN)	ANEKAL	8444.71	8637.31	102.28	Over-Exploited
2	KARNATAKA	BENGALURU (URBAN)	BANGALORE (NORTH)	1600.8	3348.83	209.2	Over-Exploited
3	KARNATAKA	BENGALURU (URBAN)	BANGALORE CITY	2128.15	4626.69	217.4	Over-Exploited
4	KARNATAKA	BENGALURU (URBAN)	BANGALORE-EAST	2450.63	5007.84	204.35	Over-Exploited
5	KARNATAKA	BENGALURU (URBAN)	BANGALORE-SOUTH	4311.46	5137.7	119.16	Over-Exploited
6	KARNATAKA	BENGALURU (URBAN)	YELAHANKA	2410.32	5439.97	225.69	Over-Exploited
GRAND TOTAL				21346.07	32198.34	150.84	Over-Exploited
