Categorization of Assessment Units based on the 'Stage of Ground Water Extraction'

Sl. No	Category	GWRA-2017		GWRA-2020		GWRA-2022		GWRA-2023	
		Number of AUs	% of AUs	Number of AUs	% of AUs	Number of AUs	% of AUs	Number of AUs	% of AUs
1	Safe	3	9	3	9	4	12	5	15
2	Semi-critical	7	21	7	21	8	24	4	12
3	Critical	2	6	7	21	7	21	12	35
4	Over-exploited	22	65	17	50	15	44	13	38
5	Saline								
Total number of AUs		34		34		34		34	

Recommendations: -

The State is covered by diverse rock types of different geological ages from Pre-Cambrian to Recent. As much as 89% of the State is occupied by alluvium. The ground water resources assessment has been carried out tehsil-wise. The Total Annual Ground Water Recharge of the State has been assessed as 0.38 bcm and Annual Extractable Ground Water Resources is 0.34 bcm. The Total Current Annual Ground Water Extraction is 0.34 bcm and Stage of Ground Water Extraction is 99.13 %. Out of 34 assessment units (tehsils), 13 units (38 %) have been categorized as 'Over-exploited', 12 units (35 %) as 'Critical', 4 units (12 %) as 'Semi-critical', and 5 units (15 %) as 'Safe' categories of assessment units.

More numbers of STP plants and usage of these water for other than domestic use may be planned and implemented religiously.

Rain water harvesting may be made mandatory for water depleted areas.

Creating awareness (Mass Awareness Campaign for public and farmers, slideshows, display boards on water conservation, Water Management Training Programme for personnel related with water sector, painting/elocution competition for school students etc.) regarding water conservation etc may be organized at appropriate level.

National Aquifer Mapping & Management Programme (NAQUIM) Reports prepared by CGWB (http://cgwb.gov.in/AQM/AQM-Reports.html) which are also being shared with State/District Authorities and Ground Water Year Book published by CGWB having water level & water quality data may be used in Ground water management. (http://cgwb.gov.in/Ground-Water/GW%20YEAR%20BOOK%202019-0%20ALL%20INDIA%20FINAL%20752021%20(1).pdf).

State may bring suitable water pricing policy and may work further towards crop rotation/diversification/other initiatives to reduce overdependence on groundwater.

Regulation & control of Ground water Extraction: Ministry of Jal Shakti has issued the guidelines for control and regulations of ground water extraction vide notification dated 24.09.2020 which has further been amended in March 2023. Existing notification for regulation of ground water development may be modified as per the central guidelines. Concerned departments may ensure implementations of the guidelines.

Conjunctive use of both surface water and ground water may be followed in the areas where water logging problems are being reported.

For Further Information, Contact to :

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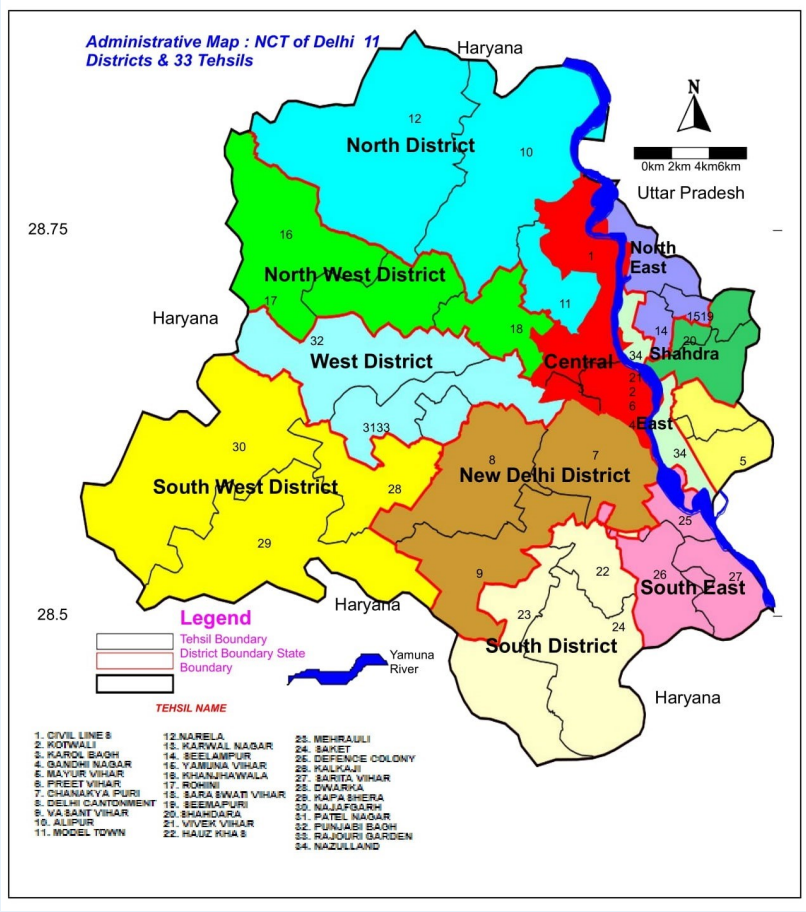
Central Ground Water Board

Department of Water Resources, RD & GR

Ministry of Jal Shakti, Government of India



Dynamic Ground Water Resources, 2023

Delhi

January, 2024

Background

- Ground Water Resources Assessment (GWRA)- jointly carried out by Central Ground Water Board and State Nodal/Ground Water Department periodically as per the Ground Water Resource Estimation Committee (GEC) methodology.
- Carried out under the guidance of the respective State/UT Level Committees (SLCs) and overall supervision of Central Level Expert Group (CLEG).
- As part of the assessment, 'Annual Extractable Ground Water Resource' as well as 'Annual Ground Water Extraction are assessed for each assessment unit (Tehsil).
- The 'Stage of Ground Water Extraction' is computed as the ratio of 'Annual Ground Water Extraction' with respect to 'Annual Extractable Ground Water Resource' and is usually expressed in percentage. Based on the stage of extraction, the assessment units are categorized as Safe (<= 70 %), Semi-Critical (>70 % and <=90 %), Critical (>90 % and <=100%) and Over-Exploited (>100 %).
- GWRA-2023, 2022 and 2020 has been carried out through a software/web-based application "INDIA-GROUNDWATER RESOURCE ESTIMATION SYSTEM (IN-GRES)" developed by CGWB through IIT-Hyderabad.

Salient Features

1	Average Annual Rainfall	904.4 mm
2	Hydrogeology	89 % of the State is occupied by alluvium and 11 % occupied by quartzitic hard rock.
3	Recharge Worthy Area of the State	1.49 Thousand Sq. Km
4	Assessment Unit (AU) Type / Number	Tehsil / 34 Numbers
5	Average area of Assessment Unit	44 Sq. Km

Findings

	Attribute	GWRA-2017	GWRA-2020	GWRA-2022	GWRA-2023
1	Total Annual Ground Water Recharge (in bcm)	0.32	0.32	0.41	0.38
2	Annual Extractable Ground Water Resources (in bcm)	0.3	0.29	0.37	0.34
3	Annual Ground Water Extraction (in bcm)	0.36	0.29	0.36	0.34
4	Stage of Ground Water Extraction (in %)	119.61	101.4	98.16	99.13

bcm: Biliion Cubic Meters